3C

WATER SEMIVOLATILE LAB CONTROL SAMPLE RECOVERY

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SDG No 22601

Matrix Spike - Client Sample No SLCSRN

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	REC #	QC LIMITS REC
Pyridine	100 0	45 66	46	10- 85
1 4-Dichlorobenzene	100 0	102 9	103*	26- 96
2-Methylphenol	100 0	83 72	84	10-120
3-Methylphenol	200 0	140 9	70	10-113
4-Methylphenol	200 0	140 9	70	10-113
Hexachloroethane	100 0	94 57	94*	28- 93
Nitrobenzene	100 0	134 8	135*	34-104
Hexachlorobutadiene	100 0	114 2	114*	29-101
2 4 6-Trichlorophenol	100 0	70 21	70	10-130
2 4 5-Trichlorophenol	100 0	87 37	87	10-135
2 4-Dinitrotoluene	100 0	130 2	130*	40-105
Hexachlorobenzene	100 0	125 6	126*	35-115
Pentachlorophenol	100 0	83 57	84	10-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

Spike Recovery 6 out of 13 outside limits

COMMENTS

FORM III SV-1

MAY 11 1999

RFA 226

TCLP Pesticides

COMPUCHEM

a division of Liberty Analytical Corp

10/MAY/99

LEGGETTE BRASHEARS & GRAHAM
ATTN Ken Vogel
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

Subject Report of Data - Account Number# 500944 Order# 34292

ATTN Ken Vogel

Enclosed are the results of analytical work performed in accordance with the referenced account number

This report covers 2 sample(s) appearing on the attached listing

Thank you for selecting CompuChem Environmental for your sample analysis If you should have questions or require additional analytical services please contact your representative at 1-800-833-5097

Sincerely,

Diane Ellmore

CompuChem Environmental
a division of Liberty Analytical

Attachment

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919 379-4100 ■ Fax 919-379-4050

COMPUCHEM
a division of Liberty Analytical Corp

10/MAY/99

LEGGETTE BRASHEARS & GRAHAM
ATTN
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

ACCOUNT # 500944

CC#	SAMPLE-ID	RECEIPT DATE
936826	CP00001	5/03/99
936841	CP00002	5/03/99

TOTAL NUMBER OF SAMPLES = 2

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

COMPUCHEM
501 Madison Ave
Cary, NC 27513
(919)379-4100

SDG Narrative
Case # 34292
SDG #22601
METHOD 8081-TCLP

Sample Identification CP00001, CP00002

The two (2) soil samples listed above were received intact, properly refrigerated, with proper chain-of-custody (COC) documentation on May 3 1999 The samples were extracted and analyzed following SW846 Method 8081-TCLP protocol for this fraction

The samples were extracted within method holding time The surrogate Tetrachloro-m-xylene, recovery exceeded tne method limits for CP00002MS/MSD and CP00001 on the CLPesticide column All remaining surrogate recoveries were within method criteria The associated method blank, laboratory control sample and matrix spike/matrix spike duplicate met method QC limits No target compounds were present above the reporting limit in any of the samples

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

Katrina L Travis
GC/HPLC Supervisor
May 10, 1999

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00001

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936826

Sample wt/vol 100 0 (g/mL) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/06/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/07/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
58-89-9	gamma-BHC (Lindane)	0 043	J
72-20-8	Endrin	1 0	U
76-44-8	Heptachlor	0 25	U
1024-57-3	Heptachlor Epoxide	0 25	U
72-43-5	Methoxychlor	2 5	U
8001-35-2	Toxaphene	25	U
12789-03-6	Technical Chlordane	25	U

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00002

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936841

Sample wt/vol 100 0 (g/mL) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/06/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/08/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
58-89-9---------	gamma-BHC (Lindane)	2 5	U
72-20-8---------	Endrin	1 0	U
76-44-8---------	Heptachlor	0 25	U
1024-57-3-------	Heptachlor Epoxide	0 25	U
72-43-5---------	Methoxychlor	2 5	U
8001-35-2-------	Toxaphene	25	U
12789-03-6------	Technical Chlordane	25	U

FORM I PEST

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00002MS

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936833

Sample wt/vol 100 0 (g/mL) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/06/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/07/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
58-89-9	gamma-BHC (Lindane)	1 5	J
72-20-8	Endrin	1 0	U
76-44-8	Heptachlor	1 5	
1024-57-3	Heptachlor Epoxide	1 6	
72-43-5	Methoxychlor	2 5	U
8001-35-2	Toxaphene	35	
12789-03-6	Technical Chlordane	25	U

FORM I PEST

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00002MSD

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936834

Sample wt/vol 100 0 (g/mL) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/06/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/07/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
58-89-9---------	gamma-BHC (Lindane)	1 5	J
72-20-8---------	Endrin	1 0	U
76-44-8---------	Heptachlor	1 6	
1024-57-3-------	Heptachlor Epoxide	1 7	
72-43-5---------	Methoxychlor	2 5	U
8001-35-2-------	Toxaphene	35	
12789-03-6------	Technical Chlordane	25	U

FORM I PEST

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

PLCSRR

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 937108

Sample wt/vol 500 0 (g/mL) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received _____

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/06/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/07/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
58-89-9---------	gamma-BHC (Lindane)	0 30	J
72-20-8---------	Endrin	0 20	U
76-44-8---------	Heptachlor	0 31	
1024-57-3-------	Heptachlor Epoxide	0 33	
72-43-5---------	Methoxychlor	0 50	U
8001-35-2-------	Toxaphene	7 1	
12789-03-6------	Technical Chlordane	5 0	U

FORM I PEST

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

PBLKRR

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 937107

Sample wt/vol 500 0 (g/mL) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received _____

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/06/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/07/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
58-89-9	gamma-BHC (Lindane)	0 50	U
72-20-8	Endrin	0 20	U
76-44-8	Heptachlor	0 050	U
1024-57-3	Heptachlor Epoxide	0 050	U
72-43-5	Methoxychlor	0 50	U
8001-35-2	Toxaphene	5 0	U
12789-03-6	Technical Chlordane	5 0	U

FORM I PEST

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

TCLPBLK

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936077

Sample wt/vol 100 0 (g/mL) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received _____

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/06/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/08/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
58 89-9---------	gamma-BHC (Lindane)	2 5	U
72-20-8---------	Endrin	1 0	U
76-44-8---------	Heptachlor	0 25	U
1024-57-3-------	Heptachlor Epoxide	0 25	U
72-43-5---------	Methoxychlor	2 5	U
8001-35-2-------	Toxaphene	25	U
12789-03-6------	Technical Chlordane	25	U

4C
PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO

PBLKRR

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Lab Sample ID 937107 Lab File ID _____

Matrix (soil/water) WATER Extraction (SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted 05/06/99

Date Analyzed (1) 05/07/99 Date Analyzed (2) 05/07/99

Time Analyzed (1) 2111 Time Analyzed (2) 2111

Instrument ID (1) VARIAN37 Instrument ID (2) VARIAN42

GC Column (1) CLPPEST1 ID 0 53(mm) GC Column (2) CLPPEST2 ID 0 53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES MS and MSD

	EPA SAMPLE NO	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PLCSRR	937108	05/07/99	05/07/99
02	CP00002MS	936833	05/07/99	05/07/99
03	CP00002MSD	936834	05/07/99	05/07/99
04	CP00001	936826	05/07/99	05/07/99
05	CP00002	936841	05/08/99	05/08/99
06	TCLPBLK	936077	05/08/99	05/08/99
07				
08				
09				
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21				
22				
23				
24				
25				
26				

COMMENTS _____

page 1 of 1

FORM IV PEST

FORM 3
WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix Spike - Sample No CP00002

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC
gamma-BHC (Lindane)	1 5	0 0	1 5	100	32-127
Heptachlor	1 5	0 0	1 5	100	34-111
Heptachlor Epoxide	1 5	0 0	1 6	107	37-142
Toxaphene	50	0 0	35	70	41-126

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC
gamma-BHC (Lindane)	1 5	1 5	100	2	20	32-127
Heptachlor	1 5	1 6	107	2	20	34-111
Heptachlor Epoxide	1 5	1 7	113	2	20	37-142
Toxaphene	50	35	70	2	20	41-126

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD 0 out of 4 outside limits
Spike Recovery 0 out of 8 outside limits

COMMENTS _____

FORM III PEST

FORM 3
WATER PESTICIDE LAB CONTROL SAMPLE

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC LIMITS REC
gamma-BHC (Lindane)	0 30	0 30	100	32-127
Heptachlor	0 30	0 31	103	34-111
Heptachlor Epoxide	0 30	0 33	110	37-142
Toxaphene	10	7 1	71	41-126

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery 0 out of 4 outside limits

COMMENTS

FORM III PEST

FORM 2
WATER PESTICIDE SURROGATE RECOVERY

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

GC Column(1) CLPPEST2 ID 0 53 (mm) GC Column(2) CLPPEST1 ID 0 53 (mm)

	CLIENT SAMPLE NO	S1 1 %REC #	S1 2 %REC #	TCX 1 %REC #	TCX 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKRR	120	121	120	135			0
02	PLCSRR	98	112	110	142			0
03	CP00002MS	114	139	110	198*			1
04	CP00002MSD	117	139	122	162*			1
05	CP00001	110	121	108	150*			1
06	CP00002	111	123	114	149			0
07	TCLPBLK	138	133	127	148			0
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
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24								
25								
26								
27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 = Decachlorobiphenyl (DC (30-150)
S2 (TCX) = Tetrachloro-m-Xylene (30-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

CompuChem Receiving Log

48-117

13

Client: CHRYSLER
Order #: 34292
Project: DAITON TIRE RURAL PRODUCTS
Quote #: 99-11318
Account #: 500944

Received on: 5/3/99 # of COCs: 1
Delivered by: FED EX
Freight #: 810581589292
Subcontract Y (N)
TAT Verbal: 48 Hr Hardcopy:

PPS (RFA) #: 226 Page 1 of 1
Lab Instructions: Pick GC/MS HI TNT/TCLP V,SV,Pest,Herb,MTLS / Spot PCB, Ign, Corr, react

SDG	REQ	SAMPLE ID	CCN	AMOUNT / CONTAINER	PARAMETER	ANALYSIS CODE	LINE ITEM	SAMPLE DATE	MX	pH
226CX	1	CPCC001	936826	1 4oz, 2-8oz	TCLP V, SV, PEST HERB MTL PCB	36,114,457,1142,1146,1178,11	1,2,4,5,7,9 3 11	4/30/99	50	NA
226C1	2	CPCC002	936841	↓	TCLP V,SV,Pest,Herb,MTL	↓	1,2,4,5,7,9,11	↓	↓	↓
226CX	3	PC0001	936842	1 8oz	TCL I,D,Corr,Reac	749,1316,1 54,1317,1246	13,15,17,19,21	4/30/99	50	NA
226CX	5	CP0002	936850	1 3oz	TCL Ign,Corr,React	↓	↓	↓	↓	↓

MS 5/3/99

Logged In By: [illegible]
Order Entered By: Marlene Smith
Cyanide samples checked for sulfide and chlorine Y / (NA)
Received in good condition (Y) / N
Holding Blank(s) Counter / Page ____ / ____ CCNs ____ / ____
Temperature(s) 20 °C

CHRYSLER CORPORATION

Chain-of-Custody

04449 A

SILICATE LINE SOILPILE

CompuChem
501 Madison Avenue
Cary NC 27513
Phone Number 1 800 833 5097
Fax Number (919) 379-4050

Project Name: DAYTON THERMAL PRODUCTS
Site Location: 1600 WEBSTER ST DAYTON OH
Site Code: SC001
RFA Number: YGQP9900226
Chrysler PM: GARY STANCZUK

Consultant: LEGGETTE, BRASHEARS + GRAHAM INC
Address: 1210 W COUNTY ROAD E., SUITE 700, ST PAUL, MN 55112
Consultant PM: KEN VOGEL
Phone: (651) 490 1405 Fax: (651) 490 1006

Turn around Time Request: 24 calendar hrs; 48 calendar hrs; 10 days; 28 days

Data Package Deliverables (circle): Chrysler Level 1; Chrysler Level 2; Other (specify)

Matrix Codes: S Soil; SW Surface Water; GW Groundwater; A Air; Sed Sediment; O Other (specify)

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	VOC 8260	SVOCs 8270	PCBs	RCRA METALS	HERBICIDES	PESTICIDES				Volatiles pH <2	Metals pH < 2	Cyanide pH > 12	Other ____	Remarks
CPCCC01	4/30/99	1505	C	S	3	✓	✓	✓	✓	✓	✓								SEGREGATED SOIL
CPCCC02	4-30-99	1515	C	S	3	✓	✓	✓	✓	✓	✓								CLEAN SOIL

Per Mike Curry & Gary Stanczuk @ Dayton Chrysler, perform the following analyses on both samples TCLP VOC, SVOC, Metals, Pest, Herb & PCBs, reactivity, corrosivity & ignitability DE 5/3/99

Sampler(s): Jennifer Bennesch

Bottles Relinquished under Airbill No

Samples Relinquished under Airbill No 810581589292 Temperature (corrected) 2.0 C

Relinquished by	Date	Time	Received by	Date	Time	Custody Seal Intact?
Jennifer Bennesch	4-30-99	1535				Yes No
						Yes N
						Yes N

Cooler ID # ~~SIE~~ NA

Is RFA sampling complete? Y N

Received for Laboratory by: [signature] Date: 5/3/99 Time: 0905

Chrysler Corporation 800 Chrysler Drive CIMS 482-00-51, Auburn Hills Michigan 48326-2757

Distribution: White copy Data package; Yellow Retained by laboratory; Pink Retained by sampler

opened cooler at 9:20 AM [signature] 5/3/99

Rev 1 1 S t mb 23 1997

Page 1 of 1

LEGGETTE BRASHEARS & GRAHAM
ATTN
1210 WEST COUNTY RD E
SUITE 700
ST PAUL MN 55112

RECEIVE DATE 5/03/99
QUOTE NUMBER 99-00073180000500944
ORDER NUMBER 34292

SAMPLE ID	TURNAROUND** TIME	ANALYSIS	COMPUCHEM NUMBER
CP00001	2	ZHE Extraction SW846-3rd -Method 1311	936826
		Voa ZHE Method 8240	936826
		TCLP Extraction SW846-3rd -Method 1311	936826
		Semivoa TCLP Method 8270	936826
		Pesticide TCLP 9-25 Method 8080	936826
		Herbicide TCLP Method 8150	936826
		Metals TCLP Methods 6010-7470	936826
		PCBs Method 8080 S/S	936842
		REACTIVITY	936842
		Ignit SW-846 1010/ ASTM D93-90/ Case ID	936842
		Corrosivity (AS pH)	936842
		% Moisture; Undecanted/S-S/	936842
CP00002	2	ZHE Extraction SW846-3rd -Method 1311	936841
		Voa ZHE Method 8240	936841
		TCLP Extraction SW846-3rd -Method 1311	936841
		Semivoa TCLP Method 8270	936841
		Pesticide TCLP 9-25 Method 8080	936841
		Herbicide TCLP Method 8150	936841
		Metals TCLP Methods 6010-7470	936841
		PCBs Method 8080 S/S	936850
		REACTIVITY	936850
		Ignit SW-846 1010/ ASTM D93-90/Case ID	936850
		Corrosivity (AS pH)	936850
		% Moisture; Undecanted/S-S/	936850

MS
5/5/99

** Please note that turnaround time and sample due dates will be, whenever applicable calculated and determined by the last sample received in a Sample Delivery Group

COMPUCHEM
a division of Liberty Analytical

LOG-IN VERIFICATION

Client LBG/CHRYSLER Project SILICATE LINE SOILPILE

Case 34292/RFA 226 Date Received 5/3/99

Were all sample I D s checked?	Yes / No
Were all analyses on COC also on receipt log?	Yes / No
Were any associated line item's missing?	Yes / No
Were all parameter s logged in?	Yes / No
Were correct method numbers received?	Yes / No
Is any information absent from receiving log header?	Yes / No
Were all blank lines on the receiving log z ed out?	Yes / No
Was TAT verified (quick turn line items useed?)	Yes / No
Was QC designated and verified?	Yes / No / N/A
Is the field COC complete (signed/dated etc)?	Yes / No
Were all comments/issues recorded on COC?	Yes / No
Were all ph s recorded on log-in-sheet and COC s?	Yes / No
Was temperature recorded on log-in sheet & COC s?	Yes / No

Signature Melissa Ste Date 5/5/99

Corrective Action
SEE COC CONCERNING TCLP
Completed By Melissa Ste Date 5/5/99

COMPUCHEM

a division of Liberty Analytical Corp

MAY 11 1999

RFA 226

TCLP Herbicide

10/MAY/99

LEGGETTE BRASHEARS & GRAHAM
ATTN Ken Vogel
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

Subject Report of Data - Account Number# 500944 Order# 34292

ATTN Ken Vogel

Enclosed are the results of analytical work performed in accordance with the referenced account number

This report covers 2 sample(s) appearing on the attached listing

Thank you for selecting CompuChem Environmental for your sample analysis If you should have questions or require additional analytical services please contact your representative at 1-800-833-5097

Sincerely,

Diane Ellmore

CompuChem Environmental
a division of Liberty Analytical

Attachment

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

COMPUCHEM

a division of Liberty Analytical Corp

10/MAY/99

LEGGETTE BRASHEARS & GRAHAM
ATTN
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

ACCOUNT # 500944

CC#	SAMPLE-ID	RECFIPT DATE
936826	CP00001	5/03/99
936841	CP00002	5/03/99

TOTAL NUMBER OF SAMPLES = 2

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

COMPUCHEM
501 Madison Ave
Cary, NC 27513
(919)379-4100

SDG Narrative
Case # 34292
SDG #22601
METHOD 8151-TCLP

Sample Identification CP00001, CP00002

The two (2) soil samples listed above were received intact, properly refrigerated with proper chain-of-custody (COC) documentation on May 3, 1999 The samples were extracted and analyzed following SW846 Method 8151-TCLP protocol for this fraction

The samples were extracted within method holding time All surrogate recoveries were within method criteria The associated matrix spike/matrix spike duplicate met method QC limits The laboratory control sample exhibited high recovery for 2,4-D No target compounds were present above the reporting limits in any of the samples The associated method blank met all quality control criteria

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

Katrina L Travis
GC/HPLC Supervisor
May 10 1999

FORM 1
8151 ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00001

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936826

Sample wt/vol 100 0 (g/ml) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/08/99

Concentrated Extract Volume 2500(ul) Date Analyzed 05/09/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
94-75-7	2 4-D	7 5	U
93-76-5	2 4 5-T	2 5	U

FORM I 8151

FORM 1
8151 ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00001MS

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936835

Sample wt/vol 100 0 (g/ml) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/08/99

Concentrated Extract Volume 2500(ul) Date Analyzed 05/09/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4-D	51	E
93-76-5	2 4 5-T	9 1	

FORM I 8151

FORM 1
8151 ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00001MSD

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936836

Sample wt/vol 100 0 (g/ml) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/08/99

Concentrated Extract Volume 2500(ul) Date Analyzed 05/09/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4-D	52	EP
93-76-5	2 4 5-T	8 4	

FORM I 8151

FORM 1
8151 ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00002

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936841

Sample wt/vol 100 0 (g/ml) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/08/99

Concentrated Extract Volume 2500(ul) Date Analyzed 05/09/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4-D	7 5	U
93-76-5	2 4 5-T	2 5	U

FORM I 8151

FORM 1
8151 ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

PLCSSD

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 937561

Sample wt/vol 100 0 (g/ml) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received _____

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/08/99

Concentrated Extract Volume 2500(ul) Date Analyzed 05/09/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
94-75-7	2 4-D	60	E
93-76-5	2 4,5-T	8 9	

FORM I 8151

FORM 1
8151 ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

PBLKSD

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 937560

Sample wt/vol 100 0 (g/ml) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received _____

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/08/99

Concentrated Extract Volume 2500(ul) Date Analyzed 05/09/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4-D	7 5	U
93-76-5	2 4 5-T	2 5	U

FORM I 8151

FORM 1
8151 ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

TCLPBLK

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 937077

Sample wt/vol 100 0 (g/ml) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received _____

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/08/99

Concentrated Extract Volume 2500(ul) Date Analyzed 05/09/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4-D	2 5	JP
93-76-5	2 4 5-T	2 5	U

FORM I 8151

4C
PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO

PBLKSD

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Lab Sample ID 937560 Lab File ID _____

Matrix (soil/water) WATER Extraction (SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted 05/08/99

Date Analyzed (1) 05/09/99 Date Analyzed (2) 05/09/99

Time Analyzed (1) 1120 Time Analyzed (2) 1120

Instrument ID (1) VARIAN51 Instrument ID (2) VARIAN50

GC Column (1) CLPESTICIDES ID 0 53(mm) GC Column (2) CLPEST2 ID 0 53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES MS and MSD

	EPA SAMPLE NO	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PLCSSD	937561	05/09/99	05/09/99
02	CP00001MS	936835	05/09/99	05/09/99
03	CP00001MSD	936836	05/09/99	05/09/99
04	CP00002	936841	05/09/99	05/09/99
05	CP00001	936826	05/09/99	05/09/99
06	TCLPBLK	937077	05/09/99	05/09/99
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS _____

FORM IV PEST

FORM 2
WATER 8151 SURROGATE RECOVERY

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

GC Column(1) CLPESTICIDES ID 0 53 (mm) GC Column(2) CLPEST2 ID 0 53 (mm)

	CLIENT SAMPLE NO	S1 1 %REC #	S1 2 %REC #	S2 1 %REC #	S2 2 %REC #	S3 1 %REC #	S3 2 %REC #	TOT OUT
01	PBLKSD	71	72					0
02	PLCSSD	79	78					0
03	CP00001MS	74	68					0
04	CP00001MSD	80	84					0
05	CP00002	72	67					0
06	CP00001	78	78					0
07	TCLPBLK	94	69					0
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

ADVISORY
QC LIMITS
S1 = DCAA (30-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 3
WATER 8151 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix Spike - Sample No CP00001

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS REC #	QC LIMITS REC
2,4-D	40	0 0	51	128	70-130
2,4 5-T	10	0 0	9 1	91	70-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	RPD #	QC LIMITS RPD	QC LIMITS REC
2 4-D	40	52	130	2	40	70-130
2 4 5-T	10	8 4	84	2	40	70-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD 0 out of 2 outside limits
Spike Recovery 0 out of 4 outside limits

COMMENTS

FORM III 8151

FORM 3
WATER 8151 LAB CONTROL SAMPLE

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS - REC #	QC LIMITS REC
2,4-D	40	60	150*	70-130
2 4 5-T	10	8 9	89	70-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery 1 out of 2 outside limits

COMMENTS

FORM III 8151

Compuchem Receiving Log 4D-111

ent LILLIAN SLER
der # 31292
oject 21 TN THERMAL PRODUCTS
ote # CK 11516
count # 5009411

Received on 5/3/99 # of COC s 1
Delivered by FED-EX
Freight # 810581589292
Subcontract Y / N
TAT Verbal 48 Hr Hardcopy

PPS / RFA # 224 Page 1 of 1
Lab Instructions Pick GC/MS HI TAT / TCLP V, SV, Pest, Herb, MTLS / Spot PCB, Ign, Cell Lead

SDG	REQ	SAMPLE ID	CCN	AMOUNT / CONTAINER	PARAMETER	ANALYSIS CODE	LINE ITEM	SAMPLE DATE	MX	pH
22612	1	CPC0001	9368426	1 4oz, 2-8oz	TCLP V, SV, PEST HERB MTL PCB Spot	56,114,4,7,11,12,114,6,10,11,13 11	1,2,4,5,7,9	4/30/99	50	NA
22612	2	CPC0002	9368411	↓	TCLP V, SV, Pest, Herb, MTL	↑	1,2,4,5,7,9,11	↓	↓	↓
22612	4	CP00001	9368442	1 8oz	TCL, Ign, Corr, React	749,1,16,1 54,1,17,22,6	13,15,17,19,21	4/30/99	50	NA
22612	5	CP00002	9368450	1 8oz	TCL Ign, Corr, React	↑	↓	↓	↓	↓

MPA 5/3/99

ogged In By [signature] Order Entered By Marlene Swift

yanide samples checked for sulfide and chlorine Y / NA Received in good condition Y / N

olding Blank(s) Counter / Page / CCN s / Temperature(s) 20 °C

CHRYSLER CORPORATION

Chain-of-Custody

04449 A

14

CompuChem
501 Madison Avenue
Cary NC 27513
Phone Number 1 800 833 5097
Fax Number (919) 379-4050

SILICATE LINE SOILPILE

Project Name: DAYTON THERMAL PRODUCTS
Site Location: 1600 WEBSTER ST DAYTON OH
Site Code: SC001
RFA Number: YGQP9900226
Chrysler PM: GARY STANCZUK

Consultant: LEGGETTE, BRASHEARS + GRAHAM INC
Address: 1210 W COUNTY ROAD E., SUITE 700, ST PAUL, MN 55112
Consultant PM: KEN VOGEL
Phone: (651) 490 1405 Fax: (651) 490 1006

Turn around Time Request
24 calendar hrs
(48 calendar hrs)
10 days
28 day

Data Package Deliverables (circle)
(Chrysler Level 1)
Chrysler Level 2
Other (specify)

Matrix Codes
S Soil; SW Surface Water; GW Groundwater; A Air; Sed Sediment; O Other (specify)

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	VOC 8260	SVOCs 8270	PCBs	RCRA METALS	HERBICIDES	PESTICIDES				Volatiles pH <2	Metals pH < 2	Cyanide pH > 12	Other	Remarks
CPCCC01	4-30-99	1505	C	S	3	✓	✓	✓	✓	✓	✓								SEGREGATED SOIL
CPCCC02	4-30-99	1515	C	S	3	✓	✓	✓	✓	✓	✓								CLEAN SOIL

Per Mike Curry & Gary Stanczuk @ Daimler Chrysler, perform the following analyses on both samples TCLP VOC, SVOC, Metals, Pest, Herb & PCBs, reactivity, corrosivity & ignitability DE 5/3/99

Sampler(s): Jennifer Bennesch

Bottles Relinquished under Airbill No

Samples Relinquished under Airbill No: 810581589292

Temperature (corrected): 2.0 C

Relinquished by	Date	Time	Received by	Date	Time	Custody Seal Intact?
Jennifer Bennesch	4-30-99	1535				Yes N
						Yes No
			Received for Laboratory by: [signature]	5/3/99	0905	Yes No

Cooler ID # ~~SIE~~ NA

Is RFA attached complete? (Y) N

Chrysler Corporation 800 Chrysler Drive CIMS 482-00-51, Auburn Hills Michigan 48326-2757

Distribution White copy Data package Yellow Retained by laboratory Pink Retained by sampler

opened coolers at 9:20 AM [signature] 5/3/99

Revision No 1
Dated September 3 1997

LEGGETTE BRASHEARS & GRAHAM
ATTN
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

RECEIVE DATE: 5/03/99
QUOTE NUMBER: 99-00073180000500944
ORDER NUMBER: 34292

SAMPLE ID	TURNAROUND** TIME	ANALYSIS	COMPUCHEM NUMBER
CP00001	2	ZHE Extraction SW846-3rd -Method 1311	936826
		Voa ZHE Method 8240	936826
		TCLP Extraction SW846-3rd -Method 1311	936826
		Semivoa TCLP Method 8270	936826
		Pesticide TCLP 9-25 Method 8080	936826
		Herbicide TCLP Method 8150	936826
		Metals TCLP Methods 6010-7470	936826
		PCBs Method 8080 S/S	936842
		REACTIVITY	936842
		Ignit SW-846 1010/ ASTM D93-90/Case ID	936842
		Corrosivity (AS pH)	936842
		% Moisture, Undecanted/S-S/	936842
CP00002	2	ZHE Extraction SW846-3rd -Method 1311	936841
		Voa ZHE Method 8240	936841
		TCLP Extraction SW846-3rd -Method 1311	936841
		Semivoa TCLP Method 8270	936841
		Pesticide TCLP 9-25 Method 8080	936841
		Herbicide TCLP Method 8150	936841
		Metals TCLP Methods 6010-7470	936841
		PCBs Method 8080 S/S	936850
		REACTIVITY	936850
		Ignit SW-846 1010/ ASTM D93-90/Case ID	936850
		Corrosivity (AS pH)	936850
		% Moisture; Undecanted/S-S/	936850

MS
5/5/99

** Please note that turnaround time and sample due dates will be, whenever applicable, calculated and determined by the last sample received in a Sample Delivery Group

COMPUCHEM
a division of Liberty Analytical

LOG-IN VERIFICATION

Client LBG/CHRYSLER Project SILICATE LINE SOILPILE

Case 34292/RFH 226 Date Received 5/3/99

Were all sample I D s checked?	Yes / No
Were all analyses on COC also on receipt log?	Yes / No
Were any associated line items missing?	Yes / No
Were all parameter's logged in?	Yes / No
Were correct method numbers received?	Yes / No
Is any information absent from receiving log header?	Yes / No
Were all blank lines on the receiving log z ed out?	Yes / No
Was TAT verified (quick turn line items useed?)	Yes / No
Was QC designated and verified?	Yes / No / N/A
Is the field COC complete (signed/dated etc)?	Yes / No
Were all comments/issues recorded on COC?	Yes / No
Were all ph's recorded on log-in-sheet and COC s?	Yes / No
Was temperature recorded on log in sheet & COC s?	Yes / No

Signature Melissa Stu Date 5/5/99

Corrective Action

SEE COC CONCERNING TCLP

Completed By Melissa Stu Date 5/5/99

COMPUCHEM

a division of Liberty Analytical Corp

MAY 11 1999

RFA 226

TCLP metals

10/MAY/99

LEGGETTE BRASHEARS & GRAHAM
ATTN Ken Vogel
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

Subject Report of Data - Account Number# 500944 Order# 34292

ATTN Ken Vogel

Enclosed are the results of analytical work performed in accordance with the referenced account number

This report covers 2 sample(s) appearing on the attached listing

Thank you for selecting CompuChem Environmental for your sample analysis If you should have questions or require additional analytical services please contact your representative at 1-800-833-5097

Sincerely,

Diane Ellmore

CompuChem Environmental
a division of Liberty Analytical

Attachment

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

COMPUCHEM
a division of Liberty Analytical Corp

10/MAY/99

LEGGETTE BRASHEARS & GRAHAM
ATTN
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

ACCOUNT # 500944

CC#	SAMPLE-ID	RECEIPT DATE
936826	CP00001	5/03/99
936841	CP00002	5/03/99

TOTAL NUMBER OF SAMPLES = 2

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

U S EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name COMPUCHEM Contract SW-846

Lab Code COMPU Case No 34292 SAS No SDG No 22601

SOW No SW846

EPA Sample No	Lab Sample ID
CP00001	936826
CP00001D	936840
CP00001M	936838
CP00001S	936837
CP00002	936841
LEACH_BLK	937077

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO

Comments
THE FOLLOWING ANALYTES HAVE BEEN FLAGGED WITH AN "E" TO INDICATE SERIAL DILUTION RESULTS WHICH WERE OUTSIDE CONTROL LIMITS
BARIUM

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature

Signature Thomas P Cole for Name Joe Basile

Date May 6, 1999 Title Laboratory Manager

CompuChem
a Division of Liberty Analytical Corp
501 Madison Avenue Cary NC 27513

INORGANIC CASE SUMMARY NARRATIVE
CASE # 34292 SDG # 22601
PROTOCOL # SW-846

The indicated Sample Delivery Group (SDG) consisting of two (2) soil samples was received into the laboratory information management system (LIMS) on May 3 1999 intact and in good condition with Chain of Custody (COC) records in order Sample ID s reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC

The samples were prepared as leachates then analyzed for the eight TCLP metals (arsenic barium cadmium chromium lead, mercury selenium and silver) using analytical methods delineated in SW 846 (Third Edition) Update III

The Form 10 for the mercury IDL shows a reading of 0 0 ug/L There is an inability to get the IDL 0 048 ug/L to show on the form

Due to spectral interference related to leached samples the selenium results in leachate blank samples are indicative of false positive readings

SAMPLE IDs

The following customer IDs are associated with this SDG

CP00001 CP00001

INSTRUMENTAL QUALITY CONTROL

All calibration verification solutions (ICV & CCV) blanks (ICB CCB) and interference check samples (ICSA & ICSAB) associated with this data were confirmed to be within SW 846 allowable limits

SAMPLE PREPARATION QUALITY CONTROL

The sample preparation procedure verifications (LCSW & PBW) were found to be within acceptable ranges and all field samples were prepared and analyzed within the contract specified holding times

MATRIX RELATED QUALITY CONTROL

The sample matrix spike CCN = 936837 (CP00001S) and sample matrix spike duplicate CCN = 936838 (CP00001M) were found to be outside control limits for selenium The reported concentrations for this analyte is flagged with an N on all associated Form 1 and on Form 5a

An 'N indicates a matrix related interference in the sample preparation procedure &/or analysis for the flagged analyte This is normally the consequence of a relatively high anionic content in the sample or (for some sediments) an inconsistent sample matrix relative to that analyte

SW 846 control limits for matrix spike recoveries are set at 75% to 125% of the analyte quantity added unless original sample concentrations exceed the true values of these spikes by a factor of four or more in this case effected analytes are not flagged even if recoveries fall outside percentage recovery control limits

Post digestion spikes are mandatory for analytes demonstrating unsatisfactory matrix spike recoveries during ICP analysis (excluding silver) The results of such spikes are presented on Form 5b

Unsatisfactory recovery of post digestion spikes of this type do not have bearing upon the aforementioned N flags but may indicate interference during analysis &/or a solution matrix which is hostile to the analyte in question

Satisfactory recovery of an analyte in a post digestion spike of this type implies interference by the required preparation procedure or in the sample matrix itself Lack of uniformity for an analyte in sediments will also result in satisfactory recovery of post-digestion spikes after failure in the related matrix spike

The sample matrix duplicate CCN = 936840 (CP00001D) was found to be inside SW 846 control limits for the requested analytes

SW 846 control limits for duplicate determinations are +/ 20% Relative Percent Difference (RPD) for concentrations greater than or equal to five times the CRDL in both the original and duplicate samples and +/ the CRDL for concentrations less than five times the CRDL The RPD is not calculated if both the original and duplicate values fall below the IDL

A five fold serial dilution of sample CCN = 936826 (CP00001L) was performed in accordance with SW 846 requirements for ICP analysis

The adjusted sample concentrations were outside control limits for barium which is flagged with an E on all associated Form 1 the Cover Page and Form 9

An E indicates that a chemical or physical interference effect was encountered during the analysis of the flagged analyte As a result of this interference all values for the analyte in the same matrix must be considered to be estimated quantities

SW 846 control limits for serial dilution are defined as a deviation less than or equal to 10% in the dilution adjusted concentrations from the original values for all analyte concentrations with values greater than fifty (50) times their respective Instrument Detection Limit (IDL) in the original sample

This SDG package was processed using the Ward Scientific software This software package has a seven character limitation on the Forms 13 and 14 any sample ID s which exceed seven characters are truncated from left to right on these forms

Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee as verified by the following signature

Thomas R Cole
Chemist II
May 6 1999

CompuChem
a Division of Liberty Analytical Corp
501 Madison Avenue Cary NC 27513

DATA REPORTING QUALIFIERS FOR INORGANICS

On Form I under the column labeled C for concentration qualifier and Q for qualifier each result is flagged with the specific data reporting qualifiers listed below as appropriate Up to five qualifiers may be reported on Form I for each analyte

The C (concentration) qualifiers used are

U This flag indicates the analyte was analyzed for but not detected This reported value was obtained from a reading that was less than the Instrument Detection Limit (IDL) The IDL will be adjusted to reflect any dilution and for soils the percent moisture

B This flag indicates the analyte was analyzed for and the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL)

The Q qualifiers used are

E This flag indicates an estimated value This flag is used

1 When the serial dilution (a five fold dilution for CLP and a five fold dilution for SW 846 method 6010B) results are not within 10% The analyte concentration must be sufficiently high (minimally a factor of 50X above the IDL in the original sample)
2 When the analytical spike recovery associated with the sample is below 40% after two successive dilutions by Graphite Furnace Atomic Absorption (GFAA)

M *This flag applies to GFAA analyses for concentrations greater than the Contract Required* Detection Limit (CRDL) This flag is only used for GFAA if the analytical sample or analytical spike duplicate injection reading is not within 20% of the Relative Standard Deviation (RSD)

N This flag indicates the sample spike recovery is outside of control limits

***** This flag is used for duplicate analysis when the sample and the sample duplicate results are not within control limits

S This flag applies to GFAA analyses to indicate the reported value was determined by the Method Of Standard Addition (MSA)

W This flag applies to GFAA analyses when the post digestion spike (analytical spike) is out of control limits (85% 115%) while sample absorbance is less than 50% of spike absorbance [spike is defined as (absorbance or concentration of spike sample) minus (absorbance or concentration of the sample)]

+ This flag applies to GFAA analyses when the correlation coefficient for the MSA is less than 0 995 after two MSA analyses

NOTE Entering "S W or + is mutually exclusive No combination of these qualifiers can appear in the same field for an analyte

The extensions D S, M L A added to the end of the client ID represent as follows

D	matrix duplicate
S	matrix spike
M	matrix spike duplicate
L	serial dilution
A	post digestion spike

Method Codes

P	ICP PLASMA
CV	MERCURY COLD VAPOR AA
CA	MIDI DISTILLATION SPECTROPHOTOMETRIC
F	FURNACE AA

CHRYSLER CORPORATION

Chain-of-Custody

04449 A

SILICATE LINE SOILPILE

CompuChem
501 Madison Avenue
Cary NC 27513
Phone Number 1 800 833 5097
Fax Number (919) 379-4050

Project Name: DAYTON THERMAL PRODUCTS
Site Location: 1600 WEBSTER ST DAYTON OH
Site Code: SC001
RFA Number: YGQP9900226
Chrysler PM: GARY STANCZUK

Consultant: LEGGETTE, BRASHEARS + GRAHAM INC
Address: 1210 W COUNTY ROAD E., SUITE 700, ST PAUL, MN 55112
Consultant PM: KEN VOGEL
Phone: (651) 490 1405 Fax: (651) 490 1006

Turn around Time Request
24 calendar hrs
48 calendar hrs
10 days
28 days

Data Package Deliverables (circle)
Chrysler Level 1
Chrysler Level 2
Other (specify)

Matrix Codes
S Soil
SW Surface Water
GW Groundwater
A Air
Sed Sediment
O Other (specify)

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	VOC 8260	SVOCs 8270	PCBs	RCRA METALS	HERBICIDES	PESTICIDES				Volatiles pH <2	Metals pH <2	Cyanide pH > 12	Other ___	Remarks
CP00001	4/30/99	1505	C	S	3	✓	✓	✓	✓	✓	✓								SEGREGATED SOIL
CP00002	4-30-99	1515	C	S	3	✓	✓	✓	✓	✓	✓								CLEAN SOIL

Per Mike Curry & Gary Stanczuk @ Daimler Chrysler, perform the following analyses on both samples TCLP VOC, SVOC, Metals, Pest, Herb & PCBs, reactivity, corrosivity & ignitability DE 5/3/99

Lab Use Only

Sampler(s): Jennifer Bennesch

Bottles Relinquished under Airbill No

Samples Relinquished under Airbill No 810581589292

Temperature (Corrected) 20C

Relinquished by	Date	Time	Received by	Date	Time	Custody Seal Intact?
Jennifer Bennesch	4/30/99	1535				Yes N
R linquished by	Date	Time:	Received for Laboratory by	Date	Time	Custody Seal Intact?
			[signature]	5/3/99	0905	Yes N

C I ID # ~~SIE~~ NA

Is RFA sampling sample? Y No

Chrysler Corporation 800 Chrysler Drive CIMS 482-00 51, Auburn Hills Michigan 48326-2757

Distribution White copy Data package Yellow Retained by laboratory Pink Retained by sampler

opened cooler at 9 20 am [signature] 5/3/99

R is on No 1
t d S pt mbe 23 1997

CompuChem Receiving Log

Client [illegible]
Order # 31292
Project [illegible] THERMAL PRODUCTS
Quote # [illegible] 17318
Account # [illegible]

Received on 3/29 # of COCs 1
Delivered by FED EX
Freight # 81C 5815 8 9292
Subcontract Y / N
TAT Verbal 45 Hr Hardcopy

PPS / RFA # 224 Page 1 of 1
Lab Instructions Pick GC/MS HI TAT / TCLP
VOA, Pest, Herb, MTBE / Apt PCB, Lyn Pb, Acac

	SDG	REQ	SAMPLE ID	CCN	AMOUNT / CONTAINER	PARAMETER	ANALYSIS CODE	LINE ITEM	SAMPLE DATE	MX	pH
1	[illegible]	1	CPC [illegible]	1368226	1 4oz, 2-8oz	CLP VOA, SV, PEST HERB MTBE PCB	[illegible]	1,2,1[illegible]9,9 3 11	4/30/99	SO	N/A
2	[illegible]	2	CPC[illegible]2	1368811	↓	[illegible]	↓	1,4,4,5,7,9,1	↓	↓	↓
3	[illegible]	4	P10001	1368842	1 8oz	[illegible]	[illegible]	13,15,17,19,21	4/30/99	SO	N/A
4	[illegible]	5	CP00002	1368850	1 8oz	[illegible]	↓	↓	↓	↓	↓
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

MPS 5/5/99

Logged In By [signature]
Order Entered By [signature]
Cyanide samples checked for sulfide and chlorine Y / NA
Received in good condition Y / N
Holding Blank(s) Counter / Page ____ / ____ CCNs ____ / ____
Temperature(s) 20 °C

U S EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO

CP00001

Lab Name COMPUCHEM Contract SW-846

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936826

Level (low/med) LOW Date Received 05/03/99

% Solids 0 0

Concentration Units (ug/L or mg/kg dry weight) UG/L

CAS No	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6 6	B		P
7440-39-3	Barium	707		E	P
7440-43-9	Cadmium	15 9			P
7440-47-3	Chromium	5 8			P
7439-92-1	Lead	38 4			P
7439-97-6	Mercury	0 05	U		CV
7782-49-2	Selenium	17 9		N	P
7440-22-4	Silver	0 40	U		P

Color Before COLORLESS Clarity Before CLEAR Texture

Color After COLORLESS Clarity After CLEAR Artifacts

Comments

Duplicate (CP00001D)

FORM I - IN SW846

U S EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO

CP00002

Lab Name COMPUCHEM Contract SW-846

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936841

Level (low/med) LOW Date Received 05/03/99

% Solids 0 0

Concentration Units (ug/L or mg/kg dry weight) UG/L

CAS No	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11 3			P
7440-39-3	Barium	385		E	P
7440-43-9	Cadmium	17 2			P
7440-47-3	Chromium	0 97	B		P
7439-92-1	Lead	16 5			P
7439-97-6	Mercury	0 05	U		CV
7782-49-2	Selenium	16 9		N	P
7440-22-4	Silver	0 40	U		P

Color Before COLORLESS Clarity Before CLEAR Texture

Color After COLORLESS Clarity After CLEAR Artifacts

Comments

FORM I - IN SW846

U S EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO

LEACH BLK

Lab Name COMPUCHEM Contract SW-846

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 937077

Level (low/med) LOW Date Received 05/05/99

% Solids 0 0

Concentration Units (ug/L or mg/kg dry weight) UG/L

CAS No	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5 4	B		P
7440-39-3	Barium	2 2	B	E	P
7440-43-9	Cadmium	0 71	B		P
7440-47-3	Chromium	0 99	B		P
7439-92-1	Lead	1 0	B		P
7439-97-6	Mercury	0 05	U		CV
7782-49-2	Selenium	14 0		N	P
7440-22-4	Silver	0 40	U		P

Color Before COLORLESS Clarity Before CLEAR Texture

Color After COLORLESS Clarity After CLEAR Artifacts

Comments

FORM I - IN SW846

U S EPA - CLP

3
BLANKS

Lab Name COMPUCHEM Contract SW-846

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Preparation Blank Matrix (soil/water) WATER

Preparation Blank Concentration Units (ug/L or mg/kg) UG/L

Analyte	Initial Calib Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Arsenic	1 40	U	3 24	B	1 40	U	1 40	U	5 75	B	P
Barium	0 10	U	0 36	B	0 50	B	0 50	B	0 56	B	P
Cadmium	0 21	B	0 43	B	0 49	B	0 55	B	0 38	B	P
Chromium	0 50	U	0 50	U	0 50	U	0 50	U	-0 76	B	P
Lead	1 00	U	1 00	U	1 00	U	1 00	U	1 00	U	P
Mercury	0 05	U	0 05	U	0 05	U	0 05	U	0 05	U	CV
Selenium	1 60	U	1 60	U	1 60	U	1 60	U	1 60	U	P
Silver	0 40	U	0 40	U	0 40	U	0 40	U	-0 44	B	P

U S EPA - CLP

3
BLANKS

Lab Name COMPUCHEM_____ Contract SW-846____

Lab Code COMPU_ Case No 34292_ SAS No _____ SDG No 22601_

Preparation Blank Matrix (soil/water) _____

Preparation Blank Concentration Units (ug/L or mg/kg) _____

Analyte	Initial Calib Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Arsenic			1 40	U							P
Barium			0 52	B							P
Cadmium			0 43	B							P
Chromium			0 50	U							P
Lead			1 00	U							P
Mercury			0 05	U	0 05	U					CV
Selenium			1 60	U							P
Silver			0 40	U							P

U S EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO

CP00001M

Lab Name COMPUCHEM Contract SW-846

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Level (low/med) LOW

% Solids for Sample 0 0

Concentration Units (ug/L or mg/kg dry weight) UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Arsenic	75-125	5481 0000		6 5900	B	5000 00	109 5		P
Barium	75-125	96560 0000		707 1000		100000 00	95 9		P
Cadmium	75-125	858 2000		15 9100		1000 00	84 2		P
Chromium	75-125	4334 0000		5 8450		5000 00	86 6		P
Lead	75-125	4534 0000		38 4000		5000 00	89 9		P
Mercury	75-125	191 2300		0 0500	U	200 00	95 6		CV
Selenium	75-125	1302 0000		17 9500		1000 00	128 4	N	P
Silver	75-125	918 1000		0 4000	U	1000 00	91 8		P

Comments

U S EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO

CP00001S

Lab Name COMPUCHEM Contract SW-846

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Level (low/med) LOW

% Solids for Sample 0 0

Concentration Units (ug/L or mg/kg dry weight) UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Arsenic	75-125	5436 0000		6 5900	B	5000 00	108 6		P
Barium	75-125	92960 0000		707 1000		100000 00	92 3		P
Cadmium	75-125	872 0000		15 9100		1000 00	85 6		P
Chromium	75-125	4386 0000		5 8450		5000 00	87 6		P
Lead	75-125	4561 0000		38 4000		5000 00	90 5		P
Mercury	75-125	195 0780		0 0500	U	200 00	97 5		CV
Selenium	75-125	1282 0000		17 9500		1000 00	126 4	N	P
Silver	75-125	953 4000		0 4000	U	1000 00	95 3		P

Comments

U S EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO

CP00001A

Lab Name COMPUCHEM Contract SW-846

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Level (low/med) LOW

Concentration Units ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Arsenic									NR
Barium									NR
Cadmium									NR
Chromium									NR
Lead									NR
Mercury									NR
Selenium		29 44		17 95		10 0	114 9		P
Silver									NR

Comments

FORM V (Part 2) - IN SW846

U S EPA - CLP

7
LABORATORY CONTROL SAMPLE

Lab Name COMPUCHEM_____ Contract SW-846____

Lab Code COMPU_ Case No 34292_ SAS No _____ SDG No 22601_

Solid LCS Source _____

Aqueous LCS Source HIPUR_____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Arsenic	5000 0	4680 00	93 6						
Barium	100000	92820 00	92 8						
Cadmium	1000 0	914 00	91 4						
Chromium	5000 0	4668 00	93 4						
Lead	5000 0	4671 00	93 4						
Mercury									
Selenium	1000 0	936 60	93 7						
Silver	1000 0	901 30	90 1						

U S EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name COMPUCHEM_____ Contract SW-846____

Lab Code COMPU_ Case No 34292_ SAS No _____ SDG No 22601_

Solid LCS Source _____

Aqueous LCS Source HIPUR_____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Arsenic									
Barium									
Cadmium									
Chromium									
Lead									
Mercury	200 0	192 09	96 0						
Selenium									
Silver									

MAY 11 1999

COMPUCHEM

a division of Liberty Analytical Corp

RFA226

06/MAY/99

PCBS

LEGGETTE BRASHEARS & GRAHAM
ATTN Ken Vogel
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

Subject Report of Data - Account Number# 500944 Order# 34292

ATTN Ken Vogel

Enclosed are the results of analytical work performed in accordance with the referenced account number

This report covers 2 sample(s) appearing on the attached listing

Thank you for selecting CompuChem Environmental for your sample analysis If you should have questions or require additional analytical services please contact your representative at 1-800-833-5097

Sincerely,

Diane Ellmore

CompuChem Environmental
a division of Liberty Analytical

Attachment

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

COMPUCHEM

a division of Liberty Analytical Corp

06/MAY/99

LEGGETTE BRASHEARS & GRAHAM
ATTN
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

ACCOUNT # 500944

CC#	SAMPLE-ID	RECEIPT DATE
936842	CP00001	5/03/99
936850	CP00002	5/03/99

TOTAL NUMBER OF SAMPLES = 2

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

CompuChem
a division of Liberty Analytical Corp
501 Madison Avenue
Cary North Carolina 27513

SDG NARRATIVE

CASE 34244
SDG 22602

SAMPLE IDENTIFICATIONS CP00001 CP00002

The two (2) soil samples listed above were received intact properly refrigerated with proper chain of custody (COC) documentation on May 3 1999 The samples were prepared and analyzed following SW846 Method 8082 protocol for the PCB fractions

PCBs

Extraction and analysis holding time requirements were met for both of these samples No PCB target analytes were confirmed by dual column analysis at a concentration above the reporting limit in either of these samples

All of the surrogates met recovery and retention time criteria in the analyses of these samples The associated method blank met all quality control criteria No PCBs were confirmed in the method blank

CP00002 was used as the original to prepare the duplicate matrix spikes The associated duplicate matrix spikes met all advisory accuracy and precision criteria The associated Laboratory Control Sample (LCS) met all quality control

I certify that this data package is in compliance with the terms and conditions of the contract both technically and for completeness for other than conditions listed above Release of the data contained in the hardcopy data package and in the computer readable data submitted on floppy diskette has been authorized by the Laboratory Manager or his designee as verified by the signature below

Stephanie W Winfield 5-5-99
Stephanie W Winfield
Technical Reviewer
May 5 1999

DATA REPORTING QUALIFIERS

On the Form I under the column labeled Q for qualifier each result is flagged with the specific data reporting qualifiers listed below as appropriate Up to five qualifiers may be reported on Form I for each compound The qualifiers used are

U This flag indicates the compound was analyzed for but not detected The Contract Required Quantitation Limit (CRQL) (or Reporting Limit) will be adjusted to reflect any dilution and for soils the percent moisture

J This flag indicates an estimated value The flag is used as detailed below

1 When estimating a concentration for tentatively identified compounds (TICs) where a response factor of 1 0 is assumed for the TIC analyte

2 When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria and the result is less than the CRQL (or Reporting Limit) but greater than zero and

3 When the retention time data indicates the presence of a compound that meets the pesticide/Aroclor or other GC or HPLC identification criteria and the result is less than the CRQL (or Reporting Limit) but greater than zero For example if the CRQL (or Reporting Limit) is 10 µg/L but a concentration of 3 µg/L is calculated it is reported as 3J

N This flag indicates presumptive evidence of a compound This flag is only used for TICs where the identification is based on a mass spectral library search For generic characterization of a TIC such as chlorinated hydrocarbon the N flag is not used

P In the EPA's Contract Laboratory Program (CLP) this flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns The lower of the two values is reported on Form I and flagged with a P
For SW 846 GC and HPLC analyses when the Relative Percent Difference (RPD) is greater than 40% and there is no evidence of chromatographic anomalies or interferences then the higher of the two values is reported and flagged with a P When the RPD is equal to or less than 40% our policy is to also report the higher of the two values although the choice could be a project specific issue

C **This flag applies to GC or HPLC results where the identification has been confirmed by GC/MS If GC/MS confirmation was attempted but was unsuccessful this flag is not applied a laboratory-defined flag is used instead (see the X/Y/Z qualifier)**

DATA REPORTING QUALIFIERS (continued)

B This flag is used when the analyte is found in the associated blank as well as in the sample It indicates probable blank contamination and warns the data user to take appropriate action This flag is used for a TIC as well as for a positively identified target compound The combination of flags BL or L B is not an allowable policy Blank contaminants are flagged B only when they are detected in the sample

E This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis If one or more compounds have a response greater than the upper level of the calibration range the sample or extract will be diluted and reanalyzed All such compounds with a response greater than the upper level of the calibration range will have the concentration flagged with an E on Form I for the original analysis

D If a sample or extract is reanalyzed at a higher dilution factor for example when the concentration of an analyte exceeds the upper calibration range the DL suffix is appended to the sample number on Form I for the more diluted sample and **all** reported concentrations on that Form I are flagged with the D flag This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract

NOTE 1 The D flag is not applied to compounds which are not detected in the sample analysis i e compounds reported with the CRQL (or Reporting Limit) and the U flag

NOTE 2 Separate Form Is are used for reporting the original analysis (Client Sample No XXXXX) and the more diluted sample analysis (Client Sample No XXXXXDL) i e the results from both analyses <u>are not combined</u> on a single Form I

A This flag indicates that a TIC is a suspected aldol condensation product

S This flag indicates that an analyte was detected by a single column GC analysis but the result was below the Reporting Limit This flag is only used when clients request a second (confirmation) column analysis after detecting an analyte above the Reporting Limit in the initial single column analysis This flag alerts the data user that only an analyte was detected below the Reporting Limit and a second (confirmation) analysis was not performed

X/Y/Z Other specific flags may be required to properly define the results If used the flags will be fully described in the SDG Narrative The laboratory defined flags are limited to X Y and Z

CompuChem Receiving Log

48-911

Client LBG/CHRYSLER
Order # 34292
Project DAYTON THERMAL PRODUCTS
Quote # 99-7318
Account # 500744

Received on 5/3/99 # of COC's 1
Delivered by FED-EX
Freight # 810581589292
Subcontract Y (N)
TAT Verbal 48 Hr Hardcopy

PPS (RFA) # 226 Page 1 of 1
Lab Instructions Pick QC/48 Hr TAT/TCLP 4 V,SV,Pest,Herb,MTLS / Rpt PCB, Ign Corr, Reac/

	SDG	REQ	SAMPLE ID	CCN	AMOUNT / CONTAINER	PARAMETER	ANALYSIS CODE	LINE ITEM	SAMPLE DATE	MX	pH
1	22602	1	CP00001	936826	1-4oz, 2-8oz	TCLP V, SV, PEST, HERB MTL PCB NO	458,114,457,1143,1146,1108,11	1,2,4,6,7,9 3 11	4/30/99	50	NA
2	22601	2	CP00002	936841	↓	TCLP V,SV,Pest,Herb,MTL	↓	1,2,4,5,7, 9,11	↓	↓	↓
3	22602	4	CP00001	936842	1 8oz	PCB, Ign, Corr, Reac	749,1316,1254,1317,936	13,15,17,19,21	4/30/99	50	NA
4	22602	5	CP00002	936850	1 8oz	PCB, Ign, Corr, React	↓	↓	↓	↓	↓
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

5/3/99

Logged In By [signature]
Order Entered By Marlene J. Swift
Cyanide samples checked for sulfide and chlorine Y / (NA)
Received in good condition (Y) / N
Holding Blank(s) Counter / Page ____ / ____ CCN s ____ / ____
Temperature(s) 20 °C

CHRYSLER CORPORATION

Chain-of-Custody

04449 A

SILICATE LINE SOILPILE

CompuChem
501 Madison Avenue
Cary NC 27513
Phone Number 1 800 833 5097
Fax Number (919) 379-4050

Project Name: DAYTON THERMAL PRODUCTS
Site Location: 1600 WEBSTER ST DAYTON OH
Site Code: SC001
RFA Number: 9GQP9900226
Chrysler PM: GARY STANCZUK

Consultant: LEGGETTE, BRASHEARS + GRAHAM INC
Address: 1210 W COUNTY ROAD E., SUITE 700, ST PAUL, MN 55112
Consultant PM: KEN VOGEL
Phone: (651) 490 1405 Fax: (651) 490 1006

Turn around Time Request: 24 calendar hrs; 48 calendar hrs; 10 days; 28 days

Data Package Deliverables (circle): Chrysler Level 1; Chrysler Level 2; Other (specify)

Matrix Codes: S Soil; SW Surface Water; GW Groundwater; A - Air; Sed Sediment; O - Other (specify)

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	VOC 8260	SVOCs 8270	PCBs	RCRA METALS	HERBICIDES	PESTICIDES				Volatiles pH <2	Metals pH < 2	Cyanide pH > 12	Other	Remarks
CP00001	4-30-99	1505	C	S	3	✓	✓	✓	✓	✓	✓								SEGREGATED SOIL
CP00002	4-30-99	1515	C	S	3	✓	✓	✓	✓	✓	✓								CLEAN SOIL

Per Mike Curry & Gary Stanczuk @ Daimler Chrysler, perform the following analysis on both samples TCLP VOC, SVOC, Metals, Pest, Herb & PCBs, reactivity, corrosivity & ignitability DE 5/3/99

Sampler(s): Jennifer Bennesch

Cooler ID # ~~SIC~~ NA

Is RFA sampling complete? Yes No

Bottles Relinquished under Airbill No.

Samples Relinquished under Airbill No. 810581589292

Temperature (corrected) 2.0 C

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Custody Seal Intact?
Jennifer Bennesch	4-30-99	1535				Yes No
						Yes No
			Received for Laboratory by:	5/3/99	0905	Yes No

Chrysler Corporation 800 Chrysler Drive CIMS 482-00-51 Auburn Hills Michigan 48326-2757

Distribution White copy Data package Yellow Retained by laboratory Pink Retained by sampler

opened cooler at 9:20 AM 5/3/99

Revision No 1
Created September 23 1997

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00001

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22602

Matrix (soil/water) SOIL Lab Sample ID 936842

Sample wt/vol 30 0 (g/mL) G Lab File ID _____

% Moisture 7 decanted (Y/N) N Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SONC Date Extracted 05/03/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/04/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	35	U
11104-28-2------	Aroclor-1221	46	U
11141-16-5------	Aroclor-1232	35	U
53469-21-9------	Aroclor-1242	24	U
12672-29-6------	Aroclor-1248	24	U
11097-69-1------	Aroclor-1254	23	J
11096-82-5------	Aroclor-1260	35	U

FORM I PEST

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00002

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22602

Matrix (soil/water) SOIL Lab Sample ID 936850

Sample wt/vol 30 0 (g/mL) G Lab File ID _____

% Moisture 3 decanted (Y/N) N Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SONC Date Extracted 05/03/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/04/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	34	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	34	U
53469-21-9	Aroclor-1242	23	U
12672-29-6	Aroclor-1248	23	U
11097-69-1	Aroclor-1254	7 4	J
11096-82-5	Aroclor-1260	34	U

FORM I PEST

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

PBLKQE

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22602

Matrix (soil/water) SOIL Lab Sample ID 936868

Sample wt/vol 30 0 (g/mL) G Lab File ID _____

% Moisture 0 decanted (Y/N) N Date Received _____

Extraction (SepF/Cont/Sonc) SONC Date Extracted 05/03/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/03/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	32	U
11104-28-2------	Aroclor-1221	42	U
11141-16-5------	Aroclor-1232	32	U
53469-21-9------	Aroclor-1242	22	U
12672-29-6------	Aroclor-1248	22	U
11097-69-1------	Aroclor-1254	22	U
11096-82-5------	Aroclor-1260	32	U

FORM I PEST

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO

PBLKQE

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22602

Lab Sample ID 936868 Lab File ID _____

Matrix (soil/water) SOIL Extraction (SepF/Cont/Sonc) SONC

Sulfur Cleanup (Y/N) N Date Extracted 05/03/99

Date Analyzed (1) 05/03/99 Date Analyzed (2) 05/03/99

Time Analyzed (1) 1900 Time Analyzed (2) 1900

Instrument ID (1) VARIAN72 Instrument ID (2) VARIAN70

GC Column (1) DB-608 ID 0 53(mm) GC Column (2) RTX-1701 ID 0 53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD

	EPA SAMPLE NO	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PLCSQE	936867	05/03/99	05/03/99
02	CP00001	936842	05/04/99	05/04/99
03	CP00002	936850	05/04/99	05/04/99
04	CP00002MS	936843	05/04/99	05/04/99
05	CP00002MSD	936844	05/04/99	05/04/99
06				
07				
08				
09				
10				
11				
12				
13				
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17				
18				
19				
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22				
23				
24				
25				
26				

COMMENTS _____

FORM IV PEST

FORM 2
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22602

GC Column(1) RTX-1701 ID 0 53 (mm) GC Column(2) DB-608 ID 0 53 (mm)

	CLIENT SAMPLE NO	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKQE	77	77	86	89			0
02	PLCSQE	79	76	86	89			0
03	CP00001	94	72	123	77			0
04	CP00002	82	83	81	70			0
05	CP00002MS	78	82	78	75			0
06	CP00002MSD	84	84	121	86			0
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
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19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (30-150)
S2 (DCB) = Decachlorobiphenyl (30-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 3
SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22602

Matrix Spike - Sample No CP00002

COMPOUND	SPIKE ADDED (ug/Kg	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC
Aroclor-1254	340	7 4	290	83	50-150

COMPOUND	SPIKE ADDED (ug/Kg	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	REC
Aroclor-1254	340	290	83	0	20	50-150

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD 0 out of 1 outside limits
Spike Recovery 0 out of 2 outside limits

COMMENTS

FORM 3
SOIL PESTICIDE LAB CONTROL SAMPLE

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22602

COMPOUND	SPIKE ADDED (ug/Kg	LCS CONCENTRATION (ug/Kg)	LCS % REC #	QC LIMITS REC
Aroclor-1254	330	270	82	50-150

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery 0 out of 1 outside limits

COMMENTS

CompuChem
A Division of Liberty Analytical Corp
501 Madison Avenue
Cary, NC 27513

MAY 1 1 1999 May 31 1999

RFA226

Ms Kai Hansen
Leggette Brashears & Graham
1210 West County Rd E
Suite 700
St Paul, MN 55112

Dear Ms Hansen

We at CompuChem are pleased to provide our report for the analysis you requested
Data for the following samples are enclosed

Client ID Number	CompuChem ID Number	Analysis Code	Case Number	Description of Work Requested
CP00001	936842	1317	34292/22602	Corrosivity by pH
CP00002	936850	1254		Ignitability
		1316		Reactive Cyanide
		1316		Reactive Sulfide

Thank you for selecting CompuChem Environmental for your sample analysis
If you have any questions concerning this report or the analytical methods employed, please contact your Sales Representative at 919-379-4100

Sincerely,

PROJECT MANAGER

ANALYTICAL REPORT OF DATA - CASE # 34292/22602

SUBMITTED TO
Ms Kai Hansen
Leggette Brashears & Graham
1210 West County Rd E
Suite 700
St Paul, MN 55112

LABORATORY CHRONICLE - CORROSIVITY BY PH ANALYSIS

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	DATE SAMPLE RECEIVED	DATE ANALYSIS COMPLETED
1	CP00001	936842	05/03/99	05/04/99
2	CP00002	936850	05/03/99	05/04/99

ANALYTICAL REPORT OF DATA - CASE # 34292/22602

SUBMITTED TO
Ms Kai Hansen
Leggette Brashears & Graham
1210 West County Rd E
Suite 700
St Paul, MN 55112

LABORATORY CHRONICLE REACTIVE SULFIDE ANALYSIS

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	DATE SAMPLE RECEIVED	DATE ANALYSIS COMPLETED
1	CP00001	936842	05/03/99	05/04/99
2	CP00002	936850	05/03/99	05/04/99

ANALYTICAL REPORT OF DATA - CASE # 34292/22602

SUBMITTED TO
Ms Kai Hansen
Leggette Brashears & Graham
1210 West County Rd E
Suite 700
St Paul MN 55112

LABORATORY CHRONICLE - REACTIVE CYANIDE ANALYSIS

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	DATE SAMPLE RECEIVED	DATE ANALYSIS COMPLETED
1	CP00001	936842	05/03/99	05/04/99
2	CP00002	936850	05/03/99	05/04/99

ANALYTICAL REPORT OF DATA - CASE # 34292/22602

SUBMITTED TO
Ms Kai Hansen
Leggette Brashears & Graham
1210 West County Rd E
Suite 700
St Paul, MN 55112

LABORATORY CHRONICLE - IGNITABILITY ANALYSIS

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	DATE SAMPLE RECEIVED	DATE ANALYSIS COMPLETED
1	CP00001	936842	05/03/99	05/05/99
2	CP00002	936850	05/03/99	05/05/99

CORROSIVITY BY PH ANALYSIS

SUMMARY REPORT

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	CONCENTRATION (STANDARD pH UNITS)	REPORTING LIMIT (STANDARD pH UNITS)
1	CP00001	936842	8 4	N/A
2	CP00002	936850	8 6	N/A

Reviewed by/ID# Joe Bauch 12381 Date 5/5/99

IGNITABILITY ANALYSIS

SUMMARY REPORT

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	CONCENTRATION (degree F)	REPORTING LIMIT (degree F)
1	CP00001	936842	> 140	68
2	CP00002	936850	> 140	68

Reviewed by/ID# Joe Baccle / 2381 Date 5/5/89

REACTIVE CYANIDE ANALYSIS

SUMMARY REPORT

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	CONCENTRATION (mg/Kg)	REPORTING LIMIT (mg/Kg)
1	CP00001	936842	< 134	134
2	CP00002	936850	< 129	129

Reviewed by/ID# Joe Bracke 12381 Date 5/5/99

REACTIVE SULFIDE ANALYSIS

SUMMARY REPORT

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	CONCENTRATION (mg/Kg)	REPORTING LIMIT (mg/Kg)
1	CP00001	936842	< 134	134
2	CP00002	936850	< 129	129

Reviewed by/ID# Joe Bazale 12381 Date 5/5/99

CORROSIVITY BY PH ANALYSIS

QUALITY CONTROL REPORT

CASE 34292/22602
MATRIX SOIL

Analyst 2356
Date Analyzed 05/04/99

BLANK SPIKE (BS) COMPUCHEM # BS

TRUE VALUE STANDARD pH UNITS)	BS CONC (STANDARD pH UNITS)	ACCEPTANCE LIMITS (STANDARD pH UNITS)
9 050	9 068	8 85 - 9 25

ORIG SAMPLE COMPUCHEM # 936842
MATRIX DUP COMPUCHEM # DUP

SAMPLE VALUE STANDARD pH UNITS)	DUPLICATE VALUE (STANDARD pH UNITS)
8 436	8 462

REACTIVE CYANIDE ANALYSIS

QUALITY CONTROL REPORT

CASE 34292/22602
MATRIX SOIL

Analyst 2356
Date Analyzed 05/04/99

BLANK SPIKE (BS) COMPUCHEM # BS

SPIKE ADDED (mg/Kg)	BS CONC (mg/Kg)	BS % RECOVERY
40 0	40 0	100 0

ORIG SAMPLE COMPUCHEM # 936842
MATRIX DUP COMPUCHEM # DUP

SAMPLE CONC (mg/Kg)	DUP CONC (mg/Kg)	RPD
< 134	< 134	ND

COMPUCHEM #	QC TYPE	AMOUNT DETECTED (mg/Kg)
BLK	METHOD BLANK	< 125

RPD = RELATIVE PERCENT DIFFERENCE
ND = NON-DETERMINABLE RELATIVE PERCENT DIFFERENCE

IGNITABILITY ANALYSIS

QUALITY CONTROL REPORT

CASE 34292/22602
MATRIX SOIL

Analyst 2356
Date Analyzed 05/05/99

BLANK SPIKE (BS) COMPUCHEM # p-Xylene

TRUE VALUE (degree F)	BS VALUE (degree F)	ACCEPTANCE LIMITS (degree F)
81 0	79 3	79 - 83

ORIG SAMPLE COMPUCHEM # 936842
MATRIX DUP COMPUCHEM # DUP

SAMPLE CONC (degree F)	DUP CONC (degree F)
> 140	> 140

REACTIVE SULFIDE ANALYSIS

QUALITY CONTROL REPORT

CASE 34292/22602
MATRIX SOIL

Analyst 2356
Date Analyzed 05/04/99

BLANK SPIKE (BS) COMPUCHEM # BS

SPIKE ADDED (mg/Kg)	BS CONC (mg/Kg)	BS % RECOVERY
1000	940	94 0

ORIG SAMPLE COMPUCHEM # 936842
MATRIX DUP COMPUCHEM# DUP

SAMPLE CONC (mg/Kg)	DUP CONC (mg/Kg)	RPD
< 134	< 134	ND

COMPUCHEM #	QC TYPE	AMOUNT DETECTED (mg/Kg)
BLK	METHOD BLANK	< 125

RPD = RELATIVE PERCENT DIFFERENCE
ND = NON DETERMINABLE RELATIVE PERCENT DIFFERENCE

CompuChem a division of Liberty Analytical Corp Logbook 1 GG 3

pH Determination Run Log

Fisher Scientific Model #50

Operator lcocke

Page 1 of 1

Date 5/4/99

SDG 34292/22602

#	CompuChem Number	Customer ID	Reagent Reference #	pH	Temperature (°C)
	200	N/A	IM2-15416	2000	21.6
	400		IM2 15414	4003	21.7
	700		IM2 15324	7002	21.6
	1000		IM2 15415	10003	21.6
1	LCSS	EKA9961 TV905	IM1 67	9068	21.2
2	936842	LP00001	N/A	8436	22.3
3	936842D	CFC0001D		8462	22.4
4	936850	CFC0002		6562	22.2
	Check Std	TV-700	IM2 15324	7006	21.5

lcocke 5/4/99

Buffer	Slope	Efficiency
4.00	58.07	98.2
7.00	59.03	99.8
10.00	58.01	98.1

- lc 5/4/99

Reviewed By Joe Bascle

Date 5/5/99

IGNITABILITY RUNLOG

OPERATOR [illegible]
DATE 5/5/99
AMBIENT BAROMETRIC PRESSURE 751 mm Hg

	CompuChem Number	Customer ID	CASE	OBSERVED FLASH POINT (C)	OBSERVED FLASH POINT (F)	CORRECTED FLASH POINT (F)
ICV	Chlorobenzene	1M2-153-13	N/A	27	80.6	81.1
LCS	p-Xylene	7M2 215-6	↓	26	78.8	79.3
	5/5/99					
1	936842	CP00001	34392/22602	>140	>140	>140
2	936843D	CP00001D	↓	>140	>140	>140
3	936845	CP00002	↓	>140	>140	>140
4						
5						
6						
7						
8						
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20						
21						
22						
23						
24						
25						

[illegible] 5/5/99

Corrected flashpoint = F+ 0 06(760-P)
F=observed flashpoint, F P=ambient barametric pressure mm Hg
RANGE→ 140 F NWR = NOT WITHIN RANGE
p-Xylene certified flashpoint = 81 ± 2° Chlorobenzene certified flashpoint = 82 ± 4°

REVIEWED BY Joe [illegible] DATE 5/5/99

REACTIVE CYANIDE PREPARATION AND RUNLOG

COMPUCHEM ENV LOGBOOK 1 BBBBB 3

OPERATOR [illegible]

PAGE 1 OF 1

DATE 5/4/97

METHOD CH 7/ 9010A

CASE NAME 34-921-2602

#	CompuChem Number	Customer ID	Titration Volume (ml)	Initial weight (g)	Final Volume (ml)	#	CompuChem Number	Customer ID	Titration Volume (ml)	Initial weight (g)	Final Volume (ml)
1	PBS	BIL	01	10.00	250						
"	ICSS	BS	05								
3	936842	CPCOLC1	01								
4	936842D	CPCOLC1D	01								
5	936850	CPCOLC2	01								

[illegible] 5/4/97

[illegible] 5/4/97

(1) ICV/BS Solutions 40mg/kg

Reagent Manufacturer & Lot # s AgNO3 (7M1-214) CN (7M2-161-17)

Reviewed by Joe Basile Date 5/5/97

Reactive Sulfide Preparation and Runlog Log

1 WWWWWW

Operator [illegible]

Page ___ of ___

Date 5/4 [illegible]

Case Name [illegible]

Method Ch 7/ 9030A

#	CompuChem Number	Customer ID	Titration Volume (ml)	Initial Weight (g)	Final Volume (ml)	Comments Iodine Volume (ml)
	PBS		58	10.10	200ml	1ml
	LCSS		13			~~2m~~ 25ml LC 5/4/99
	936902	WS00001	07			ml
	936902 D	WS00001 D	07			
	936903	WS00002	08			
	936842	CP00001	06			
	936842 D	CP00001 D	06			
	936856	CP00002	04			3ml

Reagent Manufacturer & Lot# s [illegible]

(1) ICV/BS Solutions

[illegible]

Reviewed by Joe Basile Date 5/5/99

Total Releasable Sulfide in Waste

CCN	Sample ID	Sample Vol. (g.)	Iodine Vol. (ml.)	Sodium Thiosulfate Vol. (ml.)	Percent Solids	Weight of Waste(Gram)	Total Releasable H_2S(mg/kg)	Reporting Limit	% Recovery
PBS	BLK	10 00	1	0 8	100%	10	0	125	< 125
LCSS	BS	10 00	25	1 3	100%	10	940	125	94 0
936902	WS00001	10 00	1	0 7	94 04%	10	4	133	< 133
936902D	WS00001D	10 00	1	0 7	94 04%	10	4	133	< 133
936903	WS00002	10 00	1	0 8	61 02%	10	0	205	< 205
936842	CP00001	10 00	1	0 6	93 42%	10	9	134	< 134
936842D	CP00001D	10 00	1	0 6	93 42%	10	9	134	< 134
936850	CP00002	10 00	2	0 4	96 66%	10	58	129	< 129

Reviewed by Joe Bazale 8/5/99

SDG 22602 32201

COMPUCHEM

Bring to Extractions lab

INTERNAL CHAIN-OF-CUSTODY

Laboratory Wet Chem

Requested By Cooke

Water ____ Soil ✓ P E ____

Date 5/4/99 Shift (1) 2 Sat

circle one

EPA ____ Commercial ✓

	CCN	RECEIPT DATE	PRES	PARAMETER	RECEIVING USE ONLY BOTTLE NUMBER
1	936842	5/3/99	N/A	Ign, RCN, RSulf, pH	of
2	↓ 850	↓	↓	↓	of
3					of
4					of
5					of
6					of
7					of
8					of
9					of
10					of
11					of
12					of
13					of
14					of
15					of
16					of
17					of
18					of
19					of
20					of

Relinquished By P Moon Date 5/4/99

Received By Cooke Date 5/4/99

Relinquished By Cooke Date 5/4/99 K 5/5/99

Received Extractions By ~~cooler~~ cooler K 5/5/99 Date 5/4/99 K 5/5/99

Comments Extractions has sample 936842-850

20

CompuChem Receiving Log

48-11

Client LBG/CHRYSLER
Order # 34292
Project DAYTON THERMAL PRODUCTS
Quote # 99-17318
Account # 500744

Received on 5/3/99 # of COC s 1
Delivered by FED-EX
Freight # 810581589292
Subcontract Y / (N)
TAT Verbal 48 Hr Hardcopy

PPS / (RFA) # 226 Page 1 of 1
Lab Instructions Pick QC/48 Hr TAT/TCLP. V,SV,Pest,Herb,MTLS / Rpt PCB, Ign Corr. Reac/

	SDG	REQ	SAMPLE ID	CCN	AMOUNT / CONTAINER	PARAMETER	ANALYSIS CODE	LINE ITEM	SAMPLE DATE	MX	pH
1	22601	1	CP00001	9368226	1-4oz, 2-8oz.	TCLP V, SV, PEST HERB MTL PCB	456,1141,457,1142,1146,1148,1 3 11	1,2,4,5,7,9	4/30/99	50	NA
2	22601	2	CP00002	9368241	↓	TCLP V,SV,Pest,Herb,MTL	↑	1,2,4,5,7,9,11	↓	↓	↓
3	22602	4	CP00001	9368242	1 8oz	PCBs, Ign, Corr, Reac	749,1316,1254,1317,936	13,15,17,19,21	4/30/99	50	NA
4	22602	5	CP00002	9368250	1 8oz	PCB, Ign, Corr, React	↑	↓	↓	↓	↓
5											
6											
7											
8											
9											
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12											
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15											
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17											
18											
19											
20											

5/3/99

Logged In By [signature]
Order Entered By [signature]
Cyanide samples checked for sulfide and chlorine Y / (NA)
Received in good condition (Y) / N
Holding Blank(s) Counter / Page ____ / ____ CCN s ____ / ____
Temperature(s) 20 °C

CHRYSLER CORPORATION

Chain-of-Custody

04449 A

SILICATE LINE SOILPILE

CompuChem 501 Madison Avenue Cary NC 27513 Phone Number 1 800 833 5097 Fax Number (919) 379-4050	Project Name: DAYTON THERMAL PRODUCTS Site Location: 1600 WEBSTER ST DAYTON OH Site Code: SC001 RFA Number: YGQP9900226 Chrysler PM: GARY STANCZUK	Consultant: LEGGETTE, BRASHEARS + GRAHAM INC Address: 1210 W COUNTY ROAD E, SUITE 700 ST PAUL, MN. 55112 Consultant PM: KEN VOGEL Phone: (651) 490 1405 Fax: (651) 490 1006	

Turn-around Time Request: 24 calendar hrs; (48 calendar hrs); 10 days; 28 days

Data Package Deliverables (circle): (Chrysler Level 1); Chrysler Level 2; Other (specify)

Matrix Codes: S Soil; SW - Surface Water; GW - Groundwater; A - Air; Sed Sediment; O - Other (specify)

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	VOC 8260	SVOCs 8270	PCBs	RCRA METALS	HERBICIDES	PESTICIDES				Volatiles pH <2	Metals pH < 2	Cyanide pH > 12	Other ____	Remarks
CP00001	4-30-99	1505	C	S	3	✓	✓	✓	✓	✓	✓								SEGREGATED SOIL
CP00002	4-30-99	1515	C	S	3	✓	✓	✓	✓	✓	✓								CLEAN SOIL

Per Mike Curry & Gary Stanczuk @ Daimler Chrysler, perform the following analysis on both samples TCLP VOC, SVOC, Metals, Pest, Herb & PCBs, reactivity, corrosivity & ignitability DE 5/3/99

Sampler(s): Jennifer Bennesch

Cool ID # ~~STE~~ NA

Is RFA sampling complete? (Yes) N

Bottles Relinquished under Airbill No.			Samples Relinquished under Airbill No. 810581589292			Temperature (corrected) 2.0°C
Relinquished by: Jennifer Bennesch	Date: 4-30-99	Time: 1535	Received by:	Date:	Time:	Custody Seal Intact? Yes No
Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Custody Seal Intact? Yes No
Relinquished by:	Date:	Time:	Received for Laboratory by: [signature]	Date: 5/3/99	Time: 0905	Custody Seal Intact? (Yes) No

Chrysler Corporation 800 Chrysler Drive CIMS 482-00-51 Auburn Hills Michigan 48326-2757

Distribution White copy Data package Yellow Retained by laboratory Pink Retained by sampler

opened cooler at 9:20 am [signature] 5/3/99

Revision No 1
C ted pt mber 23 1997

Silicate Soil Pile

COMPUCHEM

a division of Liberty Analytical Corp

MAY 11 1999

RFA 226

TCLP VOAs

10/MAY/99

LEGGETTE BRASHEARS & GRAHAM
ATTN Ken Vogel
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

Subject Report of Data - Account Number# 500944 Order# 34292

ATTN Ken Vogel

Enclosed are the results of analytical work performed in accordance with the referenced account number

This report covers 2 sample(s) appearing on the attached listing

Thank you for selecting CompuChem Environmental for your sample analysis If you should have questions or require additional analytical services please contact your representative at 1-800-833-5097

Sincerely,

Diane Ellmore

CompuChem Environmental
a division of Liberty Analytical

Attachment

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919-379-4100 ■ Fax 919 379-4050

COMPUCHEM

a division of Liberty Analytical Corp

10/MAY/99

LEGGETTE BRASHEARS & GRAHAM
ATTN
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

ACCOUNT # 500944

CC#	SAMPLE-ID	RECEIPT DATE
936826	CP00001	5/03/99
936841	CP00002	5/03/99

TOTAL NUMBER OF SAMPLES = 2

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

CompuChem
a Division of Liberty Analytical
501 N Madison Avenue
Cary, NC 27513

SDG NARRATIVE
CASE 34292
SDG 22601
CONTRACT 500944

SAMPLE IDENTIFICATIONS CP00001 CP00002

The two(2) soil samples listed above were received intact, properly refrigerated with proper chain of custody(COC) documentation on May 03, 1999 The samples were prepared by TCLP extraction and analyzed by Method 8260B

VOLATILES

Analysis holding time requirements were met for these samples The target analytes trichloroethene and tetrachloroethene were identified in both samples however only trichloroethene in sample CP00001 was present above the reporting limits

No Tentatively Identified Compound (TIC) data is provided as requested by the client

All of the surrogates met recovery criteria, and all of the internal standards met response and retention time criteria in the analyses of these samples

The associated instrument blank and method blank met all quality control criteria and did not contain any target analytes above the reporting limits

The associated Laboratory Control Sample(LCS) met all QC acceptance limits

Duplicate matrix spikes generated from CP00001 met all QC accuracy and precision requirements without exception

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions listed above Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or his designee,as verified by the following signature

Roy M Sutton
Development Chemist
May 06, 1999

GC and GC/MS Column and Trap Specifications Table

COLUMNS

Brand Name	Coating Material	ID (mm)	Film Thickness (um)	Length (m)
GC Laboratory				
Restek	PTX-1701	0 53	0 5	30
J & W	DB-608	0 53	0 83	30
Restek	CLPesticides	0 53	0 5	30
Restek	CLPesticides II	0 53	0 42	30
GC Volatiles Laboratory				
Restek	RTX-1	0 53	0 5	105
Restek	RTX-502 2	0 53	0 5	105
GC/MS Volatiles Laboratory				
J & W	DB-624	0 53	3 0	30/75
Supelco	SPB 624	0 53	3 0	75
GC/MS Semivolatiles Laboratory				
J & W	DB-5 625	0 32	1 0	30
J & W	DB5-MS	0 25	0 25	30
Hewlett Packard	HP5-MS	0 25	0 25	30

TRAP

GC/MS Volatiles Laboratory	
	* 1 cm of methyl silicone packing (OV-1 coating) * 8 cm of 2 6-diphenylene oxide polymer (Tenax) * 8 cm of silica gel * 7 cm of coconut charcoal * 0 5 cm of silanized glass wool at each end

Notification Regarding Manual Editing/Integration Flags

In some instances manual adjustments to the software output are necessary to provide accurate data These adjustments are performed by the data reviewer GC/MS operator or GC chemist An Extracted Ion Current Profile (EICP) or a GC chromatographic peak has been provided for the manual integration of each compound to demonstrate the accuracy of that process Adjustments are flagged on the quantitation report in the far right column beyond the FINAL concentration for GC/MS analysis and in the Flags column for GC analysis The manual editing/integration flags are

M Denotes that a manual integration has been performed for this compound The manual integration was performed in order to provide the most accurate area count as possible for the peak

H Denotes that the data reviewer GC/MS operator or GC Chemist has chosen an alternate peak within the retention time window from that chosen by the software for that compound No manual integration is performed in choosing an alternate peak The software still performs the integration

MH Denotes that an alternate peak has been chosen within the retention time window from that chosen by the software for that compound and also a manual integration of the chosen peak has been performed The manual integration was performed in order to provide the most accurate area count possible for the peak

L Denotes that the data reviewer or GC/MS operator has selected an alternate library search This is typically done when an additional tentatively identified compound (TIC) has been added to the number of peaks searched No manual integration is performed in choosing an alternate peak The software still performs the integration

ML Denotes that an alternate library search has been selected and a manual integration has also been performed This is typically done when an additional TIC has been added and the TIC peak also required a manual integration

With the introduction of the current EPA CLP SOW (Document Number OLM03 0 plus revisions) additional explanations for manual editing integration are required In the accompanying raw data packages additional codes have been applied to the M flag and carry the following meanings

M1 The compound was not found by the automatic integration routine

M2 The compound was incorrectly integrated by the automatic integration routine

M3 The co eluting compounds were incorrectly integrated by the automatic integration routine

These codes will appear in the GC/MS and GC data packages

Robert E. Meierer
Vice President

Revision 4 (10/8/97)

DATA REPORTING QUALIFIERS

On the Form I under the column labeled Q for qualifier each result is flagged with the specific data reporting qualifiers listed below as appropriate Up to five qualifiers may be reported on Form I for each compound The qualifiers used are

U This flag indicates the compound was analyzed for but not detected The Contract Required Quantitation Limit (CRQL) (or Reporting Limit) will be adjusted to reflect any dilution and for soils the percent moisture

J This flag indicates an estimated value The flag is used as detailed below

1 When estimating a concentration for tentatively identified compounds (TICs) where a response factor of 1 0 is assumed for the TIC analyte

2 When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC MS identification criteria and the result is less than the CRQL (or Reporting Limit) but greater than zero and

When the retention time data indicates the presence of a compound that meets the pesticide Aroclor or other GC or HPLC identification criteria and the result is less than the CRQL (or Reporting Limit) but greater than zero For example if the CRQL (or Reporting Limit) is 10 µg L but a concentration of µg L is calculated it is reported a J

N This flag indicates presumptive evidence of a compound This flag is only used for TICs where the identification is based on a mass spectral library search For generic characterization of a TIC such as chlorinated hydrocarbon the N flag is not used

P In the EPA s Contract Laboratory Program (CLP) this flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns The lower of the two values is reported on Form I and flagged with a P
For SW 846 GC and HPLC analyses when the Relative Percent Difference (RPD) is greater than 40% and there is no evidence of chromatographic anomalies or interferences then the higher of the two values is reported and flagged with a P When the RPD is equal to or less than 40% our policy is to also report the higher of the two values although the choice could be a project specific issue

C This flag applies to GC or HPLC results where the identification has been confirmed by GC/MS If GC/MS confirmation was attempted but was unsuccessful this flag is not applied a laboratory defined flag is used instead (see the X/Y/Z qualifier)

DATA REPORTING QUALIFIERS or Page 1

B This flag is used when the analyte is found in the associated blank as well as in the sample It indicates probable blank contamination and warns the data user to take appropriate action This flag is used for a TIC as well as for a positively identified target compound The combination of flags BU or UB is not an allowable policy Blank contaminants are flagged B only when they are detected in the sample

E This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis If one or more compounds have a response greater than the upper level of the calibration range the sample or extract will be diluted and reanalyzed All such compounds with a response greater than the upper level of the calibration range will have the concentration flagged with an E on Form I for the original analysis

D If a sample or extract is reanalyzed at a higher dilution factor for example when the concentration of an analyte exceeds the upper calibration range the DL suffix is appended to the sample number on Form I for the more diluted sample and **all** reported concentrations on that Form I are flagged with the D flag This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract

NOTE 1 The D flag is not applied to compounds which are not detected in the sample analysis i e compounds reported with the CRQL (or Reporting Limit) and the U flag

NOTE 2 Separate Form Is are used for reporting the original analysis (Client Sample No XXXXX) and the more diluted sample analysis (Client Sample No XXXXXDL) i e the results from both analyses are not combined on a single Form I

A This flag indicates that a TIC is a suspected aldol condensation product

S This flag indicates that an analyte was detected by a single column GC analysis but the result was below the Reporting Limit This flag is only used when clients request a second (confirmation) column analysis after detecting an analyte above the Reporting Limit in the initial single column analysis This flag alerts the data user that only an analyte was detected below the Reporting Limit and a second (confirmation) analysis was not performed

X,Y,Z Other specific flags may be required to properly define the results If used the flags will be fully described in the SDG Narrative The laboratory defined flags are limited to X Y and Z

Revision 4 (8-19 98)

Laboratory Notice

Initial Calibration Date 4 30 99

Instrument Identifier 51

An initial calibration was analyzed by Method 8260B Per the methodology all compounds are to meet a Percent Relative Standard Deviation (%RSD) limit of no more than 1 Additional calibration options are provided in the method when the RSD exceeds 15% CompuChem has chosen to apply the option of determining the mean RSD values for all analytes in the calibration

When there are analytes with %RSDs greater than the limit proof of calibration linearity can be shown if the average of all compounds in the initial calibration meet the same 15% limit Based on Method 8000B Revision 2 requirements described in Sections 7 5 1 2 and 7 5 1 2 3 we are providing a list of the compounds which failed to meet the limit and their associated %RSDs Finally the average of all %RSDs from all compounds in the initial calibration is shown confirming the usability of the initial calibration and any data that follows it

dichlorodifluoromethane – 33 7
chloromethane 15 9
acetone – 27 6
tetrahydrofuran – 16 2

Average %RSD for all compounds in the Initial Calibration 8 2

Data Reviewer ID= 2 77

Date May 1999

TOTAL RELEASABLE CYANIDE IN WASTE

Date 05/04/99
Analyst 2356

COMPUCHEM NUMBER	SAMPLE ID	SILVER NITRATE 0 0192 NORMALITY VOL (ml)	WEIGHT OF SAMPLE (g)	FINAL SAMPLE VOLUME (ml)	DIL FACTOR	CALC CONC mg/L	% Solids	TOTAL RELEASABLE HCN mg/kg	% REC / RESULT	RL
BLK	PBS	0 10	10 00	250	1	0 000	100 0	0 00	< 125	125
LCSS	BS	0 50	10 00	250	1	1 600	100 0	40 00	100 0%	125
936842	CP00001	0 10	10 00	250	1	0 000	93 42	0 00	< 134	134
936842D	CP00001D	0 10	10 00	250	1	0 000	93 42	0 00	< 134	134
936850	CP00002	0 10	10 00	250	1	0 000	96 66	0 00	< 129	129

BS and SS True Value= 40 0 mg/kg

Reviewed by Joe Beaulo Date 5/5/99

CHRYSLER CORPORATION

Chain-of-Custody

04449 A

Computech
501 Madison Avenue
Cary NC 7513
Phone Number 1 800 833 5097
Fax Number (919) 379-4050

Project Name: SILICATE LINE SOILPILE
Site Location: DAYTON THERMAL PRODUCTS 1600 WEBSTER ST DAYTON OH
Site Code: SC001
RFA Number: YGQP9900226
Chrysler PM: GARY STANCZUK

Consultant: LEGGETTE, BRASHEARS + GRAHAM INC
Address: 1210 W COUNTY ROAD E., SUITE 700 ST PAUL, MN 55112
Consultant PM: KEN VOGEL
Phone: (651) 490 1405 Fax: (651) 490 1006

Turn around Time Request
24 calendar hrs
48 calendar hrs
10 days
28 days

Data Package Deliverables (circle)
Chrysler Level 1
Chrysler Level 2
Other (specify)

Matrix Codes
S Soil
SW Surface Water
GW Groundwater
A Air
Sed Sediment
O Other (specify)

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	VOC 8260	SVOCs 8270	PCBs	RCRA METALS	HERBICIDES	PESTICIDES				Volatiles pH <2	Metals pH < 2	Cyanide pH > 12	Other ____	Remarks
CPCCC01	4-30-99	1505	C	S	3	✓	✓	✓	✓	✓	✓								SEGREGATED SOIL
CPCCC02	4-30-99	1515	C	S	3	✓	✓	✓	✓	✓	✓								CLEAN SOIL

Per Mike Curry & Gary Stanczuk @ Daimler Chrysler, perform the following analysis on both samples TCLP VOC, SVOC, Metals, Pest, Herb & PCBs, reactivity, corrosivity & ignitability DE 5/3/99

Sampler(s): Jennifer Bennesch

Bottles Relinquished under Airbill No

Samples Relinquished under Airbill No 810581589292

Temperature (corrected) 2.0 C

Relinquished by:	Date:	Time	Received by:	Date:	Time:	Custody Seal Intact?
Jennifer Bennesch	4-30-99	1535				Yes No
						Yes No
			Received for Laboratory by:	5/3/99	0905	Yes No

Cooler ID: ~~STC~~ NA

Is RFA sampling complete? Y N

Chrysler Corporation 800 Chrysler Drive CIMS 482-00-51 Auburn Hills Michigan 48326-2757

Distribution White copy Data package Yellow Retained by laboratory Pink Retained by sampler

opened cooler at 9:20am 5/3/99

Page 1 of 1

CompuChem

WATER BATCH SHEET

1 A 1 Z1 1C 11R

Date Batched 5/5/91

Case 34772 -3101

Instrument Code

LINKER WS-61B 5ml

TAT <

SOW

	CCN	CLIENT ID	QC SAMPLE TYPE	QC SAMPLE ORIGINAL	pH	TIME	DATE RUN	INST #	OPERATOR	H/T	VOLUME/ INSTRUCTIONS	SCREEN BOTTLE #	ANALYSIS BOTTLE #
1)	[illegible]		SS			1411	5 9c	57	2343		507/658	of	of
2)	[illegible]		SS			1418	↓	↓	↓			of	of
3)	731[illegible]	VL-62	LCS			1453	5344	581	2343			of	of
4)	9[illegible]	C1ØØØ1			6	1337				5/17		of	of
5)	[illegible]	CØØØ02			6	1412						of	of
6)	93[illegible]73	ZH-BLKTZ			6	1240						of	of
7)	936841R1				—	1552						of	of
8)												of	of
9)												of	of
10)												of	of
11)												of	of
12)												of	of
13)												of	of
14)												of	of
15)												of	of
16)												of	of
17)												of	of
18)												of	of
19)												of	of
20)												of	of
21)												of	of
22)												of	of
23)												of	of

Relinquished By Ref2 Date 5590 Received By MB Date 5 5 90

Relinquished By MB Date 5 5 90 Received By Ref #2 Date 5 5 90

Relinquished By Date Received By Date

Log Page Updated

8

ASSIGNED TO [illegible]

COMPUCHEM
TCLP/ZHE
SW-846 METHOD 1311
-815

DATE EXTRACTED [illegible]

EMPLOYEE ID

QUEUE # 54

COMPUCHEM SAMPLE #	PREP CODE #	CASE	CLIENT ID	SAMPLE WEIGHT (G) VOLUME (ml)	FINAL VOLUME	% SOLIDS	Vol Ext. Fluid	INITIAL LIQUID PHASE (ml)	PARTICLE SIZE REDUCTION (Y OR N)	COMMENTS
[illegible]	[illegible]	[illegible]	CPD-[illegible]	25.0 g	100 ml	100%	500 ml	[illegible]	N	
[illegible]	[illegible]	[illegible]	CTIDICE	25.0 g	400 ml	[illegible]	500 ml	0	N	
	BLANK									
[illegible]	BLANK		ZHEBLKT2	25.0 g	500 ml	100%	500 ml	0	N	[illegible]

LOADED NUMBER CALIB CHECK (MUST BE 30 RPM ± 2 RPM)

NUMBER #	CALC RPM
1A	32

(COUNT rpm FOR 30 sec AND MULTIPLY NUMBER BY 2 TO CALCULATE RPM)

MANUAL COUNTER ~~467~~ 1161

ROATATION TIME ONLY

Room Temperature 23.0°

DATE/TIME STARTED 5/4/99 3:35 pm

DATE/TIME COMPLETED 5/5/99 10:35

MANUFACTURER AND LOT NUMBER OF REAGENT USED Acetic Acid L42821 NaOH L49943

FINAL VOL VERIFIED [illegible]

REVIEWED BY [illegible]

RECEIVED BY

pH of ext fluid # 1 4.96 (4.93 ± .05)

CompuChem Receiving Log

AD-111

Client: [illegible]
Order #: 34292
Project: [illegible] THERMAL PRODUCTS
Quote #: 19-17318
Account #: [illegible]

Received on: 5/3/99 # of COCs: 1
Delivered by: FED-EX
Freight #: 810581589292
Subcontract Y / (N)
TAT Verbal: 48 Hr Hardcopy:

PPS / (RFA) #: 224 Page 1 of 1
Lab Instructions: Pick GC/MS HI TAT/TCLP V, SV, Pest, Herb, Metals / Spot PCB, Ign, Corr, Reac

	SDG	REQ	SAMPLE ID	CCN	AMOUNT / CONTAINER	PARAMETER	ANALYSIS CODE	LINE ITEM	SAMPLE DATE	MX	pH
1	224[illegible]	1	CPCC001	1368426	1 4oz, 2-8oz	TCLP V, SV, PEST HERB MTL PCB	[illegible]	1,2,4,5,7,9 3 11	4/30/99	SO	NA
2	224 1	2	CPCC002	936841	↓	TCLP V, SV, Pest, Herb, MTL	↓	1,2,4,5,7,9,11	↓	↓	↓
3	[illegible]	4	PQQQQ1	936842	1 8oz	PCB, Ign, Corr, Reac	[illegible]	13,15,17,19,21	4/30/99	SO	NA
4	224 2	5	CPQQQQ2	936850	1 8oz	TCT Ign, Corr, Reac	↓	↓	↓	↓	↓
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

5/3/99

Logged In By: [illegible]
Order Entered By: Marlene Smith
Cyanide samples checked for sulfide and chlorine Y / (NA)
Received in good condition (Y) / N
Holding Blank(s) Counter / Page ____ / ____ CCNs ____ / ____
Temperature(s) 20 °C

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

CP00001

Project

Date Sampled 04/30/99

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER

Lab Sample ID 936826

Sample wt/vol 5 0 (g/mL) ML

Lab File ID CN036826A51 D

Level (low/med) LOW

Date Received 05/03/99

% Moisture not dec _____

Date Analyzed 05/05/99

GC Column SP624 ID 0 53 (mm)

Dilution Factor 5 0

Soil Extract Volume _____(uL)

Soil Aliquot Volume _____(uL)

CONCENTRATION UNITS UG/L

CAS NO	COMPOUND	DL	CONC	Q
75-01-4	Vinyl Chloride	50		U
75-35-4	1,1-Dichloroethene	50		U
67-66-3	Chloroform	50		U
107-06-2	1,2-Dichloroethane	50		U
56-23-5	Carbon Tetrachloride	50		U
79-01-6	Trichloroethene	50	52	
71-43-2	Benzene	50		U
127-18-4	Tetrachloroethene	50	9	J
108-90-7	Chlorobenzene	50		U
78-93-3	2-butanone	50	16	J

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

CP00002

Project

Date Sampled 04/30/99

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER

Lab Sample ID 936841

Sample wt/vol 5 0 (g/mL) ML

Lab File ID CN036841A51 D

Level (low/med) LOW

Date Received 05/03/99

% Moisture not dec _____

Date Analyzed 05/05/99

GC Column SP624 ID 0 53 (mm)

Dilution Factor 5 0

Soil Extract Volume _____(uL)

Soil Aliquot Volume _____(uL)

CONCENTRATION UNITS UG/L

CAS NO	COMPOUND	DL	CONC	Q
75-01-4	Vinyl Chloride	50		U
75-35-4	1,1-Dichloroethene	50		U
67-66-3	Chloroform	50		U
107-06-2	1,2-Dichloroethane	50		U
56-23-5	Carbon Tetrachloride	50		U
79-01-6	Trichloroethene	50	15	J
71-43-2	Benzene	50		U
127-18-4	Tetrachloroethene	50	7	J
108-90-7	Chlorobenzene	50		U
78-93-3	2-butanone	50		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

CP00001MS

Project

Date Sampled 04/30/99

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER

Lab Sample ID 936827

Sample wt/vol 5 0 (g/mL) ML

Lab File ID CN036827A51 D

Level (low/med) LOW

Date Received 05/03/99

% Moisture not dec _____

Date Analyzed 05/05/99

GC Column SP624 ID 0 53 (mm)

Dilution Factor 5 0

Soil Extract Volume _____(uL)

Soil Aliquot Volume _____(uL)

CONCENTRATION UNITS UG/L

CAS NO	COMPOUND	DL	CONC	Q
75-01-4	Vinyl Chloride	50	400	
75-35-4	1,1-Dichloroethene	50	600	
67-66-3	Chloroform	50	560	
107-06-2	1,2-Dichloroethane	50	540	
56-23-5	Carbon Tetrachloride	50	580	
79-01-6	Trichloroethene	50	600	
71-43-2	Benzene	50	550	
127-18-4	Tetrachloroethene	50	480	
108-90-7	Chlorobenzene	50	500	
78-93-3	2-butanone	50	350	

FORM I VOA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

CP00001MSD

Project

Date Sampled 00/00/00

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER

Lab Sample ID 936828

Sample wt/vol 5 0 (g/mL) ML

Lab File ID CN036828A51 D

Level (low/med) LOW

Date Received 05/03/99

% Moisture not dec _____

Date Analyzed 05/05/99

GC Column SP624 ID 0 53 (mm)

Dilution Factor 5 0

Soil Extract Volume _____(uL)

Soil Aliquot Volume _____(uL)

CONCENTRATION UNITS UG/L

CAS NO	COMPOUND	DL	CONC	Q
75-01-4	Vinyl Chloride	50	410	
75-35-4	1,1-Dichloroethene	50	600	
67-66-3	Chloroform	50	560	
107-06-2	1,2-Dichloroethane	50	560	
56-23-5	Carbon Tetrachloride	50	580	
79-01-6	Trichloroethene	50	590	
71-43-2	Benzene	50	560	
127-18-4	Tetrachloroethene	50	480	
108-90-7	Chlorobenzene	50	500	
78-93-3	2-butanone	50	410	

FORM I VOA

4A

VOLATILE METHOD BLANK SUMMARY

SAMPLE NO

VBLKDH

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Lab File ID CB990505A51 D Lab Sample ID VBLKDH

Date Analyzed 05/05/99 Time Analyzed 1102

GC Column SP624 ID 0 53 (mm) Heated Purge (Y/N) N

Instrument ID F50051

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VLCS62	936829	CN036829A51 D	1153
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
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26				
27				
28				
29				
30				

COMMENTS

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

VBLKDH

Project

Date Sampled _____

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID VBLKDH

Sample wt/vol 5 0 (g/mL) ML Lab File ID CB990505A51 D

Level (low/med) LOW Date Received _____

% Moisture not dec _____ Date Analyzed 05/05/99

GC Column SP624 ID 0 53 (mm) Dilution Factor 1 0

Soil Extract Volume _____(uL) Soil Aliquot Volume _____(uL)

CONCENTRATION UNITS UG/L

CAS NO	COMPOUND	DL	CONC	Q
75-01-4	Vinyl Chloride	10		U
75-35-4	1,1-Dichloroethene	10		U
67-66-3	Chloroform	10		U
107-06-2	1,2-Dichloroethane	10		U
56-23-5	Carbon Tetrachloride	10		U
79-01-6	Trichloroethene	10		U
71-43-2	Benzene	10		U
127-18-4	Tetrachloroethene	10		U
108-90-7	Chlorobenzene	10		U
78-93-3	2-butanone	10	5	J

FORM I VOA

4A
VOLATILE METHOD BLANK SUMMARY

SAMPLE NO

ZHEBLKT2

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Lab File ID CN036973A51 D Lab Sample ID 936973

Date Analyzed 05/05/99 Time Analyzed 1240

GC Column SP624 ID 0 53 (mm) Heated Purge (Y/N) N

Instrument ID F50051

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

	SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	CP00001	936826	CN036826A51 D	1337
02	CP00002	936841	CN036841A51 D	1412
03	CP00001MS	936827	CN036827A51 D	1445
04	CP00001MSD	936828	CN036828A51 D	1518
05				
06				
07				
08				
09				
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24				
25				
26				
27				
28				
29				
30				

COMMENTS

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO

ZHEBLKT2

Project

Date Sampled _____

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936973

Sample wt/vol 5 0 (g/mL) ML Lab File ID CN036973A51 D

Level (low/med) LOW Date Received _____

% Moisture not dec _____ Date Analyzed 05/05/99

GC Column SP624 ID 0 53 (mm) Dilution Factor 5 0

Soil Extract Volume _____(uL) Soil Aliquot Volume _____(uL)

CONCENTRATION UNITS UG/L

CAS NO	COMPOUND	DL	CONC	Q
75-01-4	Vinyl Chloride	50		U
75-35-4	1,1-Dichloroethene	50		U
67-66-3	Chloroform	50		U
107-06-2	1,2-Dichloroethane	50		U
56-23-5	Carbon Tetrachloride	50		U
79-01-6	Trichloroethene	50		U
71-43-2	Benzene	50		U
127-18-4	Tetrachloroethene	50		U
108-90-7	Chlorobenzene	50		U
78-93-3	2-butanone	50		U

FORM I VOA

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22601

	SAMPLE NO	SMC1 (DBF) #	SMC2 (DCE) #	SMC3 (TOL) #	OTHER (BFB)	TOT OUT
01	CP00001	105	98	106	116	0
02	CP00001MS	103	109	93	99	0
03	CP00001MSD	105	112	94	108	0
04	CP00002	104	99	98	111	0
05	VBLKDH	102	97	98	108	0
06	VLCS62	105	106	101	110	0
07	ZHEBLKT2	104	99	98	108	0
08						
09						
10						
11						
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			QC LIMITS
SMC1	(DBF)	= Dibromofluoromethane	(80-120)
SMC2	(DCE)	= 1,2-Dichloroethane-d4	(80-120)
SMC3	(TOL)	= Toluene-d8	(80-120)
OTHER	(BFB)	= Bromofluorobenzene	(80-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM II VOA-1

3A
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix Spike - Sample No CP00001

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC
Vinyl Chloride	500 0	0 000	403 6	81	1-251
1,1-Dichloroethene	500 0	0 000	602 7	120	1-234
Chloroform	500 0	0 000	557 7	112	51-138
1,2-Dichloroethane	500 0	0 000	537 3	107	49-155
Carbon Tetrachloride	500 0	0 000	575 3	115	70-140
Trichloroethene	500 0	52 27	598 9	109	71-157
Benzene	500 0	0 000	551 2	110	37-151
Tetrachloroethene	500 0	8 57	479 9	94	64-148
Chlorobenzene	500 0	0 000	499 2	100	37-160
2-butanone	500 0	15 77	351 1	67	1-200

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC
Vinyl Chloride	500 0	405 1	81	0	20	1-251
1,1-Dichloroethene	500 0	595 0	119	1	20	1-234
Chloroform	500 0	563 4	113	1	20	51-138
1 2-Dichloroethane	500 0	556 9	111	4	20	49-155
Carbon Tetrachloride	500 0	581 7	116	1	20	70-140
Trichloroethene	500 0	589 8	108	1	20	71-157
Benzene	500 0	557 8	112	2	20	37-151
Tetrachloroethene	500 0	476 6	94	0	20	64-148
Chlorobenzene	500 0	495 6	99	1	20	37-160
2-butanone	500 0	412 7	79	16	20	1-200

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD 0 out of 10 outside limits
Spike Recovery 0 out of 20 outside limits

COMMENTS _____

FORM III VOA-1

3A

WATER VOLATILE LAB CONTROL SAMPLE RECOVERY

CLIENT SAMPLE NO

VLCS62

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Lab Sample ID 936829 LCS Lot No ME48

Lab File ID CN036829A51 D Date Analyzed 05/05/99

Purge Volume 5 0 (mL) Dilution Factor 1 0

COMPOUND	AMOUNT ADDED (ug/L)	AMOUNT RECOVERED (ug/L)	%REC #	QC LIMITS
Carbon Tetrachloride	100 0	117 8	118	70-140
Tetrachloroethene	100 0	99 83	100	64-148
Benzene	100 0	114 9	115	37-151
1,2-Dichloroethane	100 0	111 4	111	49-155
Trichloroethene	100 0	119 6	120	71-157
2-butanone	100 0	68 49	68	1-200
Chloroform	100 0	115 6	116	51-138
Chlorobenzene	100 0	109 3	109	37-160
1,1-Dichloroethene	100 0	126 3	126	1-234
Vinyl Chloride	100 0	87 81	88	1-251

Column to be used to flag LCS recovery with an asterisk
* Values outside of QC limits

LCS Recovery 0 outside limits out of 10 total

COMMENTS

FORM III

COMPUCHEM

a division of Liberty Analytical Corp

MAY 11 1999

RFA 226

10/MAY/99

TCLP SVOC

LEGGETTE BRASHEARS & GRAHAM
ATTN Ken Vogel
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

Subject Report of Data - Account Number# 500944 Order# 34292

ATTN Ken Vogel

Enclosed are the results of analytical work performed in accordance with the referenced account number

This report covers 2 sample(s) appearing on the attached listing

Thank you for selecting CompuChem Environmental for your sample analysis If you should have questions or require additional analytical services please contact your representative at 1-800-833-5097

Sincerely,

Diane Ellmore

CompuChem Environmental
a division of Liberty Analytical

Attachment

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

COMPUCHEM

a division of Liberty Analytical Corp

10/MAY/99

LEGGETTE BRASHEARS & GRAHAM
ATTN
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

ACCOUNT # 500944

CC#	SAMPLE-ID	RECEIPT DATE
936826	CP00001	5/03/99
936841	CP00002	5/03/99

TOTAL NUMBER OF SAMPLES = 2

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919 379-4100 ■ Fax 919-379-4050

CompuChem

a division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N C 27513
Tel 919/379-4100 Fax 919/379-4050

SDG NARRATIVE

CASE # 34292
SDG # 22601
PROTOCOL SW846
RFA # YGQP9900226

SAMPLE IDENTIFICATIONS CP00001, CP00002

The two leachate samples listed above were prepared from soil received intact properly refrigerated with proper documentation in a sealed shipping container on May 3 1999 The samples were scheduled for the requested analyses of the semivolatile fractions These samples were analyzed following SW 846 Method 8270 3rd Edition protocol with the exceptions and/or additions requested by the client

All pertinent Quality Assurance notices are included in the narrative section and all pertinent Laboratory notices for Case # # 34292 SDG # 22601 are included in the sample data section

Semivolatiles

Extraction and analysis holding time requirements were met for all of these samples

There were no semivolatile target analytes identified above reported limits in these samples No Tentatively Identified Compounds (TICs) were searched in these samples per the RFA

CP00001 was used as the original to prepare the duplicate matrix spikes In the analysis of the original the recovery of the acid surrogates 2 fluorophenol d5 phenol and 2 4 6 tribromophenol failed quality control criteria Although the analyses of the duplicate matrix spikes met all surrogate recovery criteria the recovery values were much lower for these acid surrogates than for the base surrogates We have attributed the failing surrogate to the particular matrix of the original

In the initial analysis of CP00002 the recovery of the acid surrogates 2 fluorophenol and d5 phenol failed quality control criteria The sample was re extracted In the analysis of the second extract these surrogates again failed recovery criteria as did the remaining acid surrogate 2 4 6 tribromophenol We have attributed the failing surrogate recoveries to the particular matrix of the sample Therefore we have reported both analyses of CP00002

All of the surrogates not mentioned above met recovery criteria in the analyses of these samples All of the internal standards met response and retention time criteria in the analysis of these samples

The associated method blanks met all quality control criteria Both method blanks were free of target analyte contamination

With one exception the associated duplicate matrix spikes met all advisory accuracy and precision criteria The Relative Percent Difference (RPD) of pentachlorophenol was flagged as an outlier in the comparison of the duplicate matrix spikes

One of the two associated Laboratory Control Sample (LCS) met all accuracy criteria In the other LCS a majority of recovery values met QC criteria

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

Michael Steven Schapira 5/10/99

Michael Steven Schapira

Special Project Coordinator
May 10 1999

DATA REPORTING QUALIFIERS

On the Form I under the column labeled Q for qualifier each result is flagged with the specific data reporting qualifiers listed below as appropriate Up to five qualifiers may be reported on Form I for each compound The qualifiers used are

U This flag indicates the compound was analyzed for but not detected The Contract Required Quantitation Limit (CRQL) or reporting limit will be adjusted to reflect any dilution and for soils the percent moisture

J This flag indicates an estimated value The flag is used as detailed below

1 When estimating a concentration for tentatively identified compounds (TICs) where a response factor of 1 0 is assumed for the TIC analyte

2 When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria and the result is less than the CRQL but greater than zero and

3 When the retention time data indicate the presence of a compound that meets the pesticide/Aroclor or other GC or HPLC identification criteria and the result is less than the CRQL but greater than zero For example if the sample quantitation limit is 10 µg/L but a concentration of 3 µg/L is calculated it is reported as 3J

N This flag indicates presumptive evidence of a compound This flag is only used for TICs where the identification is based on a mass spectral library search For generic characterization of a TIC such as chlorinated hydrocarbon the N flag is not used

P This flag is used for a pesticide/Aroclor target analyte and other GC or HPLC analytes when there is greater than 25% difference for detected concentrations between the two GC or HPLC columns The lower of the two values is reported on Form I and flagged with a P

C This flag applies to GC or HPLC results where the identification has been confirmed by GC/MS If GC/MS confirmation was attempted but was unsuccessful this flag is not applied a laboratory-defined flag is used instead (see the X/Y/Z qualifier)

DATA REPORTING QUALIFIERS (continued)

B This flag is used when the analyte is found in the associated blank as well as in the sample It indicates probable blank contamination and warns the data user to take appropriate action This flag is used for a TIC as well as for a positively identified target compound The combination of flags BU or UB is not an allowable policy Blank contaminants are flagged B only when they are detected in the sample

E This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis If one or more compounds have a response greater than the upper level of the calibration range the sample or extract will be diluted and reanalyzed All such compounds with a response greater than the upper level of the calibration range will have the concentration flagged with an E on Form I for the original analysis

D If a sample or extract is reanalyzed at a higher dilution factor for example when the concentration of an analyte exceeds the upper calibration range the DL suffix is appended to the sample number on Form I for the more diluted sample and **all** reported concentrations on that Form I are flagged with the D flag This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract

NOTE 1 The D flag is not applied to compounds which are not detected in the sample analysis i e compounds reported with the CRQL and the U flag

NOTE 2 Separate Form Is are used for reporting the original analysis (Client Sample No XXXXX) and the more diluted sample analysis (Client Sample No XXXXXDL) i e the results from both analyses <u>are not combined</u> on a single Form I

A This flag indicates that a TIC is a suspected aldol condensation product

X/Y/Z Other specific flags may be required to properly define the results If used the flags will be fully described in the SDG Narrative The laboratory defined flags are limited to X Y and Z

CompuChem

Division of Liberty Analytical Corp

Chain-of-Custody

BATCH # 5-6-1

#	Relinquished by	Date	Received by	Date	Reason/Remark
	Norma Bolton	5/6/99	GCMS Refrig 2	5/6/99	Temp Storage
	GC/MS Ref#2	5/6/99	P S Sandhu	5/6/99	Analysis on 64
	P S Sandhu	5/6/99	GC/MS Ref#2	5/6/99	TPSZ
1	GCMS Refrig #2	5/6/99	F Naegler	5/6/99	Analysis #64
	F Naegler	5/6/99	GCMS Refrig #2	5/6/99	Temp Storage
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CompuChem

Division of Liberty Analytical Corp

Chain-of-Custody

BATCH # 5 7 4

#	Relinquished by	Date	Received by	Date	Reason/Remark
1	M. Brown	5/7/99	GC/MS Refrig #2	5/7/99	Temp Storage
	GC/MS Ref #2	5/9/99	P. S. Smith	5/9/99	Analysis on #64
	P S Smith	5/9/99	GC/MS Ref #2	5/9/99	TD St
4					
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00001

Project YGQP9900226 Date Sampled 04/30/99

Lab Code COMPU Case No 34292 SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936826

Sample wt/vol 100 (g/mL) ML Lab File ID GH036826A64

Level (low/med) LOW Date Received 05/03/99

% Moisture _____ decanted (Y/N)___ Date Extracted 05/06/99

Concentrated Extract Volume 500(uL) Date Analyzed 05/07/99

Injection Volume 1 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N

CAS NO	COMPOUND	REPORTING LIMIT	CONC UNITS UG/L	Q
110-86-1	Pyridine	50	50	U
106-46-7	1 4-Dichlorobenzene	50	50	U
95-48-7	2-Methylphenol	50	50	U
108-39-4	3-Methylphenol	50	50	U
106-44-5	4-Methylphenol	50	50	U
67-72-1	Hexachloroethane	50	50	U
98-95-3	Nitrobenzene	50	50	U
87-68-3	Hexachlorobutadiene	50	50	U
88-06-2	2 4 6-Trichlorophenol	50	50	U
95-95-4	2 4 5-Trichlorophenol	250	250	U
121-14-2	2 4-Dinitrotoluene	50	50	U
118-74-1	Hexachlorobenzene	50	50	U
87-86-5	Pentachlorophenol	250	250	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00002

Project YGQP9900226 Date Sampled 04/30/99

Lab Code COMPU Case No 34292 SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936841

Sample wt/vol 100 (g/mL) ML Lab File ID GH036841A64

Level (low/med) LOW Date Received 05/03/99

% Moisture _____ decanted (Y/N)___ Date Extracted 05/06/99

Concentrated Extract Volume 500(uL) Date Analyzed 05/07/99

Injection Volume 1 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N

CAS NO	COMPOUND	REPORTING LIMIT	CONC UNITS UG/L	Q
110-86-1	Pyridine	50	50	U
106-46-7	1 4-Dichlorobenzene	50	50	U
95-48-7	2-Methylphenol	50	50	U
108-39-4	3-Methylphenol	50	50	U
106-44-5	4-Methylphenol	50	50	U
67-72-1	Hexachloroethane	50	50	U
98-95-3	Nitrobenzene	50	50	U
87-68-3	Hexachlorobutadiene	50	50	U
88-06-2	2 4 6-Trichlorophenol	50	50	U
95-95-4	2 4 5-Trichlorophenol	250	250	U
121-14-2	2 4-Dinitrotoluene	50	50	U
118-74-1	Hexachlorobenzene	50	50	U
87-86-5	Pentachlorophenol	250	250	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00002RE

Project YGQP9900226 Date Sampled 04/30/99

Lab Code COMPU Case No 34292 SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936841

Sample wt/vol 100 (g/mL) ML Lab File ID GR036841B64

Level (low/med) LOW Date Received 05/03/99

% Moisture _____ decanted (Y/N)___ Date Extracted 05/07/99

Concentrated Extract Volume 500(uL) Date Analyzed 05/10/99

Injection Volume 1 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N

CAS NO	COMPOUND	REPORTING LIMIT	CONC UNITS UG/L	Q
110-86-1	Pyridine	50	50	U
106-46-7	1 4-Dichlorobenzene	50	50	U
95-48-7	2-Methylphenol	50	50	U
108-39-4	3-Methylphenol	50	50	U
106-44-5	4-Methylphenol	50	50	U
67-72-1	Hexachloroethane	50	50	U
98-95-3	Nitrobenzene	50	50	U
87-68-3	Hexachlorobutadiene	50	50	U
88-06-2	2 4,6-Trichlorophenol	50	50	U
95-95-4	2 4 5-Trichlorophenol	250	250	U
121-14-2	2 4-Dinitrotoluene	50	50	U
118-74-1	Hexachlorobenzene	50	50	U
87-86-5	Pentachlorophenol	250	250	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00001MS

Project YGQP9900226 Date Sampled 04/30/99

Lab Code COMPU Case No 34292 SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936830

Sample wt/vol 100 (g/mL) ML Lab File ID GH036830B64

Level (low/med) LOW Date Received 05/03/99

% Moisture _____ decanted (Y/N)___ Date Extracted 05/06/99

Concentrated Extract Volume 500(uL) Date Analyzed 05/09/99

Injection Volume 1 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N

CAS NO	COMPOUND	REPORTING LIMIT	CONC UNITS UG/L	Q
110-86-1	Pyridine	50	120	
106-46-7	1 4-Dichlorobenzene	50	160	
95-48-7	2-Methylphenol	50	36	J
108-39-4	3-Methylphenol	50	83	
106-44-5	4-Methylphenol	50	83	
67-72-1	Hexachloroethane	50	170	
98-95-3	Nitrobenzene	50	180	
87-68-3	Hexachlorobutadiene	50	180	
88-06-2	2 4 6-Trichlorophenol	50	64	
95-95-4	2 4,5-Trichlorophenol	250	120	J
121-14-2	2 4-Dinitrotoluene	50	190	
118-74-1	Hexachlorobenzene	50	210	
87-86-5	Pentachlorophenol	250	31	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00001MSD

Project YGQP9900226 Date Sampled 04/30/99

Lab Code COMPU Case No 34292 SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936831

Sample wt/vol 100 (g/mL) ML Lab File ID GH036831B64

Level (low/med) LOW Date Received 05/03/99

% Moisture _____ decanted (Y/N)___ Date Extracted 05/06/99

Concentrated Extract Volume 500(uL) Date Analyzed 05/10/99

Injection Volume 1 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N

CAS NO	COMPOUND	REPORTING LIMIT	CONC UNITS UG/L	Q
110-86-1	Pyridine	50	110	
106-46-7	1 4-Dichlorobenzene	50	180	
95-48-7	2-Methylphenol	50	47	J
108-39-4	3-Methylphenol	50	86	
106-44-5	4-Methylphenol	50	86	
67-72-1	Hexachloroethane	50	180	
98-95-3	Nitrobenzene	50	200	
87-68-3	Hexachlorobutadiene	50	210	
88-06-2	2 4 6-Trichlorophenol	50	79	
95-95-4	2 4 5-Trichlorophenol	250	120	J
121-14-2	2,4-Dinitrotoluene	50	180	
118-74-1	Hexachlorobenzene	50	210	
87-86-5	Pentachlorophenol	250	67	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

SLCSRE

Project YGQP9900226 Date Sampled

Lab Code COMPU Case No 34292 SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 937004

Sample wt/vol 500 (g/mL) ML Lab File ID G2J37004B64

Level (low/med) LOW Date Received _____

% Moisture _____ decanted (Y/N)___ Date Extracted 05/06/99

Concentrated Extract Volume 500(uL) Date Analyzed 05/09/99

Injection Volume 1 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N

CAS NO	COMPOUND	REPORTING LIMIT	CONC UNITS UG/L	Q
110-86-1	Pyridine	10	16	
106-46-7	1 4-Dichlorobenzene	10	23	
95-48-7	2-Methylphenol	10	24	
108-39-4	3-Methylphenol	10	47	
106-44-5	4-Methylphenol	10	47	
67-72-1	Hexachloroethane	10	22	
98-95-3	Nitrobenzene	10	25	
87-68-3	Hexachlorobutadiene	10	26	
88-06-2	2 4 6-Trichlorophenol	10	21	
95-95-4	2,4,5-Trichlorophenol	50	30	J
121-14-2	2 4-Dinitrotoluene	10	30	
118-74-1	Hexachlorobenzene	10	36	
87-86-5	Pentachlorophenol	50	29	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

SLCSRN

Project YGQP9900226 Date Sampled

Lab Code COMPU Case No 34292 SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 937465

Sample wt/vol 500 (g/mL) ML Lab File ID GH037465B64

Level (low/med) LOW Date Received _____

% Moisture _____ decanted (Y/N)___ Date Extracted 05/07/99

Concentrated Extract Volume 500(uL) Date Analyzed 05/09/99

Injection Volume 1 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N

CAS NO	COMPOUND	REPORTING LIMIT	CONC UNITS UG/L	Q
110-86-1	Pyridine	10	46	
106-46-7	1,4-Dichlorobenzene	10	100	
95-48-7	2-Methylphenol	10	84	
108-39-4	3-Methylphenol	10	140	
106-44-5	4-Methylphenol	10	140	
67-72-1	Hexachloroethane	10	94	
98-95-3	Nitrobenzene	10	130	
87-68-3	Hexachlorobutadiene	10	110	
88-06-2	2 4 6-Trichlorophenol	10	70	
95-95-4	2 4 5-Trichlorophenol	50	87	
121-14-2	2 4-Dinitrotoluene	10	130	
118-74-1	Hexachlorobenzene	10	120	
87-86-5	Pentachlorophenol	50	84	

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

TCLPBLKRJ

Project YGQP9900226 Date Sampled

Lab Code COMPU Case No 34292 SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 937077

Sample wt/vol 250 (g/mL) ML Lab File ID GH037077A64

Level (low/med) LOW Date Received _____

% Moisture _____ decanted (Y/N)___ Date Extracted 05/06/99

Concentrated Extract Volume 500(uL) Date Analyzed 05/06/99

Injection Volume 1 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N

CAS NO	COMPOUND	REPORTING LIMIT	CONC UNITS UG/L	Q
110-86-1	Pyridine	20	20	U
106-46-7	1 4-Dichlorobenzene	20	20	U
95-48-7	2-Methylphenol	20	20	U
108-39-4	3-Methylphenol	20	20	U
106-44-5	4-Methylphenol	20	20	U
67-72-1	Hexachloroethane	20	20	U
98-95-3	Nitrobenzene	20	20	U
87-68-3	Hexachlorobutadiene	20	20	U
88-06-2	2 4 6-Trichlorcphenol	20	20	U
95-95-4	2,4,5-Trichlorophenol	100	100	U
121-14-2	2,4-Dinitrotoluene	20	20	U
118-74-1	Hexachlorobenzene	20	20	U
87-86-5	Pentachlorophenol	100	100	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

SBLKRE

Project YGQP9900226 Date Sampled

Lab Code COMPU Case No 34292 SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 937003

Sample wt/vol 500 (g/mL) ML Lab File ID GH037003A64

Level (low/med) LOW Date Received _____

% Moisture _____ decanted (Y/N)___ Date Extracted 05/06/99

Concentrated Extract Volume 500(uL) Date Analyzed 05/06/99

Injection Volume 1 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N

CAS NO	COMPOUND	REPORTING LIMIT	CONC UNITS UG/L	Q
110-86-1	Pyridine	10	10	U
106-46-7	1,4-Dichlorobenzene	10	10	U
95-48-7	2-Methylphenol	10	10	U
108-39-4	3-Methylphenol	10	10	U
106-44-5	4-Methylphenol	10	10	U
67-72-1	Hexachloroethane	10	10	U
98-95-3	Nitrobenzene	10	10	U
87-68-3	Hexachlorobutadiene	10	10	U
88-06-2	2 4 6-Trichlorophenol	10	10	U
95-95-4	2 4 5-Trichlorophenol	50	50	U
121-14-2	2 4-Dinitrotoluene	10	10	U
118-74-1	Hexachlorobenzene	10	10	U
87-86-5	Pentachlorophenol	50	50	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

SBLKRN

Project YGQP9900226 Date Sampled

Lab Code COMPU Case No 34292 SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 937464

Sample wt/vol 500 (g/mL) ML Lab File ID GH037464B64

Level (low/med) LOW Date Received _____

% Moisture _____ decanted (Y/N)___ Date Extracted 05/07/99

Concentrated Extract Volume 500(uL) Date Analyzed 05/09/99

Injection Volume 1 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N

CAS NO	COMPOUND	REPORTING LIMIT	CONC UNITS UG/L	Q
110-86-1	Pyridine	10	10	U
106-46-7	1,4-Dichlorobenzene	10	10	U
95-48-7	2-Methylphenol	10	10	U
108-39-4	3-Methylphenol	10	10	U
106-44-5	4-Methylphenol	10	10	U
67-72-1	Hexachloroethane	10	10	U
98-95-3	Nitrobenzene	10	10	U
87-68-3	Hexachlorobutadiene	10	10	U
88-06-2	2 4 6-Trichlorophenol	10	10	U
95-95-4	2 4 5-Trichlorophenol	50	50	U
121-14-2	2 4-Dinitrotoluene	10	10	U
118-74-1	Hexachlorobenzene	10	10	U
87-86-5	Pentachlorophenol	50	50	U

4B

SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO

SBLKRE

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SDG No 22601

Lab File ID GH037003A64 Lab Sample ID 937003

Instrument ID 5972HP64 Date Extracted 05/06/99

Matrix (soil/water) WATER Date Analyzed 05/06/99

Level (low/med) LOW Time Analyzed 1644

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES LCS MS and MSD

	CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	TCLPBLKRJ	937077	GH037077A64	05/06/99
02	CP00001	936826	GH036826A64	05/07/99
03	CP00002	936841	GH036841A64	05/07/99
04	SLCSRE	937004	G2J37004B64	05/09/99
05	CP00001MS	936830	GH036830B64	05/09/99
06	CP00001MSD	936831	GH036831B64	05/10/99
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COMMENTS

FORM IV SV

4B

SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO

SBLKRN

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SDG No 22601

Lab File ID GH037464B64 Lab Sample ID 937464

Instrument ID 5972HP64 Date Extracted 05/07/99

Matrix (soil/water) WATER Date Analyzed 05/09/99

Level (low/med) LOW Time Analyzed 2037

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES LCS MS and MSD

	CLIENT SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SLCSRN	937465	GH037465B64	05/09/99
02	CP00002RE	936841	GR036841B64	05/10/99
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COMMENTS

FORM IV SV

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SDG No 22601

	CLIENT SAMPLE NO	S1 (2FP) #	S2 (PHL) #	S3 (NBZ) #	S4 (FBP) #	S5 (TBP) #	S6 (TPH) #	S7 #	S8 #	TOT OUT
01	SBLKRE	61	45	72	71	76	78			0
02	TCLPBLKRJ	45	31	68	67	68	80			0
03	CP00001	2*	3*	66	67	4*	77			3
04	CP00002	3*	2*	50	60	25	84			2
05	SBLKRN	36	31	60	61	41	80			0
06	SLCSRN	54	40	66	68	69	79			0
07	SLCSRE	36	29	48	56	61	72			0
08	CP00001MS	24	21	71	76	24	85			0
09	CP00001MSD	19	16	74	78	38	81			0
10	CP00002RE	8*	10*	54	56	10*	65			3
11										
12										
13										
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30										

		QC LIMITS
S1 (2FP)	= 2-Fluorophenol	(15-100)
S2 (PHL)	= Phenol-d5	(15-100)
S3 (NBZ)	= Nitrobenzene-d5	(23-103)
S4 (FBP)	= 2-Fluorobiphenyl	(26-101)
S5 (TBP)	= 2 4 6-Tribromophenol	(15-112)
S6 (TPH)	= Terphenyl-d14	(21-119)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SDC No 22601

Matrix Spike - Client Sample No CP00001

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS REC #	QC LIMITS REC
Pyridine	250 0	0 00	115 4	46	10- 85
1 4-Dichlorobenzene	250 0	0 00	165 6	66	26- 96
2-Methylphenol	250 0	0 00	36 16	14	10-120
3-Methylphenol	500 0	0 00	82 91	16	10-113
4-Methylphenol	500 0	0 00	82 91	16	10-113
Hexachloroethane	250 0	0 00	170 6	68	28- 93
Nitrobenzene	250 0	0 00	176 0	70	34-104
Hexachlorobutadiene	250 0	0 00	183 2	73	29-101
2 4 6-Trichlorophenol	250 0	0 00	63 55	25	10-130
2 4 5-Trichlorophenol	250 0	0 00	119 3	48	10-135
2 4-Dinitrotoluene	250 0	0 00	186 0	74	40-105
Hexachlorobenzene	250 0	0 00	207 3	83	35-115
Pentachlorophenol	250 0	0 00	30 94	12	10-122

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD REC #	RPD #	QC LIMITS RPD	QC LIMITS REC
Pyridine	250 0	109 4	44	5	50	10- 85
1 4-Dichlorobenzene	250 0	182 8	73	10	50	26- 96
2-Methylphenol	250 0	46 78	19	26	50	10-120
3-Methylphenol	500 0	86 23	17	4	50	10-113
4-Methylphenol	500 0	86 23	17	4	50	10-113
Hexachloroethane	250 0	181 8	73	6	50	28- 93
Nitrobenzene	250 0	202 9	81	14	43	34-104
Hexachlorobutadiene	250 0	206 3	82	12	50	29-101
2 4 6-Trichlorophenol	250 0	79 24	32	22	50	10-130
2 4 5-Trichlorophenol	250 0	120 8	48	1	50	10-135
2 4-Dinitrotoluene	250 0	183 7	73	1	34	40-105
Hexachlorobenzene	250 0	213 2	85	3	43	35-115
Pentachlorophenol	250 0	66 87	27	73*	50	10-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

Spike Recovery 0 out of 26 outside limits

COMMENTS

FORM III SV-1

3C
WATER SEMIVOLATILE LAB CONTROL SAMPLE RECOVERY

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SDG No 22601

Matrix Spike - Client Sample No SLCSRE

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	REC #	QC LIMITS REC
Pyridine	50 00	15 93	32	10- 85
1 4-Dichlorobenzene	50 00	22 96	46	26- 96
2-Methylphenol	50 00	24 12	48	10-120
3-Methylphenol	100 0	47 28	47	10-113
4-Methylphenol	100 0	47 28	47	10-113
Hexachloroethane	50 00	22 58	45	28- 93
Nitrobenzene	50 00	25 22	50	34-104
Hexachlorobutadiene	50 00	26 24	52	29-101
2 4 6-Trichlorophenol	50 00	20 60	41	10-130
2 4 5-Trichlorophenol	50 00	30 44	61	10-135
2 4-Dinitrotoluene	50 00	29 59	59	40-105
Hexachlorobenzene	50 00	36 17	72	35-115
Pentachlorophenol	50 00	29 13	58	10-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

Spike Recovery 0 out of 13 outside limits

COMMENTS _____

FORM III SV-1

3C

WATER SEMIVOLATILE LAB CONTROL SAMPLE RECOVERY

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SDG No 22601

Matrix Spike - Client Sample No SLCSRN

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	REC #	QC LIMITS REC
Pyridine	100 0	45 66	46	10- 85
1,4-Dichlorobenzene	100 0	102 9	103*	26- 96
2-Methylphenol	100 0	83 72	84	10-120
3-Methylphenol	200 0	140 9	70	10-113
4-Methylphenol	200 0	140 9	70	10-113
Hexachloroethane	100 0	94 57	94*	28- 93
Nitrobenzene	100 0	134 8	135*	34-104
Hexachlorobutadiene	100 0	114 2	114*	29-101
2 4 6-Trichlorophenol	100 0	70 21	70	10-130
2 4,5-Trichlorophenol	100 0	87 37	87	10-135
2 4-Dinitrotoluene	100 0	130 2	130*	40-105
Hexachlorobenzene	100 0	125 6	126*	35-115
Pentachlorophenol	100 0	83 57	84	10-122

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

Spike Recovery 6 out of 13 outside limits

COMMENTS

FORM III SV-1

COMPUCHEM

a division of Liberty Analytical Corp

MAY 11 1999

RFA 226

10/MAY/99

TCLP Pesticides

LEGGETTE BRASHEARS & GRAHAM
ATTN Ken Vogel
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

Subject Report of Data - Account Number# 500944 Order# 34292

ATTN Ken Vogel

Enclosed are the results of analytical work performed in accordance with the referenced account number

This report covers 2 sample(s) appearing on the attached listing

Thank you for selecting CompuChem Environmental for your sample analysis If you should have questions or require additional analytical services please contact your representative at 1-800-833-5097

Sincerely,

Diane Ellmore

CompuChem Environmental
a division of Liberty Analytical

Attachment

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

COMPUCHEM
a division of Liberty Analytical Corp

10/MAY/99

LEGGETTE BRASHEARS & GRAHAM
ATTN
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

ACCOUNT # 500944

CC#	SAMPLE-ID	RECEIPT DATE
936826	CP00001	5/03/99
936841	CP00002	5/03/99

TOTAL NUMBER OF SAMPLES = 2

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

COMPUCHEM
501 Madison Ave
Cary, NC 27513
(919)379-4100

SDG Narrative
Case # 34292
SDG #22601
METHOD 8081-TCLP

Sample Identification CP00001 CP00002

The two (2) soil samples listed above were received intact, properly refrigerated with proper chain-of-custody (COC) documentation on May 3, 1999 The samples were extracted and analyzed following SW846 Method 8081-TCLP protocol for this fraction

The samples were extracted within method holding time The surrogate, Tetrachloro-m-xylene recovery exceeded the method limits for CP00002MS/MSD and CP00001 on the CLPesticide column All remaining surrogate recoveries were within method criteria The associated method blank, laboratory control sample and matrix spike/matrix spike duplicate met method QC limits No target compounds were present above the reporting limit in any of the samples

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

Katrina L Travis
GC/HPLC Supervisor
May 10, 1999

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00001

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936826

Sample wt/vol 100 0 (g/mL) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/06/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/07/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
58-89-9	gamma-BHC (Lindane)	0 043	J
72-20-8	Endrin	1 0	U
76-44-8	Heptachlor	0 25	U
1024-57-3	Heptachlor Epoxide	0 25	U
72-43-5	Methoxychlor	2 5	U
8001-35-2	Toxaphene	25	U
12789-03-6	Technical Chlordane	25	U

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00002

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936841

Sample wt/vol 100 0 (g/mL) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/06/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/08/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
58-89-9	gamma-BHC (Lindane)	2 5	U
72-20-8	Endrin	1 0	U
76-44-8	Heptachlor	0 25	U
1024-57-3	Heptachlor Epoxide	0 25	U
72-43-5	Methoxychlor	2 5	U
8001-35-2	Toxaphene	25	U
12789-03-6	Technical Chlordane	25	U

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00002MS

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936833

Sample wt/vol 100 0 (g/mL) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/06/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/07/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
58-89-9	gamma-BHC (Lindane)	1 5	J
72-20-8	Endrin	1 0	U
76-44-8	Heptachlor	1 5	
1024-57-3	Heptachlor Epoxide	1 6	
72-43-5	Methoxychlor	2 5	U
8001-35-2	Toxaphene	35	
12789-03-6	Technical Chlordane	25	U

FORM I PEST

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00002MSD

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936834

Sample wt/vol 100 0 (g/mL) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/06/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/07/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
58-89-9	gamma-BHC (Lindane)	1 5	J
72-20-8	Endrin	1 0	U
76-44-8	Heptachlor	1 6	
1024-57-3	Heptachlor Epoxide	1 7	
72-43-5	Methoxychlor	2 5	U
8001-35-2	Toxaphene	35	
12789-03-6	Technical Chlordane	25	U

FORM I PEST

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

PLCSRR

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 937108

Sample wt/vol 500 0 (g/mL) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received _____

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/06/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/07/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
58-89-9	gamma-BHC (Lindane)	0 30	J
72-20-8	Endrin	0 20	U
76-44-8	Heptachlor	0 31	
1024-57-3	Heptachlor Epoxide	0 33	
72-43-5	Methoxychlor	0 50	U
8001-35-2	Toxaphene	7 1	
12789-03-6	Technical Chlordane	5 0	U

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

PBLKRR

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 937107

Sample wt/vol 500 0 (g/mL) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received _____

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/06/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/07/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
58-89-9	gamma-BHC (Lindane)	0 50	U
72-20-8	Endrin	0 20	U
76-44-8	Heptachlor	0 050	U
1024-57-3	Heptachlor Epoxide	0 050	U
72-43-5	Methoxychlor	0 50	U
8001-35-2	Toxaphene	5 0	U
12789-03-6	Technical Chlordane	5 0	U

FORM I PEST

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

TCLPBLK

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936077

Sample wt/vol 100 0 (g/mL) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received _____

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/06/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/08/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
58-89-9	gamma-BHC (Lindane)	2 5	U
72-20-8	Endrin	1 0	U
76-44-8	Heptachlor	0 25	U
1024-57-3	Heptachlor Epoxide	0 25	U
72-43-5	Methoxychlor	2 5	U
8001-35-2	Toxaphene	25	U
12789-03-6	Technical Chlordane	25	U

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO

PBLKRR

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Lab Sample ID 937107 Lab File ID _____

Matrix (soil/water) WATER Extraction (SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted 05/06/99

Date Analyzed (1) 05/07/99 Date Analyzed (2) 05/07/99

Time Analyzed (1) 2111 Time Analyzed (2) 2111

Instrument ID (1) VARIAN37 Instrument ID (2) VARIAN42

GC Column (1) CLPPEST1 ID 0 53(mm) GC Column (2) CLPPEST2 ID 0 53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES MS and MSD

	EPA SAMPLE NO	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PLCSRR	937108	05/07/99	05/07/99
02	CP00002MS	936833	05/07/99	05/07/99
03	CP00002MSD	936834	05/07/99	05/07/99
04	CP00001	936826	05/07/99	05/07/99
05	CP00002	936841	05/08/99	05/08/99
06	TCLPBLK	936077	05/08/99	05/08/99
07				
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25				
26				

COMMENTS _____

FORM IV PEST

FORM 3
WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix Spike - Sample No CP00002

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC
gamma-BHC (Lindane)	1 5	0 0	1 5	100	32-127
Heptachlor	1 5	0 0	1 5	100	34-111
Heptachlor Epoxide	1 5	0 0	1 6	107	37-142
Toxaphene	50	0 0	35	70	41-126

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC
gamma-BHC (Lindane)	1 5	1 5	100	2	20	32-127
Heptachlor	1 5	1 6	107	2	20	34-111
Heptachlor Epoxide	1 5	1 7	113	2	20	37-142
Toxaphene	50	35	70	2	20	41-126

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD 0 out of 4 outside limits
Spike Recovery 0 out of 8 outside limits

COMMENTS _____

FORM III PEST

FORM 3
WATER PESTICIDE LAB CONTROL SAMPLE

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC LIMITS REC
gamma-BHC (Lindane)	0 30	0 30	100	32-127
Heptachlor	0 30	0 31	103	34-111
Heptachlor Epoxide	0 30	0 33	110	37-142
Toxaphene	10	7 1	71	41-126

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery 0 out of 4 outside limits

COMMENTS

FORM III PEST

FORM 2
WATER PESTICIDE SURROGATE RECOVERY

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

GC Column(1) CLPPEST2 ID 0 53 (mm) GC Column(2) CLPPEST1 ID 0 53 (mm)

	CLIENT SAMPLE NO	S1 1 %REC #	S1 2 %REC #	TCX 1 %REC #	TCX 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKRR	120	121	120	135			0
02	PLCSRR	98	112	110	142			0
03	CP00002MS	114	139	110	198*			1
04	CP00002MSD	117	139	122	162*			1
05	CP00001	110	121	108	150*			1
06	CP00002	111	123	114	149			0
07	TCLPBLK	138	133	127	148			0
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ADVISORY
QC LIMITS

S1 = Decachlorobiphenyl (DC (30-150)
S2 (TCX) = Tetrachloro-m-Xylene (30-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

CompuChem Receiving Log

AS-117

lient GM/CHRYSLER
rder # 341292
roject DELCO THERMAL PRODUCTS
uote # 99-17318
ccount # 5009444

Received on 5/3/99 # of COC s 1
Delivered by FED-EX
Freight # 810581584292
Subcontract Y (N)
TAT Verbal 48 Hr Hardcopy

PPS (RFA) # 224 Page 1 of 1
Lab Instructions Pick GC/MS HI TAT/TCLP
VOA, SV, Pest, Herb, MTBE / Spot PCB, Ign, Cyan, Sulf

	SDG	REQ	SAMPLE ID	CCN	AMOUNT / CONTAINER	PARAMETER	ANALYSIS CODE	LINE ITEM	SAMPLE DATE	MX	pH
	22601	1	CPC0001	1368826	1-4oz, 2-8oz	TCLP V, SV, PEST HERB MTL PCB	56,114,457,1142,1146,1179,11	1,2,4,5,7,9 3 11	4/30/99	50	N/A
	22601	2	CPC0002	9368841	↓	TCLP V, SV, Pest, Herb, MTL	↑	1,2,4,5,7,9,11	↓	↓	↓
	22602	4	P00001	9368842	1 8oz	TCL, Ign, Cyan, Reac	749,1,16,1 54,1317,2276	13,15,17,19,21	4/30/99	50	N/A
	22602	5	CP00002	9368850	1 8oz	TCL Ign, Cyan, Reac	↓	↓	↓	↓	↓
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
0											

MA 5/3/99

ogged In By Ally Dore

Order Entered By Marlene Smith

yanide samples checked for sulfide and chlorine Y / (NA)

Received in good condition (Y) / N

lolding Blank(s) Counter / Page ____ / ____ CCN s ____ / ____

Temperature(s) 20 °C

CHRYSLER CORPORATION

Chain-of-Custody

04449 A

14

CompuChem
501 Madison Avenue
Cary NC 27513
Phone Number 1 800 833 5097
Fax Number (919) 379-4050

Project Name: SILICATE LINE SOILPILE DAYTON THERMAL PRODUCTS
Site Location: 1600 WEBSTER ST DAYTON OH
Site Code: SC001
RFA Number: YGQP9900226
Chrysler PM: GARY STANCZUK

Consultant: LEGGETTE, BRASHEARS + GRAHAM INC
Address: 1210 W COUNTY ROAD E., SUITE 700 ST PAUL, MN 55112
Consultant PM: KEN VOGEL
Phone: (651) 490 1405 Fax: (651) 490 1006

Turn around Time Request
24 calendar hrs
48 calendar hrs
10 days
28 days

Data Package Deliverables (circle)
Chrysler Level 1
Chrysler Level 2
Other (specify)

Compound List-Parameter/Method/Bottle Type/Preservative

Matrix Codes
S Soil
GW Groundwater
Sed Sediment
O Other (specify)
SW Surface Water
A Air

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	VOC 8260	SVOCs 8270	PCBs	RCRA METALS	HERBICIDES	PESTICIDES				Lab Use Only: Volatiles pH <2	Metals pH <2	Cyanide pH > 12	Other ____	Remarks
CP0001	4/30/99	1505	C	S	3	✓	✓	✓	✓	✓	✓								SEGREGATED SOIL
CP0002	4-30-99	1515	C	S	3	✓	✓	✓	✓	✓	✓								CLEAN SOIL

Per Mike Curry & Gary Stanczuk @ Daimler Chrysler, perform the following analyses on both samples TCLP VOC, SVOC, Metals, Pest, Herb & PCBs, reactivity, corrosivity & ignitability DE 5/3/99

Sampler(s): Jennifer Bennesch

Bottles Relinquished under Airbill No

Samples Relinquished under Airbill No 810581589292

Temperature (corrected) 2.0 C

Relinquished by:	Date:	Time	Received by:	Date:	Time:	Custody Seal Intact?
Jennifer Bennesch	4-30-99	1535				Yes No
						Yes No
			Received for Laboratory by:	5/3/99	0905	Yes N

Coil ID # ~~SIC~~ NA

RFA all pages complete? Y N

Chrysler Corporation 800 Chrysler Drive CIMS 482 00-51 Auburn Hills Michigan 48326-2757

Distribution White copy Data package Yellow Retained by laboratory Pink Retained by sampler

opened cooler at 9:20 AM 5/3/99

Page 1 of 1

Revision No 1
Effective September 23 1997

LEGGETTE BRASHEARS & GRAHAM PAGE 1
ATTN
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

RECEIVE DATE: 5/03/99
QUOTE NUMBER: 99-00073180000500944
ORDER NUMBER 34292

SAMPLE ID	TURNAROUND** TIME	ANALYSIS	COMPUCHEM NUMBER
CP00001	2	ZHE Extraction SW846-3rd -Method 1311	936826
		Voa ZHE Method 8240	936826
		TCLP Extraction SW846-3rd -Method 1311	936826
		Semivoa TCLP Method 8270	936826
		Pesticide TCLP 9-25 Method 8080	936826
		Herbicide TCLP Method 8150	936826
		Metals TCLP Methods 6010-7470	936826
		PCBs Method 8080 S/S	936842
		REACTIVITY	936842
		Ignit SW-846 1010/ ASTM D93-90/Case ID	936842
		Corrosivity (AS pH)	936842
		% Moisture; Undecanted/S-S/	936842
CP00002	2	ZHE Extraction SW846-3rd -Method 1311	936841
		Voa ZHE Method 8240	936841
		TCLP Extraction SW846-3rd -Method 1311	936841
		Semivoa TCLP Method 8270	936841
		Pesticide TCLP 9-25 Method 8080	936841
		Herbicide TCLP Method 8150	936841
		Metals TCLP Methods 6010-7470	936841
		PCBs Method 8080 S/S	936850
		REACTIVITY	936850
		Ignit SW-846 1010/ ASTM D93-90/Case ID	936850
		Corrosivity (AS pH)	936850
		% Moisture; Undecanted/S-S/	936850

MIS
5/5/99

** Please note that turnaround time and sample due dates will be, whenever applicable, calculated and determined by the last sample received in a Sample Delivery Group

• COMPUCHEM
a division of Liberty Analytical

LOG-IN VERIFICATION

Client LBG/CHRYSLER Project SILICATE LINE SOILPILE

Case 34292/RFH 226 Date Received 5/3/99

Were all sample I D 's checked?	Yes / No
Were all analyses on COC also on receipt log?	Yes / No
Were any associated line items missing?	Yes / No
Were all parameter's logged in?	Yes / No
Were correct method numbers received?	Yes / No
Is any information absent from receiving log header?	Yes / No
Were all blank lines on the receiving log z ed out?	Yes / No
Was TAT verified (quick turn line items useed?)	Yes / No
Was QC designated and verified?	Yes / No / N/A
Is the field COC complete (signed/dated etc)?	Yes / No
Were all comments/issues recorded on COC?	Yes / No
Were all ph s recorded on log-in sheet and COC s?	Yes / No
Was temperature recorded on log in-sheet & COC s?	Yes / No

Signature Melissa Stu Date 5/5/99

Corrective Action
SEE COC Concerning TCLP
Completed By Melissa Stu Date 5/5/99

MAY 11 1999

COMPUCHEM

a division of Liberty Analytical Corp

RFA 226

10/MAY/99

TCLP Herbicides

LEGGETTE BRASHEARS & GRAHAM
ATTN Ken Vogel
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

Subject Report of Data - Account Number# 500944 Order# 34292

ATTN Ken Vogel

Enclosed are the results of analytical work performed in accordance with the referenced account number

This report covers 2 sample(s) appearing on the attached listing

Thank you for selecting CompuChem Environmental for your sample analysis If you should have questions or require additional analytical services please contact your representative at 1-800-833-5097

Sincerely,

Diane Ellmore

CompuChem Environmental
a division of Liberty Analytical

Attachment

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

COMPUCHEM
a division of Liberty Analytical Corp

10/MAY/99

LEGGETTE BRASHEARS & GRAHAM
ATTN
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

ACCOUNT # 500944

CC#	SAMPLE-ID	RECEIPT DATE
936826	CP00001	5/03/99
936841	CP00002	5/03/99

TOTAL NUMBER OF SAMPLES = 2

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919 379-4100 ■ Fax 919 379-4050

COMPUCHEM
501 Madison Ave
Cary NC 27513
(919)379-4100

SDG Narrative
Case # 34292
SDG #22601
METHOD 8151-TCLP

Sample Identification CP00001 CP00002

The two (2) soil samples listed above were received intact, properly refrigerated with proper chain-of-custody (COC) documentation on May 3 1999 The samples were extracted and analyzed following SW846 Method 8151-TCLP protocol for this fraction

The samples were extracted within method holding time All surrogate recoveries were within method criteria The associated matrix spike/matrix spike duplicate met method QC limits The laboratory control sample exhibited high recovery for 2,4-D No target compounds were present above the reporting limits in any of the samples The associated method blank met all quality control criteria

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

Katrina L Travis
GC/HPLC Supervisor
May 10, 1999

FORM 1
8151 ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00001

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936826

Sample wt/vol 100 0 (g/ml) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/08/99

Concentrated Extract Volume 2500(ul) Date Analyzed 05/09/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4-D	7 5	U
93-76-5	2 4 5-T	2 5	U

FORM I 8151

FORM 1
8151 ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00001MS

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936835

Sample wt/vol 100 0 (g/ml) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/08/99

Concentrated Extract Volume 2500(ul) Date Analyzed 05/09/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
94-75-7	2 4-D	51	E
93-76-5	2,4 5-T	9 1	

FORM I 8151

FORM 1
8151 ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00001MSD

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936836

Sample wt/vol 100 0 (g/ml) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/08/99

Concentrated Extract Volume 2500(ul) Date Analyzed 05/09/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4-D	52	EP
93-76-5	2,4,5-T	8 4	

FORM I 8151

FORM 1
8151 ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00002

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936841

Sample wt/vol 100 0 (g/ml) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/08/99

Concentrated Extract Volume 2500(ul) Date Analyzed 05/09/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
94-75-7	2 4-D	7 5	U
93-76-5	2 4 5-T	2 5	U

FORM I 8151

FORM 1
8151 ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

PLCSSD

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 937561

Sample wt/vol 100 0 (g/ml) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received _____

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/08/99

Concentrated Extract Volume 2500(ul) Date Analyzed 05/09/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4-D	60	E
93-76-5	2 4,5-T	8 9	

FORM I 8151

FORM 1
8151 ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

PBLKSD

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 937560

Sample wt/vol 100 0 (g/ml) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received _____

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/08/99

Concentrated Extract Volume 2500(ul) Date Analyzed 05/09/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
94-75-7	2,4-D	7 5	U
93-76-5	2,4 5-T	2 5	U

FORM I 8151

FORM 1
8151 ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

TCLPBLK

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 937077

Sample wt/vol 100 0 (g/ml) ML Lab File ID _____

% Moisture _____ decanted (Y/N)___ Date Received _____

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/08/99

Concentrated Extract Volume 2500(ul) Date Analyzed 05/09/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
94-75-7	2 4-D	2 5	JP
93-76-5	2,4 5-T	2 5	U

FORM I 8151

4C
PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO

PBLKSD

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Lab Sample ID 937560 Lab File ID _____

Matrix (soil/water) WATER Extraction (SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted 05/08/99

Date Analyzed (1) 05/09/99 Date Analyzed (2) 05/09/99

Time Analyzed (1) 1120 Time Analyzed (2) 1120

Instrument ID (1) VARIAN51 Instrument ID (2) VARIAN50

GC Column (1) CLPESTICIDES ID 0 53(mm) GC Column (2) CLPEST2 ID 0 53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD

	EPA SAMPLE NO	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PLCSSD	937561	05/09/99	05/09/99
02	CP00001MS	936835	05/09/99	05/09/99
03	CP00001MSD	936836	05/09/99	05/09/99
04	CP00002	936841	05/09/99	05/09/99
05	CP00001	936826	05/09/99	05/09/99
06	TCLPBLK	937077	05/09/99	05/09/99
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS _____

page 1 of 1

FORM IV PEST

FORM 2
WATER 8151 SURROGATE RECOVERY

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

GC Column(1) CLPESTICIDES ID 0 53 (mm) GC Column(2) CLPEST2 ID 0 53 (mm)

	CLIENT SAMPLE NO	S1 1 %REC #	S1 2 %REC #	S2 1 %REC #	S2 2 %REC #	S3 1 %REC #	S3 2 %REC #	TOT OUT
01	PBLKSD	71	72					0
02	PLCSSD	79	78					0
03	CP00001MS	74	68					0
04	CP00001MSD	80	84					0
05	CP00002	72	67					0
06	CP00001	78	78					0
07	TCLPBLK	94	69					0
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 = DCAA (30-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 3
WATER 8151 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix Spike - Sample No CP00001

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS REC #	QC LIMITS REC
2,4-D	40	0 0	51	128	70-130
2 4 5-T	10	0 0	9 1	91	70-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD REC #	RPD #	QC LIMITS RPD	QC LIMITS REC
2 4-D	40	52	130	2	40	70-130
2 4 5-T	10	8 4	84	2	40	70-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD 0 out of 2 outside limits
Spike Recovery 0 out of 4 outside limits

COMMENTS _____

FORM III 8151

FORM 3
WATER 8151 LAB CONTROL SAMPLE

Lab Name COMPUCHEM Contract

Lab Code COMPU Case No 34292 SAS No SDG No 22601

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS REC #	QC LIMITS REC
2 4-D	40	60	150*	70-130
2 4 5-T	10	8 9	89	70-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery 1 out of 2 outside limits

COMMENTS

FORM III 8151

CompuChem Receiving Log

ent [illegible] / [illegible]
der # 31292
oject [illegible] THERMAL PRODUCTS
uote # [illegible]
count # [illegible]

Received on 5/3/99 # of COC s 1
Delivered by FED-EX
Freight # 810581589292
Subcontract Y (N)
TAT Verbal 48 Hr Hardcopy

PPS (RFA) # 226 Page 1 of 1
Lab Instructions Pick GC/MS HI TNT / TCLP V, SV, Pest, Herb, MTLS / Rpt PCB, Ign, Cole Reac

SDG	REQ	SAMPLE ID	CCN	AMOUNT / CONTAINER	PARAMETER	ANALYSIS CODE	LINE ITEM	SAMPLE DATE	MX	pH
226-[illegible]	1	CPCE01	936826	1 4oz, 2-8oz	TCLP V, SV, PEST HERB MTL PCB	[illegible]	1,2,4,5,7,9 3 11	4/30/99	SO	NA
226-[illegible]	2	CPCE002	936841	↓	TCLP V, SV, Pest, Herb, MTL	↑	1,2,4,5,7,9,11	↓	↓	↓
[illegible]	4	CPCCC01	936842	1 8oz	TCL, I, D, Lab, Reac	749, 1316, [illegible]	13,15,17,19,21	4/30/99	SO	NA
[illegible]	5	CPCCC02	936850	1 8oz	TCL Ign, Corr, React	↑	↓	↓	↓	↓

5/3/99

Logged In By [illegible]
Order Entered By Marlene Swift
Cyanide samples checked for sulfide and chlorine Y / (NA)
Received in good condition (Y) / N
Holding Blank(s) Counter / Page ____ / ____ CCN s ____ / ____
Temperature(s) 20 °C

CHRYSLER CORPORATION

Chain-of-Custody

04449 A

CompuChem
501 Madison Avenue
Cary NC 27513
Phone Number 1 800 833 5097
Fax Number (919) 379-4050

Project Name: SILICATE LINE SOILPILE
Site Location: DAYTON THERMAL PRODUCTS 1600 WEBSTER ST DAYTON OH
Site Code: SC001
RFA Number: YGQP9900226
Chrysler PM: GARY STANCZUK

Consultant: LEGGETTE, BRASHEARS + GRAHAM INC
Address: 1210 W COUNTY ROAD E., SUITE 700 ST PAUL, MN 55112
Consultant PM: KEN VOGEL
Phone: (651) 490 1405 Fax: (651) 490 1006

Turn around Time Request: 24 calendar hrs; (48 calendar hrs); 10 days; 28 days

Data Package Deliverables (circle): (Chrysler Level 1); Chrysler Level 2; Other (specify)

Matrix Codes: S Soil; GW Groundwater; Sed Sediment; O Other (specify); SW Surface Water; A Air

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	VOC 8260	SVOCs 8270	PCBs	RCRA METALS	HERBICIDES	PESTICIDES				Volatiles pH <2	Metals pH <2	Cyanide pH > 12	Other ____	Remarks
CP00001	4-30-99	1505	C	S	3	✓	✓	✓	✓	✓	✓								SEGREGATED SOIL
CP00002	4-30-99	1515	C	S	3	✓	✓	✓	✓	✓	✓								CLEAN SOIL

Per Mike Curry & Gary Stanczuk @ Daimler Chrysler, perform the following analysis on both samples TCLP VOC, SVOC, Metals, Pest, Herb & PCBs, reactivity, corrosivity & ignitability DE 5/3/99

Sampler(s): Jennifer Bennesch

Bottles Relinquished under Airbill No:

Samples Relinquished under Airbill No: 810581589292

Temperature (corrected): 20C

Relinquished by	Date	Time	Received by	Date	Time	Custody Seal Intact?
Jennifer Bennesch	4-30-99	1535				Yes No
						Yes No
			Received for laboratory by: [signature]	5/3/99	0905	Yes No

CID: ~~STO~~ NA

RFA sampling complete? (Y) N

Chrysler Corporation 800 Chrysler Drive CIMS 482-00-51 Auburn Hills Michigan 48326-2757

Distribution: White copy Data package; Yellow Retained by laboratory; Pink Retained by sampler

opened cooler at 9:20 am [signature] 5/3/99

Revision No 1
Created September 3 1997

LEGGETTE BRASHEARS & GRAHAM PAGE 1
ATTN:
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

RECEIVE DATE 5/03/99
QUOTE NUMBER 99-00073180000500944
ORDER NUMBER 34292

SAMPLE ID	TURNAROUND** TIME	ANALYSIS	COMPUCHEM NUMBER
CP00001	2	ZHE Extraction SW846-3rd -Method 1311	936826
		Voa ZHE Method 8240	936826
		TCLP Extraction SW846-3rd -Method 1311	936826
		Semivoa TCLP Method 8270	936826
		Pesticide TCLP 9-25 Method 8080	936826
		Herbicide TCLP Method 8150	936826
		Metals TCLP Methods 6010-7470	936826
		PCBs Method 8080 S/S	936842
		REACTIVITY	936842
		Ignit SW-846 1010/ ASTM D93-90/Case ID	936842
		Corrosivity (AS pH)	936842
		% Moisture; Undecanted/S-S/	936842
CP00002	2	ZHE Extraction SW846-3rd -Method 1311	936841
		Voa ZHE Method 8240	936841
		TCLP Extraction SW846-3rd -Method 1311	936841
		Semivoa TCLP Method 8270	936841
		Pesticide TCLP 9-25 Method 8080	936841
		Herbicide TCLP Method 8150	936841
		Metals TCLP Methods 6010-7470	936841
		PCBs Method 8080 S/S	936850
		REACTIVITY	936850
		Ignit SW-846 1010/ ASTM D93-90/Case ID	936850
		Corrosivity (AS pH)	936850
		% Moisture; Undecanted/S-S/	936850

MS
5/5/99

** Please note that turnaround time and sample due dates will be whenever applicable, calculated and determined by the last sample received in a Sample Delivery Group

COMPUCHEM
a division of Libert / Analytical

LOG-IN VERIFICATION

Client LBG/CHRYSLER Project SILICATE LINE SOILPILE

Case 34292/RFA 226 Date Received 5/3/99

Were all sample I D s checked?	Yes / No
Were all analyses on COC also on receipt log?	Yes / No
Were any associated line item s missing?	Yes / No
Were all parameter's logged in?	Yes / No
Were correct method numbers received?	Yes / No
Is any information absent from receiving log header?	Yes / No
Were all blank lines on the receiving log z ed out?	Yes / No
Was TAT verified (quick turn line items useed?)	Yes / No
Was QC designated and verified?	Yes / No / N/A
Is the field COC complete (signed/dated etc)?	Yes / No
Were all comments/issues recorded on COC?	Yes / No
Were all ph's recorded on log-in sheet and COC s?	Yes / No
Was temperature recorded on log in-sheet & COC s?	Yes / No

Signature Melissa Ste Date 5/5/99

Corrective Action
SEE COC CONCERNING TCLP
Completed By Melissa Ste Date 5/5/99

Silicate Soil Pile

RFA 99-226

TCLP metals

COMPUCHEM

a division of Liberty Analytical Corp

10/MAY/99

LEGGETTE BRASHEARS & GRAHAM
ATTN Ken Vogel
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

MAY 11 1999

Subject Report of Data - Account Number# 500944 Order# 34292

ATTN Ken Vogel

Enclosed are the results of analytical work performed in accordance with the referenced account number

This report covers 2 sample(s) appearing on the attached listing

Thank you for selecting CompuChem Environmental for your sample analysis If you should have questions or require additional analytical services please contact your representative at 1-800-833-5097

Sincerely,

Diane Ellmore

CompuChem Environmental
a division of Liberty Analytical

Attachment

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

COMPUCHEM

a division of Liberty Analytical Corp

10/MAY/99

LEGGETTE BRASHEARS & GRAHAM
ATTN
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

ACCOUNT # 500944

CC#	SAMPLE-ID	RECEIPT DATE
936826	CP00001	5/03/99
936841	CP00002	5/03/99

TOTAL NUMBER OF SAMPLES = 2

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

U S EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name COMPUCHEM Contract SW-846

Lab Code COMPU Case No 34292 SAS No SDG No 22601

SOW No SW846

EPA Sample No	Lab Sample ID
CP00001	936826
CP00001D	936840
CP00001M	936838
CP00001S	936837
CP00002	936841
LEACH_BLK	937077

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES

If yes - were raw data generated before application of background corrections ? Yes/No NO

Comments

THE FOLLOWING ANALYTES HAVE BEEN FLAGGED WITH AN "E" TO INDICATE SERIAL DILUTION RESULTS WHICH WERE OUTSIDE CONTROL LIMITS

BARIUM

I certify that this data package is in compliance with the terms and conditions of the contract both technically and for completeness, for other than the conditions detailed above Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature

Signature Thomas P Cole for Name Joe Basile

Date May 6, 1999 Title Laboratory Manager

CompuChem
a Division of Liberty Analytical Corp
501 Madison Avenue Cary NC 27513

INORGANIC CASE SUMMARY NARRATIVE
CASE # 34292 SDG # 22601
PROTOCOL # SW-846

The indicated Sample Delivery Group (SDG) consisting of two (2) soil samples was received into the laboratory information management system (LIMS) on May 3 1999 intact and in good condition with Chain of Custody (COC) records in order Sample ID s reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC

The samples were prepared as leachates then analyzed for the eight TCLP metals (arsenic barium cadmium chromium lead mercury selenium and silver) using analytical methods delineated in SW 846 (Third Edition) Update III

The Form 10 for the mercury IDL shows a reading of 0 0 ug/L There is an inability to get the IDL 0 048 ug/L to show on the form

Due to spectral interference related to leached samples the selenium results in leachate blank samples are indicative of false positive readings

SAMPLE IDs

The following customer IDs are associated with this SDG

CP00001 CP00001

INSTRUMENTAL QUALITY CONTROL

All calibration verification solutions (ICV & CCV) blanks (ICB CCB) and interference check samples (ICSA & ICSAB) associated with this data were confirmed to be within SW 846 allowable limits

SAMPLE PREPARATION QUALITY CONTROL

The sample preparation procedure verifications (LCSW & PBW) were found to be within acceptable ranges and all field samples were prepared and analyzed within the contract specified holding times

MATRIX RELATED QUALITY CONTROL

The sample matrix spike CCN = 936837 (CP00001S) and sample matrix spike duplicate CCN = 936838 (CP00001M) were found to be outside control limits for selenium The reported concentrations for this analyte is flagged with an N on all associated Form 1 and on Form 5a

An N indicates a matrix related interference in the sample preparation procedure &/or analysis for the flagged analyte This is normally the consequence of a relatively high anionic content in the sample or (for some sediments) an inconsistent sample matrix relative to that analyte

SW 846 control limits for matrix spike recoveries are set at 75% to 125% of the analyte quantity added unless original sample concentrations exceed the true values of these spikes by a factor of four or more in this case effected analytes are not flagged even if recoveries fall outside percentage recovery control limits

Post digestion spikes are mandatory for analytes demonstrating unsatisfactory matrix spike recoveries during ICP analysis (excluding silver) The results of such spikes are presented on Form 5b

Unsatisfactory recovery of post digestion spikes of this type do not have bearing upon the aforementioned 'N flags but may indicate interference during analysis &/or a solution matrix which is hostile to the analyte in question

Satisfactory recovery of an analyte in a post digestion spike of this type implies interference by the required preparation procedure or in the sample matrix itself Lack of uniformity for an analyte in sediments will also result in satisfactory recovery of post-digestion spikes after failure in the related matrix spike

The sample matrix duplicate CCN = 936840 (CP00001D) was found to be inside SW 846 control limits for the requested analytes

SW 846 control limits for duplicate determinations are +/ 20% Relative Percent Difference (RPD) for concentrations greater than or equal to five times the CRDL in both the original and duplicate samples and +/ the CRDL for concentrations less than five times the CRDL The RPD is not calculated if both the original and duplicate values fall below the IDL

A five fold serial dilution of sample CCN = 936826 (CP00001L) was performed in accordance with SW 846 requirements for ICP analysis

The adjusted sample concentrations were outside control limits for barium which is flagged with an E on all associated Form 1 the Cover Page and Form 9

An E indicates that a chemical or physical interference effect was encountered during the analysis of the flagged analyte As a result of this interference all values for the analyte in the same matrix must be considered to be estimated quantities

SW 846 control limits for serial dilution are defined as a deviation less than or equal to 10% in the dilution adjusted concentrations from the original values for all analyte concentrations with values greater than fifty (50) times their respective Instrument Detection Limit (IDL) in the original sample

This SDG package was processed using the Ward Scientific software This software package has a seven character limitation on the Forms 13 and 14 any sample ID s which exceed seven characters are truncated from left to right on these forms

Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee as verified by the following signature

Thomas R Cole

Thomas R Cole
Chemist II
May 6 1999

CompuChem
a Division of Liberty Analytical Corp
501 Madison Avenue Cary NC 27513

DATA REPORTING QUALIFIERS FOR INORGANICS

On Form I under the column labeled "C for concentration qualifier and Q for qualifier each result is flagged with the specific data reporting qualifiers listed below as appropriate Up to five qualifiers may be reported on Form I for each analyte

The C (concentration) qualifiers used are

U This flag indicates the analyte was analyzed for but not detected This reported value was obtained from a reading that was less than the Instrument Detection Limit (IDL) The IDL will be adjusted to reflect any dilution and, for soils the percent moisture

B This flag indicates the analyte was analyzed for and the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL)

The Q qualifiers used are

E This flag indicates an estimated value This flag is used

1. When the serial dilution (a five fold dilution for CLP and a five fold dilution for SW 846 method 6010B) results are not within 10/ The analyte concentration must be sufficiently high (minimally a factor of 50X above the IDL in the original sample)
2. When the analytical spike recovery associated with the sample is below 40/ after two successive dilutions by Graphite Furnace Atomic Absorption (GFAA)

M This flag applies to GFAA analyses for concentrations greater than the Contract Required Detection Limit (CRDL) This flag is only used for GFAA if the analytical sample or analytical spike duplicate injection reading is not within 20/ of the Relative Standard Deviation (RSD)

N *This flag indicates the sample spike recovery is outside of control limits*

***** This flag is used for duplicate analysis when the sample and the sample duplicate results are not within control limits

S This flag applies to GFAA analyses to indicate the reported value was determined by the Method Of Standard Addition (MSA)

W This flag applies to GFAA analyses when the post digestion spike (analytical spike) is out of control limits (85% 115/) while sample absorbance is less than 50% of spike absorbance ["spike is defined as (absorbance or concentration of spike sample) minus (absorbance or concentration of the sample)]

+ This flag applies to GFAA analyses when the correlation coefficient for the MSA is less than 0 995 after two MSA analyses

NOTE Entering "S W or "+ is mutually exclusive No combination of these qualifiers can appear in the same field for an analyte

The extensions D S, M, L A, added to the end of the client ID represent as follows

D	matrix duplicate
S	matrix spike
M	matrix spike duplicate
L	serial dilution
A	post digestion spike

Method Codes

P	ICP PLASMA
CV	MERCURY COLD VAPOR AA
CA	MIDI DISTILLATION SPECTROPHOTOMETRIC
F	FURNACE AA

CHRYSLER CORPORATION

Chain-of-Custody

04449 A

SILICATE LINE SOILPILE

CompuChem
501 Madison Avenue
Cary NC 27513
Phone Number 1 800 833 5097
Fax Number (919) 379-4050

Project Name: DAYTON THERMAL PRODUCTS
Site Location: 1600 WEBSTER ST DAYTON OH
Site Code: SC001
RFA Number: YGQP9900226
Chrysler PM: GARY STANCZUK

Consultant: LEGGETTE, BRASHEARS + GRAHAM INC
Address: 1210 W COUNTY ROAD E., SUITE 700 ST PAUL, MN 55112
Consultant PM: KEN VOGEL
Phone: (651) 490 1405 Fax: (651) 490 1006

Turn around Time Request
24 calendar hrs
48 calendar hrs
10 days
28 days

Data Package Deliverables (circle)
Chrysler Level 1
Chrysler Level 2
Other (specify)

Matrix Codes
S Soil
SW Surface Water
GW Groundwater
A Air
Sed Sediment
O Other (specify)

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	VOC 8260	SVOCs 8270	PCBs	RCRA METALS	HERBICIDES	PESTICIDES				Volatiles pH <2	Metals pH < 2	Cyanide pH > 12	Other ___	Remarks
CP0001	4/30/99	1505	C	S	3	✓	✓	✓	✓	✓	✓								SEGREGATED SOIL
CP0002	4-30-99	1515	C	S	3	✓	✓	✓	✓	✓	✓								CLEAN SOIL

Per Mike Curry & Gary Stanczuk @ Daimler Chrysler 5/3/99 perform the following analyses on both samples TCLP VOC, SVOC, Metals, Pest, Herb & PCBs, reactivity, corrosivity & ignitability DE 5/3/99

Compound List Parameter/Method/Bottle Type/Preservative

Sampler(s): Jennifer Bennesch

Bottles Relinquished under Airbill No

Samples Relinquished under Airbill No 810581589292

Temperature (corrected) 2.0C

Relinquished by	Date	Time	Received by	Date	Time	Custody Seal Intact?
Jennifer Bennesch	4/30/99	15:35				Yes No

Cooler ID # ~~SIE~~ NA

RFA sampling complete? Y N

Received for Laboratory by: [signature] Date 5/3/99 Time 0905 Custody Seal Intact? Yes No

Chrysler Corporation 800 Chrysler Drive CIMS 482-00-51, Auburn Hills Michigan 48326-2757

Distribution White copy Data package Yellow Retained by laboratory Pink Retained by sampler

opened cooler at 9:20AM [signature] 5/3/99

Revision No 1
Dated September 23 1997

CompuChem Receiving Log

Client	[illegible]	Received on	[illegible] # of COCs 1
Order #	3[illegible]29 2	Delivered by	FED EX
Project	[illegible] THERMAL PRODUCTS	Freight #	81C 581589292
Quote #	[illegible] 11318	Subcontract Y / N	
Account #	[illegible]	TAT Verbal	[illegible] Hardcopy

PPS / RFA # 224 Page 1 of 1

Lab Instructions Pick GC/MS Hi TNT / TCLP V, SV, Pest, Herb, Metals / Spot PCB, Ign Calor, Hac

	SDG	REQ	SAMPLE ID	CCN	AMOUNT / CONTAINER	PARAMETER	ANALYSIS CODE	LINE ITEM	SAMPLE DATE	MX	pH
1	[illegible]	1	CPCC001	1368426	1 4oz, 2-8oz	TCLP V, SV, PEST HERB MTL PCB	[illegible]	1,2,4,5,7,9 3,11	4/3/99	SO	NA
2	[illegible]	2	CPCC002	9368411	↓	TCLP V, SV, PEST, HERB, MTL	↓	1,2,4,5,7,9,1	↓	↓	↓
3	[illegible]	4	CP0001	9368412	1 8oz	[illegible]	[illegible]	13,15,17,19,21	4/3/99	SO	NA
4	[illegible]	5	CP0002	9368500	1 8oz	[illegible]	↓	↓	↓	↓	↓
5											
6											
7											
8											
9											
10											
11											
12											
13											
14					[illegible] 5/3/99						
15											
16											
17											
18											
19											
20											

Logged In By [illegible] Order Entered By Marlene Smith

Cyanide samples checked for sulfide and chlorine Y / NA Received in good condition Y / N

Holding Blank(s) Counter / Page ____ / ____ CCNs ____ / ____ Temperature(s) 20 °C

U S EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO

CP00001

Lab Name COMPUCHEM Contract SW-846

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936826

Level (low/med) LOW Date Received 05/03/99

% Solids 0 0

Concentration Units (ug/L or mg/kg dry weight) UG/L

CAS No	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6 6	B		P
7440-39-3	Barium	707		E	P
7440-43-9	Cadmium	15 9			P
7440-47-3	Chromium	5 8			P
7439-92-1	Lead	38 4			P
7439-97-6	Mercury	0 05	U		CV
7782-49-2	Selenium	17 9		N	P
7440-22-4	Silver	0 40	U		P

Color Before COLORLESS Clarity Before CLEAR Texture

Color After COLORLESS Clarity After CLEAR Artifacts

Comments

Duplicate (CP00001D)

FORM I - IN SW846

U S EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO

CP00002

Lab Name COMPUCHEM Contract SW-846

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 936841

Level (low/med) LOW Date Received 05/03/99

% Solids 0 0

Concentration Units (ug/L or mg/kg dry weight) UG/L

CAS No	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11 3			P
7440-39-3	Barium	385		E	P
7440-43-9	Cadmium	17 2			P
7440-47-3	Chromium	0 97	B		P
7439-92-1	Lead	16 5			P
7439-97-6	Mercury	0 05	U		CV
7782-49-2	Selenium	16 9		N	P
7440-22-4	Silver	0 40	U		P

Color Before COLORLESS Clarity Before CLEAR Texture

Color After COLORLESS Clarity After CLEAR Artifacts

Comments

FORM I - IN SW846

U S EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO

LEACH BLK

Lab Name COMPUCHEM Contract SW-846

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Lab Sample ID 937077

Level (low/med) LOW Date Received 05/05/99

% Solids 0 0

Concentration Units (ug/L or mg/kg dry weight) UG/L

CAS No	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5 4	B		P
7440-39-3	Barium	2 2	B	E	P
7440-43-9	Cadmium	0 71	B		P
7440-47-3	Chromium	0 99	B		P
7439-92-1	Lead	1 0	B		P
7439-97-6	Mercury	0 05	U		CV
7782-49-2	Selenium	14 0		N	P
7440-22-4	Silver	0 40	U		P

Color Before COLORLESS Clarity Before CLEAR Texture

Color After COLORLESS Clarity After CLEAR Artifacts

Comments

FORM I - IN SW846

U S EPA - CLP

3
BLANKS

Lab Name COMPUCHEM_____ Contract SW-846____

Lab Code COMPU_ Case No 34292_ SAS No _____ SDG No 22601_

Preparation Blank Matrix (soil/water) WATER

Preparation Blank Concentration Units (ug/L or mg/kg) UG/L_

Analyte	Initial Calib Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Arsenic	1 40	U	3 24	B	1 40	U	1 40	U	5 75	B	P
Barium	0 10	U	0 36	B	0 50	B	0 50	B	0 56	B	P
Cadmium	0 21	B	0 43	B	0 49	B	0 55	B	0 38	B	P
Chromium	0 50	U	0 50	U	0 50	U	0 50	U	-0 76	B	P
Lead	1 00	U	1 00	U	1 00	U	1 00	U	1 00	U	P
Mercury	0 05	U	0 05	U	0 05	U	0 05	U	0 05	U	CV
Selenium	1 60	U	1 60	U	1 60	U	1 60	U	1 60	U	P
Silver	0 40	U	0 40	U	0 40	U	0 40	U	-0 44	B	P

U S EPA - CLP

3
BLANKS

Lab Name COMPUCHEM_____ Contract SW-846____

Lab Code COMPU_ Case No 34292_ SAS No _____ SDG No 22601_

Preparation Blank Matrix (soil/water) _____

Preparation Blank Concentration Units (ug/L or mg/kg) _____

Analyte	Initial Calib Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Arsenic			1 40	U							P
Barium			0 52	B							P
Cadmium			0 43	B							P
Chromium			0 50	U							P
Lead			1 00	U							P
Mercury			0 05	U	0 05	U					CV
Selenium			1 60	U							P
Silver			0 40	U							P

U S EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO

CP00001M

Lab Name COMPUCHEM Contract SW-846

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Level (low/med) LOW

% Solids for Sample 0 0

Concentration Units (ug/L or mg/kg dry weight) UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Arsenic	75-125	5481 0000		6 5900	B	5000 00	109 5		P
Barium	75-125	96560 0000		707 1000		100000 00	95 9		P
Cadmium	75-125	858 2000		15 9100		1000 00	84 2		P
Chromium	75-125	4334 0000		5 8450		5000 00	86 6		P
Lead	75-125	4534 0000		38 4000		5000 00	89 9		P
Mercury	75-125	191 2300		0 0500	U	200 00	95 6		CV
Selenium	75-125	1302 0000		17 9500		1000 00	128 4	N	P
Silver	75-125	918 1000		0 4000	U	1000 00	91 8		P

Comments

FORM V (Part 1) - IN SW846

U S EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO

CP00001S

Lab Name COMPUCHEM Contract SW-846

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Level (low/med) LOW

% Solids for Sample 0 0

Concentration Units (ug/L or mg/kg dry weight) UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Arsenic	75-125	5436 0000		6 5900	B	5000 00	108 6		P
Barium	75-125	92960 0000		707 1000		100000 00	92 3		P
Cadmium	75-125	872 0000		15 9100		1000 00	85 6		P
Chromium	75-125	4386 0000		5 8450		5000 00	87 6		P
Lead	75-125	4561 0000		38 4000		5000 00	90 5		P
Mercury	75-125	195 0780		0 0500	U	200 00	97 5		CV
Selenium	75-125	1282 0000		17 9500		1000 00	126 4	N	P
Silver	75-125	953 4000		0 4000	U	1000 00	95 3		P

Comments

U S EPA - CLP

5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO

CP00001A

Lab Name COMPUCHEM Contract SW-846

Lab Code COMPU Case No 34292 SAS No SDG No 22601

Matrix (soil/water) WATER Level (low/med) LOW

Concentration Units ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Arsenic									NR
Barium									NR
Cadmium									NR
Chromium									NR
Lead									NR
Mercury									NR
Selenium		29 44		17 95		10 0	114 9		P
Silver									NR

Comments

FORM V (Part 2) - IN SW846

U S EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name COMPUCHEM_____ Contract SW-846____

Lab Code COMPU_ Case No 34292_ SAS No _____ SDG No 22601_

Solid LCS Source _____

Aqueous LCS Source HIPUR_____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Arsenic	5000 0	4680 00	93 6						
Barium	100000	92820 00	92 8						
Cadmium	1000 0	914 00	91 4						
Chromium	5000 0	4668 00	93 4						
Lead	5000 0	4671 00	93 4						
Mercury									
Selenium	1000 0	936 60	93 7						
Silver	1000 0	901 30	90 1						

U S EPA - CLP

7

LABORATORY CONTROL SAMPLE

Lab Name COMPUCHEM_____ Contract SW-846____

Lab Code COMPU_ Case No 34292_ SAS No _____ SDG No 22601_

Solid LCS Source _____

Aqueous LCS Source HIPUR_____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Arsenic									
Barium									
Cadmium									
Chromium									
Lead									
Mercury	200 0	192 09	96 0						
Selenium									
Silver									

COMPUCHEM

a division of Liberty Analytical Corp

MAY 11 1999

RFA226

06/MAY/99

PCBs

LEGGETTE BRASHEARS & GRAHAM
ATTN
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

Subject Report of Data - Account Number# 500944 Order# 34292

ATTN

Enclosed are the results of analytical work performed in accordance with the referenced account number

This report covers 2 sample(s) appearing on the attached listing

Thank you for selecting CompuChem Environmental for your sample analysis If you should have questions or require additional analytical services please contact your representative at 1-800-833-5097

Sincerely,

Diane Ellmore

CompuChem Environmental
a division of Liberty Analytical

Attachment

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

COMPUCHEM

a division of Liberty Analytical Corp

06/MAY/99

LEGGETTE BRASHEARS & GRAHAM
ATTN
1210 WEST COUNTY RD E
SUITE 700
ST PAUL, MN 55112

ACCOUNT # 500944

CC#	SAMPLE-ID	RECEIPT DATE
936842	CP00001	5/03/99
936850	CP00002	5/03/99

TOTAL NUMBER OF SAMPLES = 2

501 Madison Avenue ■ Cary N C 27513 ■ Tel 919-379-4100 ■ Fax 919-379-4050

CompuChem
a division of Liberty Analytical Corp
501 Madison Avenue
Cary North Carolina 27513

SDG NARRATIVE

CASE 34244
SDG 22602

SAMPLE IDENTIFICATIONS CP00001 CP00002

The two (2) soil samples listed above were received intact properly refrigerated with proper chain of-custody (COC) documentation on May 3 1999 The samples were prepared and analyzed following SW846 Method 8082 protocol for the PCB fractions

PCBs

Extraction and analysis holding time requirements were met for both of these samples No PCB target analytes were confirmed by dual column analysis at a concentration above the reporting limit in either of these samples

All of the surrogates met recovery and retention time criteria in the analyses of these samples The associated method blank met all quality control criteria No PCBs were confirmed in the method blank

CP00002 was used as the original to prepare the duplicate matrix spikes The associated duplicate matrix spikes met all advisory accuracy and precision criteria The associated Laboratory Control Sample (LCS) met all quality control

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness for other than conditions listed above Release of the data contained in the hardcopy data package and in the computer readable data submitted on floppy diskette has been authorized by the Laboratory Manager or his designee as verified by the signature below

Stephanie W Winfield 5-5-99
Stephanie W Winfield
Technical Reviewer
May 5 1999

DATA REPORTING QUALIFIERS

On the Form I under the column labeled Q for qualifier each result is flagged with the specific data reporting qualifiers listed below as appropriate Up to five qualifiers may be reported on Form I for each compound The qualifiers used are

U This flag indicates the compound was analyzed for but not detected The Contract Required Quantitation Limit (CRQL) (or Reporting Limit) will be adjusted to reflect any dilution and for soils the percent moisture

J This flag indicates an estimated value The flag is used as detailed below

1 When estimating a concentration for tentatively identified compounds (TICs) where a response factor of 1 0 is assumed for the TIC analyte

2 When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria and the result is less than the CRQL (or Reporting Limit) but greater than zero and

3 When the retention time data indicates the presence of a compound that meets the pesticide/Aroclor or other GC or HPLC identification criteria and the result is less than the CRQL (or Reporting Limit) but greater than zero For example if the CRQL (or Reporting Limit) is 10 µg/L but a concentration of 5 µg/L is calculated it is reported as 5J

N This flag indicates presumptive evidence of a compound This flag is only used for TICs where the identification is based on a mass spectral library search For generic characterization of a TIC such as chlorinated hydrocarbon the N flag is not used

P In the EPA's Contract Laboratory Program (CLP) this flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns The lower of the two values is reported on Form I and flagged with a P
For SW 846 GC and HPLC analyses when the Relative Percent Difference (RPD) is greater than 40% and there is no evidence of chromatographic anomalies or interferences then the higher of the two values is reported and flagged with a P When the RPD is equal to or less than 40% our policy is to also report the higher of the two values although the choice could be a project specific issue

C **This flag applies to GC or HPLC results where the identification has been confirmed by GC/MS If GC/MS confirmation was attempted but was unsuccessful this flag is not applied, a laboratory defined flag is used instead (see the X/Y/Z qualifier)**

DATA REPORTING QUALIFIERS (continued)

B This flag is used when the analyte is found in the associated blank as well as in the sample It indicates probable blank contamination and warns the data user to take appropriate actio This flag is used for a TIC as well as for a positively identified target compound The combination of flags BL or L B is not an allowable policy Blank contaminants are flagged B only when they are detected in the sample

E This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analy is If one or more compounds have a response greater than the upper level of the calibration range the sample or extract will be diluted and reanalyzed All such compounds with a response greater than the upper level of the calibration range will have the concentration flagged with an E on Form I for the original analysis

D If a sample or extract is reanalyzed at a higher dilution factor for example when the concentration of an analyte exceeds the upper calibration range the DL suffix is appended to the sample number on Form I for the more diluted sample and **all** reported concentrations on that Form I are flagged with the D flag This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract

NOTE 1 The D flag is not applied to compounds which are not detected in the sample analysis i e compounds reported with the CRQL (or Reporting Limit) and the U flag

NOTE 2 Separate Form Is are used for reporting the original analysis (Client Sample No XXXXX) and the more diluted sample analysis (Client Sample No XXXXXDL) i e the results from both analyses <u>are not combined</u> on a single Form I

A This flag indicates that a TIC is a suspected aldol condensation product

S This flag indicates that an analyte was detected by a single column GC analysis but the result was below the Reporting Limit This flag is only used when clients request a second (confirmation) column analysis after detecting an analyte above the Reporting Limit in the initial single column analysis This flag alerts the data user that only an analyte was detected below the Reporting Limit and a second (confirmation) analysis was not performed

X/Y/Z Other specific flags may be required to properly define the results If used the flags will be fully described in the SDG Narrative The laboratory defined flags are limited to X Y and Z

CompuChem Receiving Log

48-11

Client LBG/CHRYSLER
Order # 34292
Project DAYTON THERMAL PRODUCTS
Quote # 99-7318
Account # 500744

Received on 5/3/99 # of COC s 1
Delivered by FED-EX
Freight # 810581589292
Subcontract Y / N
TAT Verbal 48 Hr Hardcopy

PPS / RFA # 226 Page 1 of 1
Lab Instructions Pick QC/48 Hr TAT/TCLP 4 V,SV,Pest,Herb,MTLS / Rpt PCB, Ign Corr. Reac/

	SDG	REQ	SAMPLE ID	CCN	AMOUNT / CONTAINER	PARAMETER	ANALYSIS CODE	LINE ITEM	SAMPLE DATE	MX	pH
1	22601	1	CP00001	9368261	1-4oz, 1-8oz	TCLP V, SV, PEST, HERB MTL	458,1141,457,1143,1146,1139,1113	1,2,4,5,7,9	4/30/99	50	NA
2	22601	2	CP00002	9368411	↓	TCLP V,SV,Pest,Herb,MTL	↓	1,2,4,5,7,9,11	↓	↓	↓
3	22602	4	CP00001	9368421	1 8oz	PCB, Ign, Corr, Reac	749,1316,1254,1317,936	13,15,17,19,21	4/30/99	50	NA
4	22602	5	CP00002	9368501	1 8oz	PCB, Ign, Corr, React	↓	↓	↓	↓	↓
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

5/3/99

Logged In By Patty Dore
Order Entered By Marlene Smith
Cyanide samples checked for sulfide and chlorine Y / NA
Received in good condition Y / N
Holding Blank(s) Counter / Page ____ / ____ CCN's ____ / ____
Temperature(s) 20 °C

CHRYSLER CORPORATION

Chain-of-Custody

04449 A

SILICATE LINE SOILPILE

CompuChem 501 Madison Avenue Cary NC 27513 Phone Number 1 800 833 5097 Fax Number (919) 379-4050	Project Name: DAYTON THERMAL PRODUCTS Site Location: 1600 WEBSTER ST DAYTON OH Site Code: SC001 RFA Number: YGQP9900226 Chrysler PM: GARY STANCZUK	Consultant: LEGGETTE, BRASHEARS + GRAHAM INC. Address: 1210 W COUNTY ROAD E., SUITE 700 ST PAUL, MN. 55112 Consultant PM: KEN VOGEL Phone: (651) 490 1405 Fax: (651) 490 1006	

Turn-around Time Request: 24 calendar hrs; (48 calendar hrs); 10 days; 28 days

Data Package Deliverables (circle): (Chrysler Level 1); Chrysler Level 2; Other (specify)

Matrix Codes: S - Soil; SW - Surface Water; GW Groundwater; A - Air; Sed Sediment; O - Other (specify)

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	VOC 8260	SVOCs 8270	PCBs	RCRA METALS	HERBICIDES	PESTICIDES				Lab Use Only: Volatiles pH <2	Metals pH < 2	Cyanide pH > 12	Other ____	Remarks
CP00001	4/30/99	1505	C	S	3	✓	✓	✓	✓	✓	✓								SEGREGATED SOIL
CP00002	4-30-99	1515	C	S	3	✓	✓	✓	✓	✓	✓								CLEAN SOIL

Per Mike Curry & Gary Stanczuk @ Daimler Chrysler, perform the following analyses on both samples TCLP VOC, SVOC, Metals, Pest, Herb & PCBs, reactivity, corrosivity & ignitability DE 5/3/99

Sampler(s)	Bottles Relinquished under Airbill No			Samples Relinquished under Airbill No. 810581589292			Temperature (corrected) 2.0°C
Jennifer Bennesch	Relinquished by: Jennifer Bennesch	Date: 4-30-99	Time: 1535	Received by:	Date:	Time:	Custody Seal Intact? Yes No
	Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Custody Seal Intact? Yes No
Cooler ID # ~~STO~~ NA	Relinquished by:	Date:	Time:	Received for Laboratory by: [signature]	Date: 5/3/99	Time: 0905	Custody Seal Intact? (Yes) No
Is RFA sampling complete? (Yes) N							

Chrysler Corporation 800 Chrysler Drive CIMS 482-00-51, Auburn Hills Michigan 48326-2757

Distribution White copy Data package Yellow Retained by laboratory Pink Retained by sampler

opened cooler at 9:20am [signature] 5/3/99

Revision No 1
Created September 23 1997

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00001

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22602

Matrix (soil/water) SOIL Lab Sample ID 936842

Sample wt/vol 30 0 (g/mL) G Lab File ID _____

% Moisture 7 decanted (Y/N) N Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SONC Date Extracted 05/03/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/04/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/KG	Q
12674-11-2------	Aroclor-1016	35	U
11104-28-2------	Aroclor-1221	46	U
11141-16-5------	Aroclor-1232	35	U
53469-21-9------	Aroclor-1242	24	U
12672-29-6------	Aroclor-1248	24	U
11097-69-1------	Aroclor-1254	23	J
11096-82-5------	Aroclor-1260	35	U

FORM I PEST

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

CP00002

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22602

Matrix (soil/water) SOIL Lab Sample ID 936850

Sample wt/vol 30 0 (g/mL) G Lab File ID _____

% Moisture 3 decanted (Y/N) N Date Received 05/03/99

Extraction (SepF/Cont/Sonc) SONC Date Extracted 05/03/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/04/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	34	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	34	U
53469-21-9	Aroclor-1242	23	U
12672-29-6	Aroclor-1248	23	U
11097-69-1	Aroclor-1254	7 4	J
11096-82-5	Aroclor-1260	34	U

FORM I PEST

FORM 1
PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO

PBLKQE

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22602

Matrix (soil/water) SOIL Lab Sample ID 936868

Sample wt/vol 30 0 (g/mL) G Lab File ID _____

% Moisture 0 decanted (Y/N) N Date Received _____

Extraction (SepF/Cont/Sonc) SONC Date Extracted 05/03/99

Concentrated Extract Volume 5000(uL) Date Analyzed 05/03/99

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ___ Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	32	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	32	U
53469-21-9	Aroclor-1242	22	U
12672-29-6	Aroclor-1248	22	U
11097-69-1	Aroclor-1254	22	U
11096-82-5	Aroclor-1260	32	U

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO

PBLKQE

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22602

Lab Sample ID 936868 Lab File ID _____

Matrix (soil/water) SOIL Extraction (SepF/Cont/Sonc) SONC

Sulfur Cleanup (Y/N) N Date Extracted 05/03/99

Date Analyzed (1) 05/03/99 Date Analyzed (2) 05/03/99

Time Analyzed (1) 1900 Time Analyzed (2) 1900

Instrument ID (1) VARIAN72 Instrument ID (2) VARIAN70

GC Column (1) DB-608 ID 0 53(mm) GC Column (2) RTX-1701 ID 0 53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES MS and MSD

	EPA SAMPLE NO	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PLCSQE	936867	05/03/99	05/03/99
02	CP00001	936842	05/04/99	05/04/99
03	CP00002	936850	05/04/99	05/04/99
04	CP00002MS	936843	05/04/99	05/04/99
05	CP00002MSD	936844	05/04/99	05/04/99
06				
07				
08				
09				
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22				
23				
24				
25				
26				

COMMENTS _____

FORM IV PEST

FORM 2
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22602

GC Column(1) RTX-1701 ID 0 53 (mm) GC Column(2) DB-608 ID 0 53 (mm)

	CLIENT SAMPLE NO	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKQE	77	77	86	89			0
02	PLCSQE	79	76	86	89			0
03	CP00001	94	72	123	77			0
04	CP00002	82	83	81	70			0
05	CP00002MS	78	82	78	75			0
06	CP00002MSD	84	84	121	86			0
07								
08								
09								
10								
11								
12								
13								
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24								
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26								
27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (30-150)
S2 (DCB) = Decachlorobiphenyl (30-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 3
SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22602

Matrix Spike - Sample No CP00002

COMPOUND	SPIKE ADDED (ug/Kg	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC
Aroclor-1254	340	7 4	290	83	50-150

COMPOUND	SPIKE ADDED (ug/Kg	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	REC
Aroclor-1254	340	290	83	0	20	50-150

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD 0 out of 1 outside limits
Spike Recovery 0 out of 2 outside limits

COMMENTS

FORM III PEST

FORM 3
SOIL PESTICIDE LAB CONTROL SAMPLE

Lab Name COMPUCHEM Contract 500944

Lab Code COMPU Case No 34292 SAS No SDG No 22602

COMPOUND	SPIKE ADDED (ug/Kg	LCS CONCENTRATION (ug/Kg)	LCS % REC #	QC LIMITS REC
Aroclor-1254	330	270	82	50-150

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery 0 out of 1 outside limits

COMMENTS

FORM III PEST

CompuChem
A Division of Liberty Analytical Corp
501 Madison Avenue
Cary, NC 27513

MAY 11 1999

May 5, 1999

RFA226

Ms Kai Hansen
Leggette Brashears & Graham
1210 West County Rd E
Suite 700
St Paul MN 55112

Dear Ms Hansen

We at CompuChem are pleased to provide our report for the analysis you requested
Data for the following samples are enclosed

Client ID Number	CompuChem ID Number	Analysis Code	Case Number	Description of Work Requested
CP00001	936842	1317	34292/22602	Corrosivity by pH
CP00002	936850	1254		Ignitability
		1316		Reactive Cyanide
		1316		Reactive Sulfide

Thank you for selecting CompuChem Environmental for your sample analysis
If you have any questions concerning this report or the analytical methods employed, please contact your Sales Representative at 919-379-4100

Sincerely,

PROJECT MANAGER

ANALYTICAL REPORT OF DATA - CASE # 34292/22602

SUBMITTED TO
Ms Kai Hansen
Leggette Brashears & Graham
1210 West County Rd E
Suite 700
St Paul, MN 55112

LABORATORY CHRONICLE CORROSIVITY BY PH ANALYSIS

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	DATE SAMPLE RECEIVED	DATE ANALYSIS COMPLETED
1	CP00001	936842	05/03/99	05/04/99
2	CP00002	936850	05/03/99	05/04/99

ANALYTICAL REPORT OF DATA - CASE # 34292/22602

SUBMITTED TO
Ms Kai Hansen
Leggette Brashears & Graham
1210 West County Rd E
Suite 700
St Paul MN 55112

LABORATORY CHRONICLE IGNITABILITY ANALYSIS

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	DATE SAMPLE RECEIVED	DATE ANALYSIS COMPLETED
1	CP00001	936842	05/03/99	05/05/99
2	CP00002	936850	05/03/99	05/05/99

ANALYTICAL REPORT OF DATA - CASE # 34292/22602

SUBMITTED TO
Ms Kai Hansen
Leggette Brashears & Graham
1210 West County Rd E
Suite 700
St Paul MN 55112

LABORATORY CHRONICLE REACTIVE CYANIDE ANALYSIS

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	DATE SAMPLE RECEIVED	DATE ANALYSIS COMPLETED
1	CP00001	936842	05/03/99	05/04/99
2	CP00002	936850	05/03/99	05/04/99

ANALYTICAL REPORT OF DATA - CASE # 34292/22602

SUBMITTED TO
Ms Kai Hansen
Leggette Brashears & Graham
1210 West County Rd E
Suite 700
St Paul MN 55112

LABORATORY CHRONICLE - REACTIVE SULFIDE ANALYSIS

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	DATE SAMPLE RECEIVED	DATE ANALYSIS COMPLETED
1	CP00001	936842	05/03/99	05/04/99
2	CP00002	936850	05/03/99	05/04/99

CORROSIVITY BY PH ANALYSIS

SUMMARY REPORT

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	CONCENTRATION (STANDARD pH UNITS)	REPORTING LIMIT (STANDARD pH UNITS)
1	CP00001	936842	8 4	N/A
2	CP00002	936850	8 6	N/A

Reviewed by/ID# Joe Beaule 12381 Date 5/5/99

IGNITABILITY ANALYSIS

SUMMARY REPORT

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	CONCENTRATION (degree F)	REPORTING LIMIT (degree F)
1	CP00001	936842	> 140	68
2	CP00002	936850	> 140	68

Reviewed by/ID# Joe Baccle / 2381 Date 5/5/79

REACTIVE CYANIDE ANALYSIS

SUMMARY REPORT

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	CONCENTRATION (mg/Kg)	REPORTING LIMIT (mg/Kg)
1	CP00001	936842	< 134	134
2	CP00002	936850	< 129	129

Reviewed by/ID# Joe Bracke 12381 Date 5/5/99

IGNITABILITY ANALYSIS

SUMMARY REPORT

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	CONCENTRATION (degree F)	REPORTING LIMIT (degree F)
1	CP00001	936842	> 140	68
2	CP00002	936850	> 140	68

Reviewed by/ID# Joe Baack / 2381 Date 5/5/89

REACTIVE CYANIDE ANALYSIS

SUMMARY REPORT

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	CONCENTRATION (mg/Kg)	REPORTING LIMIT (mg/Kg)
1	CP00001	936842	< 134	134
2	CP00002	936850	< 129	129

Reviewed by/ID# Joe Brack 12381 Date 5/5/99

REACTIVE SULFIDE ANALYSIS

SUMMARY REPORT

ITEM NO	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	CONCENTRATION (mg/Kg)	REPORTING LIMIT (mg/Kg)
1	CP00001	936842	< 134	134
2	CP00002	936850	< 129	129

Reviewed by/ID# Joe Bracale 12381 Date 5/5/99

CORROSIVITY BY PH ANALYSIS

QUALITY CONTROL REPORT

CASE 34292/22602
MATRIX SOIL

Analyst 2356
Date Analyzed 05/04/99

BLANK SPIKE (BS) COMPUCHEM # BS

TRUE VALUE STANDARD pH UNITS)	BS CONC (STANDARD pH UNITS)	ACCEPTANCE LIMITS (STANDARD pH UNITS)
9 050	9 068	8 85 - 9 25

ORIG SAMPLE COMPUCHEM # 936842
MATRIX DUP COMPUCHEM # DUP

SAMPLE VALUE STANDARD pH UNITS)	DUPLICATE VALUE (STANDARD pH UNITS)
8 436	8 462

IGNITABILITY ANALYSIS

QUALITY CONTROL REPORT

CASE 34292/22602
MATRIX SOIL

Analyst 2356
Date Analyzed 05/05/99

BLANK SPIKE (BS) COMPUCHEM # p-Xylene

TRUE VALUE (degree F)	BS VALUE (degree F)	ACCEPTANCE LIMITS (degree F)
81 0	79 3	79 - 83

ORIG SAMPLE COMPUCHEM # 936842
MATRIX DUP COMPUCHEM # DUP

SAMPLE CONC (degree F)	DUP CONC (degree F)
> 140	> 140

REACTIVE CYANIDE ANALYSIS

QUALITY CONTROL REPORT

CASE 34292/22602
MATRIX SOIL

Analyst 2356
Date Analyzed 05/04/99

BLANK SPIKE (BS) COMPUCHEM # BS

SPIKE ADDED (mg/Kg)	BS CONC (mg/Kg)	BS % RECOVERY
40 0	40 0	100 0

ORIG SAMPLE COMPUCHEM # 936842
MATRIX DUP COMPUCHEM # DUP

SAMPLE CONC (mg/Kg)	DUP CONC (mg/Kg)	RPD
< 134	< 134	ND

COMPUCHEM #	QC TYPE	AMOUNT DETECTED (mg/Kg)
BLK	METHOD BLANK	< 125

RPD = RELATIVE PERCENT DIFFERENCE
ND = NON-DETERMINABLE RELATIVE PERCENT DIFFERENCE

REACTIVE SULFIDE ANALYSIS

QUALITY CONTROL REPORT

CASE 34292/22602
MATRIX SOIL

Analyst 2356
Date Analyzed 05/04/99

BLANK SPIKE (BS) COMPUCHEM # BS

SPIKE ADDED (mg/Kg)	BS CONC (mg/Kg)	BS % RECOVERY
1000	940	94 0

ORIG SAMPLE COMPUCHEM # 936842
MATRIX DUP COMPUCHEM# DUP

SAMPLE CONC (mg/Kg)	DUP CONC (mg/Kg)	RPD
< 134	< 134	ND

COMPUCHEM #	QC TYPE	AMOUNT DETECTED (mg/Kg)
BLK	METHOD BLANK	< 125

RPD = RELATIVE PERCENT DIFFERENCE
ND = NON-DETERMINABLE RELATIVE PERCENT DIFFERENCE

CompuChem a division of Liberty Analytical Corp Logbook 1 GG 3

pH Determination Run Log

Fisher Scientific Model #50

Operator LCocke

Page 1 of 1

Date 5/4 99

SDG 34292/22602

#	CompuChem Number	Customer ID	Reagent Reference #	pH	Temperature (°C)
	200	N/A	IM2 15416	2006	21.6
	400	↓	IM2 15414	4003	21.7
	700	↓	IM2 15324	7002	21.6
	1000	↓	IM2 15415	10.003	21.6
1	LCSS	ERA9961 TV 905	7M1 6 7	9.068	21.2
2	936842	LP00001	N/A	8.436	22.3
3	936842D	LP00001D	↓	8.462	22.4
4	936850	CP00002	↓	8.562	22.2
	CHECK Std	TV 700	IM2 15324	7.006	21.5

LCocke 5/4/99

Buffer	Slope	Efficiency
4.00	58.07	98.2
7.00	59.03	99.8
10.00	58.01	98.1

- LC 5/4/99

Reviewed By Joe Bascle

Date 5/5/99

REACTIVE CYANIDE PREPARATION AND RUNLOG

COMPUCHEM ENV LOGBOOK 1 BBBBB 3

OPERATOR [illegible]

PAGE 1 OF 1

DATE 5/4/99

METHOD CH 7/ 9010A

CASE NAME 34291-2602

#	CompuChem Number	Customer ID	Titration Volume (ml)	Initial weight (g)	Final Volume (ml)	#	CompuChem Number	Customer ID	Titration Volume (ml)	Initial weight (g)	Final Volume (ml)
1	PBS	BIL	01	10 00	250						
"	LCSS	BS	05								
3	136842	LPCOLL1	01								
4	136842D	LPCOLL1D	01								
5	136850	CPCOLL2	01								

[illegible] 5/4/99

[illegible] 5/4/99

(1) ICV/BS Solutions 40 mg/kg

Reagent Manufacturer & Lot # s AgNO3 (7M1214) CN (7M2-161-17)

Reviewed by Joe Basile Date 5/5/99

IGNITABILITY RUNLOG

OPERATOR [illegible]
DATE 5/5/99
AMBIENT BAROMETRIC PRESSURE 751 mm Hg

	CompuChem Number	Customer ID	CASE	OBSERVED FLASH POINT (C)	OBSERVED FLASH POINT (F)	CORRECTED FLASH POINT (F)
ICV	Chlorobenzene	IM2-153-13	N/A	27	80.6	81.1
LCS	p-Xylene	IM2 215-6	↓	26	78.8	79.3
	5/5/99					
1	936842	CPCCLC1	34342/22603	>140	>140	>140
2	936842D	CP60001D	↓	>140	>140	>140
3	936842	CPC0002	↓	>140	>140	>140
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

[illegible] 5/5/99

Corrected flashpoint = F+ 0 06(760-P)
F=observed flashpoint F P=ambient barametric pressure mm Hg
RANGE→ 140 F NWR = NOT WITHIN RANGE
p-Xylene certified flashpoint = 81 ± 2° Chlorobenzene certified flashpoint = 82 ± 4°

REVIEWED BY Joe [illegible] DATE 5/5/99

TOTAL RELEASABLE CYANIDE IN WASTE

Date 05/04/99
Analyst 2356

COMPUCHEM NUMBER	SAMPLE ID	SILVER NITRATE 0 0192 NORMALITY VOL (ml)	WEIGHT OF SAMPLE (g)	FINAL SAMPLE VOLUME (ml)	DIL FACTOR	CALC CONC mg/L	% Solids	TOTAL RELEASABLE HCN mg/kg	% REC / RESULT	RL
BLK	PBS	0 10	10 00	250	1	0 000	100 0	0 00	< 125	125
LCSS	BS	0 50	10 00	250	1	1 600	100 0	40 00	100 0%	125
936842	CP00001	0 10	10 00	250	1	0 000	93 42	0 00	< 134	134
936842D	CP00001D	0 10	10 00	250	1	0 000	93 42	0 00	< 134	134
936850	CP00002	0 10	10 00	250	1	0 000	96 66	0 00	< 129	129

BS and SS True Value= 40 0 mg/kg

Reviewed by Joe Bonola Date 5/5/99

Reactive Sulfide Preparation and Runlog Log

1 WWWWWW

Operator [illegible] Page ___ of ___

Date 5/4 [illegible] Case Name [illegible]

Method Ch 7/ 9030A

#	CompuChem Number	Customer ID	Titration Volume (ml)	Initial Weight (g)	Final Volume (ml)	Comments Iodine Volume (ml)
	PBS		98	10.10	200ml	1ml
	LCSS		13	1		~~20m~~ 25ml LC 5/4/99
	936900	WS0000 1	07			ml
	936902	WS0000 2	07			
	936903	WS0000 2	08			
	936842	CP0000 1	06			
	936842D	CP0000 1D	06			
	936850	CP00002	04	✓	✓	3ml

Reagent Manufacturer & Lot# s [illegible]

(1) ICV/BS Solutions

[illegible]

Reviewed by Joe Basile Date 5/5/99

Total Releasable Sulfide in Waste

CCN	Sample ID	Sample Vol (g.)	Iodine Vol. (ml.)	Sodium Thiosulfate Vol. (ml.)	Percent Solids	Weight of Waste(Gram)	Total Releasable H_2S(mg/kg)	Reporting Limit	% Recovery
PBS	BLK	10 00	1	0 8	100%	10	0	125	< 125
LCSS	BS	10 00	25	1 3	100%	10	940	125	94 0
936902	WS00001	10 00	1	0 7	94 04%	10	4	133	< 133
936902D	WS00001D	10 00	1	0 7	94 04%	10	4	133	< 133
936903	WS00002	10 00	1	0 8	61 02%	10	0	205	< 205
936842	CP00001	10 00	1	0 6	93 42%	10	9	134	< 134
936842D	CP00001D	10 00	1	0 6	93 42%	10	9	134	< 134
936850	CP00002	10 00	2	0 4	96 66%	10	58	129	< 129

Reviewed by Joe Beasle 5/5/94

SDG 22602 32201

COMPUCHEM

Bring to Extractions lab

INTERNAL CHAIN-OF-CUSTODY

Laboratory wet chem

Requested By Ucooke

Water ____ Soil ✓ P E ____

Date 5/4/99 Shift (1) 2 Sat

circle one

EPA ____ Commercial ✓

	CCN	RECEIPT DATE	PRES	PARAMETER	RECEIVING USE ONLY BOTTLE NUMBER
1	936842	5/3/99	N/A	Ign, RCN, RSulf, pH	of
2	↓ 850	↓	↓	↓	of
3					of
4					of
5					of
6					of
7					of
8					of
9					of
10					of
11					of
12					of
13					of
14					of
15					of
16					of
17					of
18					of
19					of
20					of

Relinquished By P Moon Date 5/4/99

Received By Ucooke Date 5/4/99

Relinquished By Ucooke Date 5/4/99 K 5/5/99

Received ~~Extractions~~ K 5/5/99 By ~~cooler~~ cooler K 5/5/99 Date 5/4/99 K 5/5/99

Comments Extractions has sample 936842-850

CompuChem Receiving Log

48-111

Client LBG/CHRYSLER
Order # 341292
Project DAYTON THERMAL PRODUCTS
Quote # 99-17318
Account # 500744

Received on 5/3/99 # of COC's 1
Delivered by FED-EX
Freight # 810581589292
Subcontract Y / N
TAT Verbal 48 Hr Hardcopy

PPS / RFA # 226 Page 1 of 1
Lab Instructions Pick QC/48 Hr TAT/TCLP V,SV,Pest,Herb,MTLS / Rpt PCB, Ign, Corr, Reac/

	SDG	REQ	SAMPLE ID	CCN	AMOUNT / CONTAINER	PARAMETER	ANALYSIS CODE	LINE ITEM	SAMPLE DATE	MX	pH
1	22601	1	CP00001	9368526	1-4oz, 2-8oz	TCLP V, SV, PEST HERB MTL PCB	1456,1141,1457,1142,1146,1148,1143	1,2,4,5,7,9	4/30/99	50	NA
2	22601	2	CP00002	9368541	↓	TCLP V, SV, Pest, Herb, MTL	↑	1,2,4,5,7,9,11	↓	↓	↓
3	22602	4	CP00001	9368542	1 8oz	PCBs, Ign, Corr, Reac	749,1316,1254,1317,1336	13,15,17,19,21	4/30/99	50	NA
4	22602	5	CP00002	9368550	1 8oz	PCB, Ign, Corr, React	↑	↓	↓	↓	↓
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

mlo 5/3/99

Logged In By Cathy Dore
Order Entered By Marlene Swift
Cyanide samples checked for sulfide and chlorine Y / NA
Received in good condition Y / N
Holding Blank(s) Counter / Page ____ / ____ CCN s ____ / ____
Temperature(s) 20 °C

CHRYSLER CORPORATION

Chain-of-Custody

04449 A

SILICATE LINE SOILPILE

CompuChem 501 Madison Avenue Cary NC 27513 Phone Number 1 800 833 5097 Fax Number (919) 379-4050	Project Name: DAYTON THERMAL PRODUCTS Site Location: 1600 WEBSTER ST DAYTON OH Site Code: SC001 RFA Number: YGQP9900226 Chrysler PM: GARY STANCZUK	Consultant: LEGGETTE, BRASHEARS + GRAHAM INC Address: 1210 W COUNTY ROAD E., SUITE 700 ST PAUL, MN 55112 Consultant PM: KEN VOGEL Phone: (651) 490 1405 Fax: (651) 490 1006	

Turn-around Time Request: 24 calendar hrs; 48 calendar hrs; 10 days; 28 days

Data Package Deliverables (circle): Chrysler Level 1; Chrysler Level 2; Other (specify)

Matrix Codes: S Soil; SW - Surface Water; GW - Groundwater; A Air; Sed - Sediment; O - Other (specify)

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	VOC 8260	SVOCs 8270	PCBs	RCRA METALS	HERBICIDES	PESTICIDES				Lab Use Only: Volatiles pH <2	Metals pH <2	Cyanide pH > 12	Other ____	Remarks
CP00001	4/30/99	1505	C	S	3	✓	✓	✓	✓	✓	✓								SEGREGATED SOIL
CP00002	4-30-99	1515	C	S	3	✓	✓	✓	✓	✓	✓								CLEAN SOIL

Per Mike Curry & Gary Stanczuk @ Daimler Chrysler, perform the following analysis on both samples TCLP VOC, SVOC, Metals, Pest, Herb & PCBs, reactivity, corrosivity & ignitability DE 5/3/99

Sampler(s): Jennifer Bennesch

Cooler ID # ~~510~~ NA

Is RFA sampling complete? Yes No

Bottles Relinquished under Airbill No.

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Custody Seal Intact?
Jennifer Bennesch	4-30-99	1535				Yes No
						Yes No
			Received for Laboratory by: [signature]	5/3/99	0905	Yes No

Samples Relinquished under Airbill No. 810581589292

Temperature (corrected) 20C

Chrysler Corporation 800 Chrysler Drive CIMS 482-00-51 Auburn Hills Michigan 48326-2757

Distribution White copy Data package Yellow Retained by laboratory Pink Retained by sampler

opened cooler at 9:20 AM [signature] 5/3/99

Revision No 1
Cr at d ptember 23 1997

ERCX # 10160 LL# 320 2268-292

CHRYSLER CORPORATION

Soil Pile Sampling
NE area of site

Chain-of-Custody

0150.

~~Company Name~~ Lancaster Labs	Project Name: Dayton Thermal Products	Consultant: Leggette, Brashears, + Graham Inc	
~~501 Madison Avenue~~ 2425 New Holland Pike	Site Location: Dayton OH	Address: 1210 W Cnty Rd E, Suite 700	
~~Cary, NC 27513~~ Lancaster PA 17601-5994	Site Code: SC001	St. Paul, MN 55112	
~~Phone Number: (800) 833-5097~~ (717) 656-2300	RFA Number: YGQP9900241	Consultant PM: Ken Vogel	
~~Fax Number: (810) 270-4050~~	Chrysler PM: Gary Stanczuk	Phone: (651) 490-4405	Fax: (651) 490-1006

Turn around Time Request: 24 calendar hrs; 48 calendar hrs; 10 days (14 days); 28 days

Data Package Deliverables (circle): Chrysler Level 1; Chrysler Level 2; Other (specify)

Matrix Codes: S Soil; SW Surface Water; GW - Groundwater; A Air; Sed Sediment; O Other (specify)

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	VOC's 8260B 4oz glass, no preserv	SVOC 8270C 8oz glass no preserv	TCLP ~~metal~~ non-VOC 1311, 8oz glass, no pres	Pesticides 8081A 8oz glass, no preserv	PCB's 8082 8oz glass, no preserv	React, Ignit, Corros 8oz glass, no preserv	MI Metals (total) 8oz glass, no preserv	Percent moisture 8oz glass, no preserv		Lab Use Only: Volatiles pH <2	Metals pH <2	Cyanide pH >12	Other ___	Remarks
SP01TP01	7/27/99	13:10	G	S	5	X	X	X	X	X	X	X	X						PID = 0 ppm
SP01TP02	↓	14 00	↓	↓	5	X	X	X	X	X	X	X	X						PID = 0 ppm
SP01TP03	↓	14:30	↓	↓	5	X	X	X	X	X	X	X	X						PID = 0 ppm
SP01TP04	↓	14.55	↓	↓	5	X	X	X	X	X	X	X	X						PID = 0 ppm
SP01TP05	↓	16 20	↓	↓	5	X	X	X	X	X	X	X	X						PID = 0 ppm
SP02TP01	7/28/99	08 30	↓	↓	5	X	X	X	X	X	X	X	X						PID = 0 ppm
SP02TP02	↓	09:00	↓	↓	5	X	X	X	X	X	X	X	X						PID = 0 ppm
SP02TP03	↓	09 25	↓	↓	5	X	X	X	X	X	X	X	X						PID = 0 ppm
SP02TP04	↓	09 50	↓	↓	5	X	X	X	X	X	X	X	X						PID = 0 ppm
SP02TP05	↓	10 10	↓	↓	5	X	X	X	X	X	X	X	X						PID = 0 ppm

Compound List-Parameter/Method/Bottle Type/Preservative

Sampler(s): Mike Plante

Bottles Relinquished und Airbill No. N/A

Samples Relinquished und r Airbill No 812756632672

Temperature (corrected) 3.0C

Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Custody Seal Intact?
Mike Plante	7/28/99	16:30				Yes N
						Yes No
			Received for Laboratory by:	7-29-99	0850	Yes No

Cooler ID # N/A

Is RFA sampling complete? Yes No

Chrysler Corporation 800 Chrysler Drive CIMS 482-00-51 Auburn Hills Michigan 48326-2757

Distribution White copy Data package Yellow Retained by laboratory Pink Retained by sampler

SDG 241-A

EPA Region 5 Records Ctr

349960

Revision No 1
Created September 23 1997

Acct # 10160 LL# 3202268-292

CHRYSLER CORPORATION

Soil Pile Sampling
NE area of site

Chain-of-Custody

04980 A

~~CompuChem~~ Lancaster Labs	Project Name: Dayton Thermal Products	Consultant: Leggette, Brashears + Graham Inc.	
~~501 Madison Avenue~~ 2425 New Holland Pike	Site Location: Dayton, OH	Address: 1218 W Cnty Rd E Suite 700	
~~Cary, NC 27513~~ Lancaster, PA 17601-5994	Site Code: SC801	St Paul MN 55112	
Phone Number ~~1-800-833-5097~~ (717)656-2300	RFA Number: YGQP9908241	Consultant PM: Ken Vogel	
Fax Number ~~(919) 379-4050~~	Chrysler PM: Gary Stanczuk	Phone: (651) 490-1405	Fax: (651) 490 1006

Turn-around Time Request
24 calendar hrs
48 calendar hrs
~~10 days~~ 14 days
28 days

Data Package Deliverables (circle)
Chrysler Level 1
Chrysler Level 2
Other (specify)

Matrix Codes
S Soil; SW Surface Water; GW - Groundwater; A Air; Sed - Sediment; O - Other (specify)

Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	VOC 8260B 4oz glass, no preserv	SVOC 8270 C 4oz glass, no preserv	TCLP non-VOC 1311 4oz glass, no preserv	Pesticides 8081A 4oz glass, no preserv	PCB 8082 4oz glass, no preserv	React, Ignit, Corros 4oz glass, no preserv	mI Metals (total) 4oz glass, no preserv	Percent Moisture 4oz glass, no preserv		Lab Use Only: Volatiles pH <2	Metals pH <2	Cyanide pH > 12	Other ____	Remarks
SP03TP01	7/28/99	10:45	G	S	8	X	X	X	X	X	X	X	X						
SP03TP02	7/28/99	11:05	G	S	8	X	X	X	X	X	X	X	X						

Sampler(s): Mike Plante	Bottles Relinquished under Airbill No: N/A			Samples Relinquished under Airbill No: 812756632672		Temperature (corrected): 3.0C
	Relinquished by: Mike Plante	Date: 7/28/99	Time: 16:30	Received by:	Date:	Time:	Custody Seal Intact? Yes No
Cooler ID #: N/A	Relinquished by:	Date:	Time:	Received by:	Date:	Time:	Custody Seal Intact? Yes No
Is RFA sampling complete? Yes No	Relinquished by:	Date:	Time:	Received for Laboratory by:	Date: 7/29/99	Time: 0852	Custody Seal Intact? Yes No

Chrysler Corporation 800 Chrysler Drive CIMS 482-00-51 Auburn Hills Michigan 48326-2757

Distribution White copy Data package Yellow Retained by laboratory Pink Retained by sampler

SDG - 241A

Revision No 1
Created September 23 1997

10160 - DaimlerChrysler Corporation

Dayton Thermal Products/Dayton OH

Sample Reference List for EDD File c3202268 txt

Laboratory Sample No	Sample Description				Collected	
3202268	SP01TP01 Grab Soil Sample	Site Code SC001	RFA# YGQP9900241		7/27/99	13 10
3202269	SP01TP01 Grab Soil Sample (TCLP Non Volatile Ext)	Site Code SC001	RFA# YGQP9900241		7/27/99	13 10
3202270	SP01TP02 Grab Soil Sample	Site Code SC001	RFA# YGQP9900241		7/27/99	14 00
3202271	SP01TP02 Grab Soil Sample (TCLP Non Volatile Ext)	Site Code SC001	RFA# YGQP9900241		7/27/99	14 00
3202272	SP01TP03 Grab Soil Sample	Site Code SC001	RFA# YGQP9900241		7/27/99	14 30
3202273	SP01TP03 Grab Soil Sample (TCLP Non Volatile Ext)	Site Code SC001	RFA# YGQP9900241		7/27/99	14 30
3202274	SP01TP04 Grab Soil Sample	Site Code SC001	RFA# YGQP9900241		7/27/99	14 55
3202275	SP01TP04 Grab Soil Sample (TCLP Non Volatile Ext)	Site Code SC001	RFA# YGQP9900241		7/27/99	14 55
3202276	SP01TP05 Grab Soil Sample	Site Code SC001	RFA# YGQP9900241		7/27/99	16 20
3202277	SP01TP05 Grab Soil Sample (TCLP Non Volatile Ext)	Site Code SC001	RFA# YGQP9900241		7/27/99	16 20
3202278	SP02TP01 Grab Soil Sample	Site Code SC001	RFA# YGQP9900241		7/28/99	08 30
3202279	SP02TP01 Grab Soil Sample (TCLP Non Volatile Ext)	Site Code SC001	RFA# YGQP9900241		7/28/99	08 30
3202280	SP02TP02 Grab Soil Sample	Site Code SC001	RFA# YGQP9900241		7/28/99	09 00
3202281	SP02TP02 Grab Soil Sample (TCLP Non Volatile Ext)	Site Code SC001	RFA# YGQP9900241		7/28/99	09 00
3202282	SP02TP03 Grab Soil Sample	Site Code SC001	RFA# YGQP9900241		7/28/99	09 25
3202283	SP02TP03 Grab Soil Sample (TCLP Non Volatile Ext)	Site Code SC001	RFA# YGQP9900241		7/28/99	09 25
3202284	SP02TP04 Grab Soil Sample	Site Code SC001	RFA# YGQP9900241		7/28/99	09 50
3202285	SP02TP04 Grab Soil Sample (TCLP Non Volatile Ext)	Site Code SC001	RFA# YGQP9900241		7/28/99	09 50
3202286	SP02TP05 Grab Soil Sample	Site Code SC001	RFA# YGQP9900241		7/28/99	10 10
3202287	SP02TP05 Grab Soil Sample (TCLP Non Volatile Ext)	Site Code SC001	RFA# YGQP9900241		7/28/99	10 10
3202288	SP03TP01 Grab Soil Sample	Site Code SC001	RFA# YGQP9900241		7/28/99	10 45
3202289	SP03TP01 Grab Soil Sample (TCLP Non Volatile Ext)	Site Code SC001	RFA# YGQP9900241		7/28/99	10 45
3202290	SP03TP02 Grab Soil Sample	Site Code SC001	RFA# YGQP9900241		7/28/99	11 05
3202291	SP03TP02 Grab Soil Sample (TCLP Non Volatile Ext)	Site Code SC001	RFA# YGQP9900241		7/28/99	11 05
3202292	Storage Blank Water Sample	Site Code SC001	RFA# YGQP9900241		7/29/99	00 00

Lancaster Laboratories
Where quality is a science

AUG 23 1999

ENTERED IN DATA-A-View
BY/DATE 8/26/99
CHECKED BY
DATE 8-26-99

LLI Sample No SW 3202268
Collected 07/27/99 at 13 10 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP01 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS	METHOD DETECTION LIMIT
6292	TCL by 8260 (soil)			See Page 2		
1225	TCL Pesticides in Solids			See Page 3		
4688	TCL SW846 Semivolatiles Soil			See Page 4		
4689	TCL SW846 Semivolatiles/Soil			See Page 5		
1123	Cyanide (Reactivity)	N D	100	mg/kg		
0111	Moisture	14 7	0 50	% by wt		
	Moisture represents the loss in weight of the sample after oven drying at 103 105 degrees Celsius					
0394	pH	8 00	0 010			
	The pH was performed on a 1 1 slurry (25 gms of sample and 25 ml of deionized water) after being tumbled for 30 min					
0496	Corrosivity	See Below	1 0	See Below		
	Corrosivity					
	The pH of a 1 1 slurry (with deionized water) was 8 00 indicating that the waste is not corrosive					
	A waste is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12 5					
0542	Ignitability	See Below		See Below		
	The sample did not spontaneously ignite when exposed to air or water					
	The sample did not ignite by friction					
	The sample vapors did not ignite when exposed to a flame using a closed cup apparatus					
1121	Reactivity	See Below		See Below		
	Reactivity					
	The sample was extracted by the interim method described in SW 846 Chapter 7 3 This solution was analyzed for cyanide and sulfide					
	This waste is not considered reactive and hazardous because it does not generate a quantity of hydrogen cyanide exceeding 250 mg/kg or hydrogen sulfide exceeding 500 mg/kg These interim threshold limits were established by the Solid Waste Branch of EPA July 1992 These results do not reflect total cyanide or total sulfide					
1122	Sulfide (Reactivity)	N D	39	mg/kg		
	The relative percent difference (RPD) between the MS and MSD on the batch associated with this sample was 21% The acceptable RPD for this analysis is 20% The MS and MSD were both within specifications					

1 COPY TO Leggette Brashears & Graham ATTN Mr Ken Vogel

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300
21 15 36 D 0001 25 138873 676387
885 0 00 00072200 ASR000

Respectfully Submitted
Duane A Luckenbill B S
Group Leader GC/MS Volatiles

Lancaster Laboratories
2425 New Holland Pike
PO Box 12425
Lancaster PA 17605 2425
717 656 2300 Fax 717 656 2681

MEMBER ACIL

Lancaster Laboratories is a subsidiary of Thermo TerraTech Inc a Thermo Electron Company
See reverse side for explanation of symbols and abbreviations

Lancaster Laboratories
Where quality is a science

LLI Sample No SW 3202268
Collected 07/27/99 at 13 10 by MP

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP01 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS		METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS		METHOD DETECTION LIMIT
TCL by 8260 (soil)								
5444	Chloromethane	N D		2	ug/kg	N D		2
5446	Bromomethane	N D		3	ug/kg	N D		4
5445	Vinyl Chloride	N D		2	ug/kg	N D		2
5447	Chloroethane	N D		3	ug/kg	N D		4
5450	Methylene Chloride	9		2	ug/kg	10		2
6293	Acetone	17	J	7	ug/kg	19	J	8
6294	Carbon Disulfide	N D		3	ug/kg	N D		4
5449	1 1 Dichloroethene	N D		2	ug/kg	N D		2
5452	1 1 Dichloroethane	9		1	ug/kg	11		1
5455	Chloroform	N D		1	ug/kg	N D		1
5461	1 2 Dichloroethane	N D		2	ug/kg	N D		2
6296	2 Butanone	N D		7	ug/kg	N D		8
5457	1 1 1 Trichloroethane	2	J	1	ug/kg	2	J	1
5458	Carbon Tetrachloride	N D		1	ug/kg	N D		1
5465	Bromodichloromethane	N D		2	ug/kg	N D		2
5480	1 1 2 2 Tetrachloroethane	N D		1	ug/kg	N D		1
5463	1 2 Dichloropropane	N D		3	ug/kg	N D		4
6297	trans 1 3 Dichloropropene	N D		1	ug/kg	N D		1
5462	Trichloroethene	27		1	ug/kg	32		1
5470	Dibromochloromethane	N D		1	ug/kg	N D		1
5467	1 1 2 Trichloroethane	N D		2	ug/kg	N D		2
5460	Benzene	N D		1	ug/kg	N D		1
6298	cis 1 3 Dichloropropene	N D		1	ug/kg	N D		1
5478	Bromoform	N D		1	ug/kg	N D		1
6299	4 Methyl 2 pentanone	N D		3	ug/kg	N D		4
6300	2 Hexanone	N D		3	ug/kg	N D		4
5468	Tetrachloroethene	2	J	1	ug/kg	2	J	1
5466	Toluene	N D		1	ug/kg	N D		1
5472	Chlorobenzene	N D		1	ug/kg	N D		1
5474	Ethylbenzene	N D		1	ug/kg	N D		1
5477	Styrene	N D		1	ug/kg	N D		1
6301	Xylene (Total)	N D		1	ug/kg	N D		1
5451	trans 1 2 Dichloroethene	N D		2	ug/kg	N D		2
5454	cis 1 2 Dichloroethene	10		2	ug/kg	11		2

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Duane A Luckenbill B S
Group Leader GC/MS Volatiles

Lancaster Laboratories
Where quality is a science

LLI Sample No SW 3202268
Collected 07/27/99 at 13 10 by MP

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP01 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS		METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS		METHOD DETECTION LIMIT
TCL Pesticides in Solids								
1981	Alpha BHC	N D		0 67	ug/kg	N D		0 79
1982	Beta BHC	N D		0 67	ug/kg	N D		0 79
1983	Delta BHC	N D		0 67	ug/kg	N D		0 79
1218	Gamma BHC Lindane	N D		0 67	ug/kg	N D		0 79
1219	Heptachlor	N D		0 67	ug/kg	N D		0 79
1220	Aldrin	N D		0 67	ug/kg	N D		0 79
1984	Heptachlor Epoxide	1 27	J	0 67	ug/kg	1 49	J	0 79
1989	Endosulfan I	N D		0 67	ug/kg	N D		0 79
1222	Dieldrin	N D		1 3	ug/kg	N D		1 5
1985	DDE	N D		1 3	ug/kg	N D		1 5
1223	Endrin	N D		1 3	ug/kg	N D		1 5
1990	Endosulfan II	N D		1 3	ug/kg	N D		1 5
1986	DDD	N D		1 3	ug/kg	N D		1 5
1991	Endosulfan Sulfate	N D		1 3	ug/kg	N D		1 5
1221	DDT	N D		1 3	ug/kg	N D		1 5
3017	Endrin Ketone	N D		1 3	ug/kg	N D		1 5
1859	Methoxychlor	30 8	J	6 7	ug/kg	36 1	J	7 9
3025	Alpha Chlordane	N D		0 67	ug/kg	N D		0 79
3026	Gamma Chlordane	1 50	J	0 67	ug/kg	1 76	J	0 79
1988	Toxaphene	N D		67	ug/kg	N D		79
1992	Endrin Aldehyde	N D		1 3	ug/kg	N D		1 5
1993	PCB 1016	N D		33	ug/kg	N D		39
1994	PCB 1221	N D		33	ug/kg	N D		39
1995	PCB 1232	N D		33	ug/kg	N D		39
1996	PCB 1242	N D		33	ug/kg	N D		39
1997	PCB 1248	N D		33	ug/kg	N D		39
1998	PCB 1254	N D		33	ug/kg	N D		39
1999	PCB 1260	N D		33	ug/kg	N D		39

Due to the nature of the sample matrix a dilution of the sample was used for analysis The Limits of Quantitation (LOQ s) were raised accordingly

This analysis was performed at a 10x dilution of the original sample

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Jenifer E Hess B S
Group Leader Pesticides/PCBs

Lancaster Laboratories
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MEMBER ACIL

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See reverse side for explanation of symbols and abbreviations

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Where quality is a science

LLI Sample No SW 3202268
Collected 07/27/99 at 13 10 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP01 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	Phenol	N D	67	ug/kg	N D	79
3753	bis(2 Chloroethyl)ether	N D	33	ug/kg	N D	39
1186	2 Chlorophenol	N D	33	ug/kg	N D	39
3754	1 3 Dichlorobenzene	N D	33	ug/kg	N D	39
1187	1 4 Dichlorobenzene	N D	33	ug/kg	N D	39
3755	1 2 Dichlorobenzene	N D	33	ug/kg	N D	39
4690	2 Methylphenol	N D	33	ug/kg	N D	39
4691	2 2 oxybis(1 Chloropropane)	N D	33	ug/kg	N D	39
4692	4 Methylphenol	N D	67	ug/kg	N D	79
1188	N Nitroso di n propylamine	N D	33	ug/kg	N D	39
3757	Hexachloroethane	N D	33	ug/kg	N D	39
3758	Nitrobenzene	N D	33	ug/kg	N D	39
3759	Isophorone	N D	33	ug/kg	N D	39
3746	2 Nitrophenol	N D	67	ug/kg	N D	79
3747	2 4 Dimethylphenol	N D	67	ug/kg	N D	79
3760	bis(2 Chloroethoxy)methane	N D	67	ug/kg	N D	79
3748	2 4 Dichlorophenol	N D	67	ug/kg	N D	79
1189	1 2 4 Trichlorobenzene	N D	33	ug/kg	N D	39
3761	Naphthalene	N D	33	ug/kg	N D	39
4693	4 Chloroaniline	N D	33	ug/kg	N D	39
3762	Hexachlorobutadiene	N D	67	ug/kg	N D	79
1190	4 Chloro 3 methylphenol	N D	67	ug/kg	N D	79
4694	2 Methylnaphthalene	N D	33	ug/kg	N D	39
3763	Hexachlorocyclopentadiene	N D	170	ug/kg	N D	200
3749	2 4 6 Trichlorophenol	N D	67	ug/kg	N D	79
4695	2 4 5 Trichlorophenol	N D	67	ug/kg	N D	79
3764	2 Chloronaphthalene	N D	33	ug/kg	N D	39
4696	2 Nitroaniline	N D	33	ug/kg	N D	39
3766	Dimethylphthalate	N D	67	ug/kg	N D	79
3765	Acenaphthylene	N D	33	ug/kg	N D	39

3 Methylphenol and 4 methylphenol cannot be resolved under the chromatographic conditions used for sample analysis The result reported for 4 methylphenol represents the combined total of both compounds

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Charles J Neslund B S
Group Leader GC/MS SVOA

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LLI Sample No SW 3202268
Collected 07/27/99 at 13 10 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP01 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS		METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS		METHOD DETECTION LIMIT
TCL SW846 Semivolatiles/Soil								
4697	3 Nitroaniline	N D		67	ug/kg	N D		79
1191	Acenaphthene	39	J	33	ug/kg	46	J	39
3750	2 4 Dinitrophenol	N D		230	ug/kg	N D		270
1192	4 Nitrophenol	N D		170	ug/kg	N D		200
4698	Dibenzofuran	N D		33	ug/kg	N D		39
1193	2 4 Dinitrotoluene	N D		67	ug/kg	N D		79
3767	2 6 Dinitrotoluene	N D		33	ug/kg	N D		39
3770	Diethylphthalate	N D		67	ug/kg	N D		79
3769	4 Chlorophenyl phenylether	N D		33	ug/kg	N D		39
3768	Fluorene	48	J	33	ug/kg	56	J	39
4700	4 Nitroaniline	N D		67	ug/kg	N D		79
3751	4 6 Dinitro 2 methylphenol	N D		170	ug/kg	N D		200
3772	N Nitrosodiphenylamine	N D		33	ug/kg	N D		39
3773	4 Bromophenyl phenylether	N D		67	ug/kg	N D		79
3774	Hexachlorobenzene	N D		33	ug/kg	N D		39
1194	Pentachlorophenol	N D		170	ug/kg	N D		200
3775	Phenanthrene	710		33	ug/kg	830		39
3776	Anthracene	200	J	33	ug/kg	230	J	39
4702	Carbazole	87	J	33	ug/kg	100	J	39
3777	Di n butylphthalate	N D		67	ug/kg	N D		79
3778	Fluoranthene	1 200		33	ug/kg	1 400		39
1195	Pyrene	1 100		33	ug/kg	1 200		39
3780	Butylbenzylphthalate	N D		67	ug/kg	N D		79
3783	3 3 Dichlorobenzidine	N D		67	ug/kg	N D		79
3781	Benzo(a)anthracene	580		33	ug/kg	680		39
3784	bis(2 Ethylhexyl)phthalate	N D		67	ug/kg	N D		79
3782	Chrysene	580		33	ug/kg	680		39
3785	Di n octylphthalate	N D		67	ug/kg	N D		79
3786	Benzo(b)fluoranthene	560		33	ug/kg	660		39
3787	Benzo(k)fluoranthene	240	J	33	ug/kg	280	J	39
3788	Benzo(a)pyrene	400		33	ug/kg	470		39
3789	Indeno(1 2 3 cd)pyrene	250	J	33	ug/kg	290	J	39
3790	Dibenz(a h)anthracene	75	J	33	ug/kg	88	J	39
3791	Benzo(g h i)perylene	210	J	33	ug/kg	250	J	39

N nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine
The result reported for N nitrosodiphenylamine represents the combined total of both compounds

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Charles J Neslund B S
Group Leader GC/MS SVOA

&&&

Analysis Report
LABORATORY CHRONICLE

Lancaster Laboratories
Where quality is a science

LLI Sample No SW 3202268
Collected 07/27/99 at 13 10 by MP

Submitted 07/29/99

Account No 10160
Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

SP01TP01 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH
1TP01 SDG#

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS ID	DATE AND TIME	ANALYST
6292	TCL by 8260 (soil)	SW 846 8260B	1		08/03/99 1458	Michael E McAdams
0819	Solid Sample Pesticide Extract	SW 846 3550B	1		07/31/99 0720	Ginelle L Haines
1225	TCL Pesticides in Solids	SW 846 8081A/8082	1		08/04/99 0453	Douglas D Seitz
0381	BNA Soil Extraction	SW 846 3550B	1		08/03/99 2000	Karen L Beyer
4688	TCL SW846 Semivolatiles Soil	SW 846 8270C	1		08/05/99 0600	Michele A Jarosick
4689	TCL SW846 Semivolatiles/Soil	SW 846 8270C	1		08/05/99 0600	Michele A Jarosick
1123	Cyanide (Reactivity)	SW 846 9012	1		08/05/99 2153	Venia M McFadden
0111	Moisture	EPA 160 3 modified	1		08/01/99 1929	Gabriel Agosto
0394	pH	SW 846 9045C (modified)	1		08/03/99 2200	Luz M Groff
0542	Ignitability	40 CFR 261 21	1		08/04/99 1130	Catherine L Cammauf
1121	Reactivity	SW 846 Chapter 7 3	1		08/05/99 0805	Susan E Hibner
1122	Sulfide (Reactivity)	SW 846 9034	1		08/05/99 0805	Susan E Hibner

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LLI Sample No 3202268
SP01TP01 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LIMITS LOW	LIMITS HIGH
6292 TCL by 8260 (soil)		Batch E992121AD									
5444 Chloromethane											
2	ug/kg	N D		105	108	2	104			48	130
5446 Bromomethane											
3	ug/kg	N D		99	108	9	99			46	134
5445 Vinyl Chloride											
2	ug/kg	N D		108	113	5	100			60	127
5447 Chloroethane											
3	ug/kg	N D		99	104	5	96			30	142
5450 Methylene Chloride											
2	ug/kg	N D		9	1	6	104			69	126
6293 Acetone											
7	ug/kg	N D		104	99	6	78			46	133
6294 Carbon Disulfide											
3	ug/kg	N D		96	97	1	88			52	165
5449 1 1 Dichloroethene											
2	ug/kg	N D		112	112	0	103			69	146
5452 1 1 Dichloroethane											
1	ug/kg	N D		113	117	3	114			81	130
5455 Chloroform											
1	ug/kg	N D		107	114	7	113			82	123
5461 1 2 Dichloroethane											
2	ug/kg	N D		103	109	6	115			81	123
6296 2 Butanone											
7	ug/kg	N D		114	117	2	110			47	153
5457 1 1 1 Trichloroethane											
1	ug/kg	N D		110	115	4	120			84	132
5458 Carbon Tetrachloride											
1	ug/kg	N D		109	116	6	121			78	129
5465 Bromodichloromethane											
2	ug/kg	N D		106	112	6	114			80	121
5480 1 1 2 2 Tetrachloroethane											
1	ug/kg	N D		108	108	0	101			70	124
5463 1 2 Dichloropropane											
3	ug/kg	N D		113	117	4	114			77	127
6297 trans 1 3 Dichloropropene											
1	ug/kg	N D		103	108	4	105			69	131
5462 Trichloroethene											
1	ug/kg	N D		111	116	5	112			81	123
5470 Dibromochloromethane											
1	ug/kg	N D		106	109	3	112			80	120
5467 1 1 2 Trichloroethane											
2	ug/kg	N D		111	110	1	108			81	124
5460 Benzene											
1	ug/kg	N D		116	119	2	113			77	126
6298 cis 1 3 Dichloropropene											
1	ug/kg	N D		110	115	4	112			79	126

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LLI Sample No 3202268
SP01TP01 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
5478 Bromoform											
1	ug/kg	N D		102	101	1	107			73	120
6299 4 Methyl 2 pentanone											
3	ug/kg	N D		102	108	6	110			63	123
6300 2 Hexanone											
3	ug/kg	N D		105	107	1	104			60	128
5468 Tetrachloroethene											
1	ug/kg	N D		115	120	4	114			83	150
5466 Toluene											
1	ug/kg	N D		114	113	1	105			74	128
5472 Chlorobenzene											
1	ug/kg	N D		114	112	2	108			81	121
5474 Ethylbenzene											
1	ug/kg	N D		117	116	0	112			86	129
5477 Styrene											
1	ug/kg	N D		116	114	2	108			84	127
6301 Xylene (Total)											
1	ug/kg	N D		117	116	1	111			88	128
5451 trans 1 2 Dichloroethene											
2	ug/kg	N D		115	119	4	111			73	126
5454 cis 1 2 Dichloroethene											
2	ug/kg	N D		113	117	3	112			84	123
1225 TCL Pesticides in Solids		Batch 992110011A									
1981 Alpha BHC											
0 67	ug/kg	N D		84	85	1	102			38	156
1982 Beta BHC											
0 67	ug/kg	N D		94	93	1	97			40	153
1983 Delta BHC											
0 67	ug/kg	N D		76	76	0	97			44	145
1218 Gamma BHC Lindane											
0 67	ug/kg	N D		84	83	1	102			51	142
1219 Heptachlor											
0 67	ug/kg	N D		85	81	5	100			59	140
1220 Aldrin											
0 67	ug/kg	N D		105	100	4	100			55	132
1984 Heptachlor Epoxide											
0 67	ug/kg	N D		93	91	2	99			58	129
1989 Endosulfan I											
0 67	ug/kg	N D		185	185	0	81			56	123
1222 Dieldrin											
1 3	ug/kg	N D		86	85	1	90			63	133
1985 DDE											
1 3	ug/kg	N D		102	101	1	101			47	159
1223 Endrin											
1 3	ug/kg	N D		105	104	0	112			70	150
1990 Endosulfan II											
1 3	ug/kg	N D		44	51	16	89			46	138

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LLI Sample No 3202268
SP01TP01 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
1986 DDD											
1 3	ug/kg	N D		108	107	1	101			53	141
1991 Endosulfan Sulfate											
1 3	ug/kg	N D		88	84	5	108			40	150
1221 DDT											
1 3	ug/kg	N D		107	107	0	110			60	138
3017 Endrin Ketone											
1 3	ug/kg	N D		90	90	0	92			62	137
1859 Methoxychlor											
6 7	ug/kg	N D		132	124	6	128			52	174
3025 Alpha Chlordane											
0 67	ug/kg	N D		151	149	1	100			68	141
3026 Gamma Chlordane											
0 67	ug/kg	N D		100	97	2	97			65	129
1988 Toxaphene											
67	ug/kg	N D									
1992 Endrin Aldehyde											
1 3	ug/kg	N D		82	82	1	83			75	125
1993 PCB 1016											
33	ug/kg	N D									
1994 PCB 1221											
33	ug/kg	N D									
1995 PCB 1232											
33	ug/kg	N D									
1996 PCB 1242											
33	ug/kg	N D									
1997 PCB 1248											
33	ug/kg	N D									
1998 PCB 1254											
33	ug/kg	N D									
1999 PCB 1260											
33	ug/kg	N D									
4688 TCL SW846 Semivolatiles Soil		Batch 99215SLD026									
1185 Phenol											
67	ug/kg	N D		63	49	24	87			40	128
3753 bis(2 Chloroethyl)ether											
33	ug/kg	N D		58	42	32	91			38	131
1186 2 Chlorophenol											
33	ug/kg	N D		62	47	28	90			44	127
3754 1 3 Dichlorobenzene											
33	ug/kg	N D		44	28	44	87			31	121
1187 1 4 Dichlorobenzene											
33	ug/kg	N D		44	29	43	86			36	119
3755 1 2 Dichlorobenzene											
33	ug/kg	N D		48	31	42	88			39	120
4690 2 Methylphenol											
33	ug/kg	N D		61	48	25	89			42	127

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SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
4691 2 2 oxybis(1 Chloropropane)											
33	ug/kg	N D		54	38	34	88			38	151
4692 4 Methylphenol											
67	ug/kg	N D		62	49	23	89			33	139
1188 N Nitroso di n propylamine											
33	ug/kg	N D		64	49	26	92			39	142
3757 Hexachloroethane											
33	ug/kg	N D		44	28	44	89			29	128
3758 Nitrobenzene											
33	ug/kg	N D		59	44	29	91			42	131
3759 Isophorone											
33	ug/kg	N D		61	47	25	89			46	130
3746 2 Nitrophenol											
67	ug/kg	N D		65	50	28	97			36	141
3747 2 4 Dimethylphenol											
67	ug/kg	N D		60	48	22	90			40	132
3760 bis(2 Chloroethoxy)methane											
67	ug/kg	N D		63	49	26	93			44	127
3748 2 4 Dichlorophenol											
67	ug/kg	N D		64	50	23	91			41	128
1189 1 2 4 Trichlorobenzene											
33	ug/kg	N D		54	39	32	92			44	121
3761 Naphthalene											
33	ug/kg	N D		55	41	31	89			34	133
4693 4 Chloroaniline											
33	ug/kg	N D		50	41	18	42			1	113
3762 Hexachlorobutadiene											
67	ug/kg	N D		52	36	36	92			39	133
1190 4 Chloro 3 methylphenol											
67	ug/kg	N D		65	52	22	93			47	135
4694 2 Methylnaphthalene											
33	ug/kg	N D		59	45	27	90			43	131
3763 Hexachlorocyclopentadiene											
170	ug/kg	N D		35	24	38	69			1	141
3749 2 4 6 Trichlorophenol											
67	ug/kg	N D		64	52	22	90			39	141
4695 2 4 5 Trichlorophenol											
67	ug/kg	N D		64	52	21	87			45	136
3764 2 Chloronaphthalene											
33	ug/kg	N D		64	51	23	92			48	127
4696 2 Nitroaniline											
33	ug/kg	N D		71	58	21	101			25	139
3766 Dimethylphthalate											
67	ug/kg	N D		67	55	21	95			53	127
3765 Acenaphthylene											
33	ug/kg	N D		62	50	21	89			44	126

4689 TCL SW846 Semivolatiles/Soil Batch 99215SLD026

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LLI Sample No 3202268
SP01TP01 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
4697 3 Nitroaniline											
67	ug/kg	N D		61	52	17	66			18	117
1191 Acenaphthene											
33	ug/kg	N D		63	51	21	91			47	127
3750 2 4 Dinitrophenol											
230	ug/kg	N D		35	26	29	55			1	133
1192 4 Nitrophenol											
170	ug/kg	N D		60	46	27	83			31	161
4698 Dibenzofuran											
33	ug/kg	N D		66	54	21	93			53	125
1193 2 4 Dinitrotoluene											
67	ug/kg	N D		67	54	21	95			50	131
3767 2 6 Dinitrotoluene											
33	ug/kg	N D		71	58	21	103			53	130
3770 Diethylphthalate											
67	ug/kg	N D		68	56	20	97			54	130
3769 4 Chlorophenyl phenylether											
33	ug/kg	N D		67	54	21	92			47	132
3768 Fluorene											
33	ug/kg	N D		65	53	20	92			42	142
4700 4 Nitroaniline											
67	ug/kg	N D		64	52	20	86			30	127
3751 4 6 Dinitro 2 methylphenol											
170	ug/kg	N D		52	37	33	76			14	143
3772 N Nitrosodiphenylamine											
33	ug/kg	N D		70	57	21	97			49	130
3773 4 Bromophenyl phenylether											
67	ug/kg	N D		70	57	22	96			53	132
3774 Hexachlorobenzene											
33	ug/kg	N D		70	56	22	95			40	144
1194 Pentachlorophenol											
170	ug/kg	N D		34	22	41	61			20	132
3775 Phenanthrene											
33	ug/kg	N D		69	45	30	94			42	141
3776 Anthracene											
33	ug/kg	N D		69	52	25	95			45	132
4702 Carbazole											
33	ug/kg	N D		70	55	23	94			48	129
3777 Di n butylphthalate											
67	ug/kg	N D		71	56	23	97			54	133
3778 Fluoranthene											
33	ug/kg	N D		64	36	33	92			37	142
1195 Pyrene											
33	ug/kg	N D		67	43	28	103			34	145
3780 Butylbenzylphthalate											
67	ug/kg	N D		72	59	21	104			47	138
3783 3 3 Dichlorobenzidine											
67	ug/kg	N D		58	50	15	69			2	132
3781 Benzo(a)anthracene											
33	ug/kg	N D		69	47	29	94			44	133

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LLI Sample No 3202268
SP01TP01 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3784 bis(2 Ethylhexyl)phthalate											
67	ug/kg	N D		77	62	21	109			41	145
3782 Chrysene											
33	ug/kg	N D		69	47	29	96			42	136
3785 Di n octylphthalate											
67	ug/kg	N D		83	67	21	117			43	156
3786 Benzo(b)fluoranthene											
33	ug/kg	N D		63	45	24	94			35	140
3787 Benzo(k)fluoranthene											
33	ug/kg	N D		71	54	25	99			38	145
3788 Benzo(a)pyrene											
33	ug/kg	N D		67	50	23	98			38	141
3789 Indeno(1 2 3 cd)pyrene											
33	ug/kg	N D		66	53	20	98			30	153
3790 Dibenz(a h)anthracene											
33	ug/kg	N D		70	56	21	97			32	151
3791 Benzo(g h i)perylene											
33	ug/kg	N D		68	53	22	97			29	151
1123 Cyanide (Reactivity)		Batch 99217104201									
100	mg/kg	N D	0 (1)	3	2	37	105			88	121
0111 Moisture		Batch 992130091820002A									
0 50	% by wt		1				100	100	0	99	101
0394 pH		Batch 992150239039400A									
0 010			0				99	100	1	98	102
0542 Ignitability		Batch 992160286054200A									
1121 Reactivity		Batch 992170416112100A									
	see below										
1122 Sulfide (Reactivity)		Batch 992170416112100A									
39	mg/kg	N D	0 (1)	24	29	21	85			80	120

(1) The result for one or both determinations was less than five times the LOQ

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LLI Sample No 3202268
SP01TP01 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS LOW	HIGH
1225 TCL Pesticides in Solids	TCX	109	30	163
	DCB	158	42	184
4688 TCL SW846 Semivolatiles Soil	Phenol d6	83	47	127
	2 Fiphenol	78	47	126
	2 4 6 TBP	82	36	150
4689 TCL SW846 Semivolatiles/Soil	Nitrobz d5	74	45	128
	2 Fbiphnyl	76	49	123
	Tphenyld14	100	40	146
6292 TCL by 8260 (soil)	DBFM	111	80	120
	d4 1 2 DCA	104	80	120
	d8 toluene	103	81	117
	4 BFB	100	74	121

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AUG 23 1999

LLI Sample No TL 3202269
Collected 07/27/99 at 13 10 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP01 Grab Soil Sample (TCLP Non Volatile Ext)
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

ENTERED + ArcView
BY/DATE mcl 8/26/99
CHECK BY/DATE KLM 8-27-99

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS
1746	Barium	0 52	0 0015	mg/l
1751	Chromium	N D	0 0054	mg/l
1753	Copper	N D	0 0058	mg/l
1755	Lead	N D	0 023	mg/l
1766	Silver	N D	0 0057	mg/l
7035	Arsenic TR	N D	0 0070	mg/l
7036	Selenium TR	0 0074 J	0 0059	mg/l
7049	Cadmium TR	0 0020	0 00063	mg/l
7072	Zinc TR	0 050	0 0036	mg/l
0259	Mercury	N D	0 000042	mg/l

The metal analyses were performed on a non volatile leachate prepared according to the procedure specified in SW 846 Chapter 7 4 (Revision 3 December 1994) A sample is considered to have failed the Toxicity Characteristic (TC) test and is considered a hazardous waste if any of the metal concentrations (mg/l) in the leachate exceed the following maxima (100 times the Primary Drinking Water Standards)

Arsenic	5 0	Cadmium	1 0	Lead	5 0	Selenium	1 0
Barium	100 0	Chromium	5 0	Mercury	0 2	Silver	5 0

1 COPY TO Leggette Brashears & Graham ATTN Mr Ken Vogel

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300
21 18 11 D 0001 25 138873 676387
885 0 00 00013600 ASR000

Respectfully Submitted
Duane A Luckenbill B S
Group Leader GC/MS Volatiles

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&&&

Analysis Report

LABORATORY CHRONICLE

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LLI Sample No TL 3202269
Collected 07/27/99 at 13 10 by MP

Submitted 07/29/99

Account No 10160
Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

SP01TP01 Grab Soil Sample (TCLP Non Volatile Ext)
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH
SDG#

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS ID	DATE AND TIME	ANALYST
1746	Barium	SW 846 6010B	1		08/10/99 2300	Donna R Sackett
1751	Chromium	SW 846 6010B	1		08/10/99 2300	Donna R Sackett
1753	Copper	SW 846 6010B	1		08/10/99 2300	Donna R Sackett
1755	Lead	SW 846 6010B	1		08/10/99 2300	Donna R Sackett
1766	Silver	SW 846 6010B	1		08/10/99 2300	Donna R Sackett
5705	WW/TL SW 846 ICP Digest (tot)	SW 846 3010A	1		08/03/99 2139	Marie D Kimmel
7035	Arsenic TR	SW 846 6010B	1		08/10/99 2300	Donna R Sackett
7036	Selenium TR	SW 846 6010B	1		08/16/99 0448	Donna R Sackett
7049	Cadmium TR	SW 846 6010B	1		08/10/99 2300	Donna R Sackett
7072	Zinc TR	SW 846 6010B	1		08/10/99 2300	Donna R Sackett
0259	Mercury	SW 846 7470A	1		08/04/99 1651	Nelli S Markaryan
5713	WW SW846 Hg Digest	SW 846 7470A	1		08/03/99 2115	Nelli S Markaryan
0947	TCLP Non volatile Extraction	SW 846 1311	1		08/02/99 1500	James D Cowan

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LLI Sample No 3202269
SP01TP01 Grab Soil Sample (TCLP Non Volatile Ext)
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
1746 Barium		Batch 992155705003									
0 0015	mg/l	N D	0 (1)	84	85	1	100			80	120
1751 Chromium		Batch 992155705003									
0 0054	mg/l	N D	0 (1)	83	84	2	102			80	120
1753 Copper		Batch 992155705003									
0 0058	mg/l	N D	3	85	85	0	99			80	120
1755 Lead		Batch 992155705003									
0 023	mg/l	N D	0 (1)	82	83	1	100			80	120
1766 Silver		Batch 992155705003									
0 0057	mg/l	N D	0 (1)	77	78	1	98			80	120
7035 Arsenic TR		Batch 992155705003									
0 0070	mg/l	N D	2	81	81	0	97			80	120
7036 Selenium TR		Batch 992155705003									
0 0059	mg/l	N D	0 (1)	84	82	2	100			80	120
7049 Cadmium TR		Batch 992155705003									
0 00063	mg/l	N D	0 (1)	84	85	1	100			80	120
7072 Zinc TR		Batch 992155705003									
0 0036	mg/l	N D	0 (1)	85	86	1	99			80	120
0259 Mercury		Batch 992155713003									
0 000042	mg/l	N D	0 (1)	80	76	6	102			80	120

(1) The result for one or both determinations was less than five times the LOQ

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AUG 23 1999

LLI Sample No SW 3202270
Collected 07/27/99 at 14 00 by MP

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP02 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP990024

+ Arc View
MCL 8/26/99
MLH 8 27-99

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS	DRY WEIGHT METHOD DETECTION LIMIT
6292	TCL by 8260 (soil)			See Page 2		
1225	TCL Pesticides in Solids			See Page 3		
4688	TCL SW846 Semivolatiles Soil			See Page 4		
4689	TCL SW846 Semivolatiles/Soil			See Page 5		
1123	Cyanide (Reactivity)	N D	100	mg/kg		
0111	Moisture	14 7	0 50	% by wt		
	Moisture represents the loss in weight of the sample after oven drying at 103 105 degrees Celsius					
0394	pH	8 07	0 010			
	The pH was performed on a 1 1 slurry (25 gms of sample and 25 ml of deionized water) after being tumbled for 30 min					
0496	Corrosivity	See Below		See Below		
	Corrosivity					
	The pH of a 1 1 slurry (with deionized water) was 8 07 indicating that the waste is not corrosive					
	A waste is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12 5					
0542	Ignitability	See Below		See Below		
	The sample did not spontaneously ignite when exposed to air or water					
	The sample did not ignite by friction					
	The sample vapors did not ignite when exposed to a flame using a closed cup apparatus					
1121	Reactivity	See Below		See Below		
	Reactivity					
	The sample was extracted by the interim method described in SW 846 Chapter 7 3 This solution was analyzed for cyanide and sulfide This waste is not considered reactive and hazardous because it does not generate a quantity of hydrogen cyanide exceeding 250 mg/kg or hydrogen sulfide exceeding 500 mg/kg These interim threshold limits were established by the Solid Waste Branch of EPA July 1992 These results do not reflect total cyanide or total sulfide					
1122	Sulfide (Reactivity)	N D	39	mg/kg		
	The relative percent difference (RPD) between the MS and MSD on the batch associated with this sample was 21% The acceptable RPD for this analysis is 20% The MS and MSD were both within specifications					

1 COPY TO Leggette Brashears & Graham ATTN Mr Ken Vogel

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300
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Respectfully Submitted
Duane A Luckenbill B S
Group Leader GC/MS Volatiles

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LLI Sample No SW 3202270
Collected 07/27/99 at 14 00 by MP

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP02 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS		METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS		METHOD DETECTION LIMIT
TCL by 8260 (soil)								
5444	Chloromethane	N D		2	ug/kg	N D		2
5446	Bromomethane	N D		3	ug/kg	N D		4
5445	Vinyl Chloride	N D		2	ug/kg	N D		2
5447	Chloroethane	N D		3	ug/kg	N D		4
5450	Methylene Chloride	3	J	2	ug/kg	3	J	2
6293	Acetone	N D		7	ug/kg	N D		8
6294	Carbon Disulfide	N D		3	ug/kg	N D		4
5449	1 1 Dichloroethene	N D		2	ug/kg	N D		2
5452	1 1 Dichloroethane	2	J	1	ug/kg	2	J	1
5455	Chloroform	N D		1	ug/kg	N D		1
5461	1 2 Dichloroethane	N D		2	ug/kg	N D		2
6296	2 Butanone	N D		7	ug/kg	N D		8
5457	1 1 1 Trichloroethane	1	J	1	ug/kg	2	J	1
5458	Carbon Tetrachloride	N D		1	ug/kg	N D		1
5465	Bromodichloromethane	N D		2	ug/kg	N D		2
5480	1 1 2 2 Tetrachloroethane	N D		1	ug/kg	N D		1
5463	1 2 Dichloropropane	N D		3	ug/kg	N D		4
6297	trans 1 3 Dichloropropene	N D		1	ug/kg	N D		1
5462	Trichloroethene	5	J	1	ug/kg	5	J	1
5470	Dibromochloromethane	N D		1	ug/kg	N D		1
5467	1 1 2 Trichloroethane	N D		2	ug/kg	N D		2
5460	Benzene	N D		1	ug/kg	N D		1
6298	cis 1 3 Dichloropropene	N D		1	ug/kg	N D		1
5478	Bromoform	N D		1	ug/kg	N D		1
6299	4 Methyl 2 pentanone	N D		3	ug/kg	N D		4
6300	2 Hexanone	N D		3	ug/kg	N D		4
5468	Tetrachloroethene	1	J	1	ug/kg	2	J	1
5466	Toluene	N D		1	ug/kg	N D		1
5472	Chlorobenzene	N D		1	ug/kg	N D		1
5474	Ethylbenzene	N D		1	ug/kg	N D		1
5477	Styrene	N D		1	ug/kg	N D		1
6301	Xylene (Total)	N D		1	ug/kg	N D		1
5451	trans 1 2 Dichloroethene	N D		2	ug/kg	N D		2
5454	cis 1 2 Dichloroethene	N D		2	ug/kg	N D		2

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Duane A Luckenbill B S
Group Leader GC/MS Volatiles

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LLI Sample No SW 3202270
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PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP02 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS	METHOD DETECTION LIMIT
TCL Pesticides in Solids						
1981	Alpha BHC	N D	0 67	ug/kg	N D	0 79
1982	Beta BHC	N D	0 67	ug/kg	N D	0 79
1983	Delta BHC	N D	0 67	ug/kg	N D	0 79
1218	Gamma BHC Lindane	N D	0 67	ug/kg	N D	0 79
1219	Heptachlor	N D	0 67	ug/kg	N D	0 79
1220	Aldrin	N D	0 67	ug/kg	N D	0 79
1984	Heptachlor Epoxide	N D	0 67	ug/kg	N D	0 79
1989	Endosulfan I	N D	0 67	ug/kg	N D	0 79
1222	Dieldrin	N D	1 3	ug/kg	N D	1 5
1985	DDE	N D	1 3	ug/kg	N D	1 5
1223	Endrin	N D	1 3	ug/kg	N D	1 5
1990	Endosulfan II	N D	1 3	ug/kg	N D	1 5
1986	DDD	N D	1 3	ug/kg	N D	1 5
1991	Endosulfan Sulfate	N D	1 3	ug/kg	N D	1 5
1221	DDT	N D	1 3	ug/kg	N D	1 5
3017	Endrin Ketone	N D	1 3	ug/kg	N D	1 5
1859	Methoxychlor	N D	6 7	ug/kg	N D	7 9
3025	Alpha Chlordane	N D	0 67	ug/kg	N D	0 79
3026	Gamma Chlordane	N D	0 67	ug/kg	N D	0 79
1988	Toxaphene	N D	67	ug/kg	N D	79
1992	Endrin Aldehyde	N D	1 3	ug/kg	N D	1 5
1993	PCB 1016	N D	33	ug/kg	N D	39
1994	PCB 1221	N D	33	ug/kg	N D	39
1995	PCB 1232	N D	33	ug/kg	N D	39
1996	PCB 1242	N D	33	ug/kg	N D	39
1997	PCB 1248	N D	33	ug/kg	N D	39
1998	PCB 1254	N D	33	ug/kg	N D	39
1999	PCB 1260	N D	33	ug/kg	N D	39

This analysis was performed at a 10x dilution of the original sample

Due to the nature of the sample matrix a dilution of the sample was used for analysis The Limits of Quantitation (LOQ s) were raised accordingly

The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Jenifer E Hess B S
Group Leader Pesticides/PCBs

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LLI Sample No SW 3202270
Collected 07/27/99 at 14 00 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP02 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	Phenol	N D	67	ug/kg	N D	79
3753	bis(2 Chloroethyl)ether	N D	33	ug/kg	N D	39
1186	2 Chlorophenol	N D	33	ug/kg	N D	39
3754	1 3 Dichlorobenzene	N D	33	ug/kg	N D	39
1187	1 4 Dichlorobenzene	N D	33	ug/kg	N D	39
3755	1 2 Dichlorobenzene	N D	33	ug/kg	N D	39
4690	2 Methylphenol	N D	33	ug/kg	N D	39
4691	2 2 oxybis(1 Chloropropane)	N D	33	ug/kg	N D	39
4692	4 Methylphenol	N D	67	ug/kg	N D	79
1188	N Nitroso di n propylamine	N D	33	ug/kg	N D	39
3757	Hexachloroethane	N D	33	ug/kg	N D	39
3758	Nitrobenzene	N D	33	ug/kg	N D	39
3759	Isophorone	N D	33	ug/kg	N D	39
3746	2 Nitrophenol	N D	67	ug/kg	N D	79
3747	2 4 Dimethylphenol	N D	67	ug/kg	N D	79
3760	bis(2 Chloroethoxy)methane	N D	67	ug/kg	N D	79
3748	2 4 Dichlorophenol	N D	67	ug/kg	N D	79
1189	1 2 4 Trichlorobenzene	N D	33	ug/kg	N D	39
3761	Naphthalene	N D	33	ug/kg	N D	39
4693	4 Chloroaniline	N D	33	ug/kg	N D	39
3762	Hexachlorobutadiene	N D	67	ug/kg	N D	79
1190	4 Chloro 3 methylphenol	N D	67	ug/kg	N D	79
4694	2 Methylnaphthalene	N D	33	ug/kg	N D	39
3763	Hexachlorocyclopentadiene	N D	170	ug/kg	N D	200
3749	2 4 6 Trichlorophenol	N D	67	ug/kg	N D	79
4695	2 4 5 Trichlorophenol	N D	67	ug/kg	N D	79
3764	2 Chloronaphthalene	N D	33	ug/kg	N D	39
4696	2 Nitroaniline	N D	33	ug/kg	N D	39
3766	Dimethylphthalate	N D	67	ug/kg	N D	79
3765	Acenaphthylene	N D	33	ug/kg	N D	39

3 Methylphenol and 4 methylphenol cannot be resolved under the chromatographic conditions used for sample analysis The result reported for 4 methylphenol represents the combined total of both compounds

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Charles J Neslund B S
Group Leader GC/MS SVOA

Lancaster Laboratories
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LLI Sample No SW 3202270
Collected 07/27/99 at 14 00 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP02 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS		METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS		METHOD DETECTION LIMIT
TCL SW846 Semivolatiles/Soil								
4697	3 Nitroaniline	N D		67	ug/kg	N D		79
1191	Acenaphthene	N D		33	ug/kg	N D		39
3750	2 4 Dinitrophenol	N D		230	ug/kg	N D		270
1192	4 Nitrophenol	N D		170	ug/kg	N D		200
4698	Dibenzofuran	N D		33	ug/kg	N D		39
1193	2 4 Dinitrotoluene	N D		67	ug/kg	N D		79
3767	2 6 Dinitrotoluene	N D		33	ug/kg	N D		39
3770	Diethylphthalate	N D		67	ug/kg	N D		79
3769	4 Chlorophenyl phenylether	N D		33	ug/kg	N D		39
3768	Fluorene	N D		33	ug/kg	N D		39
4700	4 Nitroaniline	N D		67	ug/kg	N D		79
3751	4 6 Dinitro 2 methylphenol	N D		170	ug/kg	N D		200
3772	N Nitrosodiphenylamine	N D		33	ug/kg	N D		39
3773	4 Bromophenyl phenylether	N D		67	ug/kg	N D		79
3774	Hexachlorobenzene	N D		33	ug/kg	N D		39
1194	Pentachlorophenol	N D		170	ug/kg	N D		200
3775	Phenanthrene	140	J	33	ug/kg	170	J	39
3776	Anthracene	N D		33	ug/kg	N D		39
4702	Carbazole	N D		33	ug/kg	N D		39
3777	Di n butylphthalate	N D		67	ug/kg	N D		79
3778	Fluoranthene	240	J	33	ug/kg	280	J	39
1195	Pyrene	220	J	33	ug/kg	260	J	39
3780	Butylbenzylphthalate	N D		67	ug/kg	N D		79
3783	3 3 Dichlorobenzidine	N D		67	ug/kg	N D		79
3781	Benzo(a)anthracene	130	J	33	ug/kg	150	J	39
3784	bis(2 Ethylhexyl)phthalate	N D		67	ug/kg	N D		79
3782	Chrysene	120	J	33	ug/kg	140	J	39
3785	Di n octylphthalate	N D		67	ug/kg	N D		79
3786	Benzo(b)fluoranthene	150	J	33	ug/kg	180	J	39
3787	Benzo(k)fluoranthene	65	J	33	ug/kg	77	J	39
3788	Benzo(a)pyrene	110	J	33	ug/kg	130	J	39
3789	Indeno(1 2 3 cd)pyrene	75	J	33	ug/kg	88	J	39
3790	Dibenz(a h)anthracene	N D		33	ug/kg	N D		39
3791	Benzo(g h i)perylene	67	J	33	ug/kg	79	J	39

N nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine
The result reported for N nitrosodiphenylamine represents the combined
total of both compounds

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Charles J Neslund B S
Group Leader GC/MS SVOA

&&&

Analysis Report

LABORATORY CHRONICLE

Lancaster Laboratories
Where quality is a science

LLI Sample No SW 3202270
Collected 07/27/99 at 14 00 by MP

Submitted 07/29/99

Account No 10160
Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

SP01TP02 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH
1TP02 SDG#

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS ID	DATE AND TIME	ANALYST
6292	TCL by 8260 (soil)	SW 846 8260B	1		08/03/99 1535	Michael E McAdams
0819	Solid Sample Pesticide Extract	SW 846 3550B	1		07/31/99 0720	Ginelle L Haines
1225	TCL Pesticides in Solids	SW 846 8081A/8082	1		08/04/99 0515	Douglas D Seitz
0381	BNA Soil Extraction	SW 846 3550B	1		08/03/99 2000	Karen L Beyer
4688	TCL SW846 Semivolatiles Soil	SW 846 8270C	1		08/05/99 0859	Michele A Jarosick
4689	TCL SW846 Semivolatiles/Soil	SW 846 8270C	1		08/05/99 0859	Michele A Jarosick
1123	Cyanide (Reactivity)	SW 846 9012	1		08/05/99 2155	Venia M McFadden
0111	Moisture	EPA 160 3 modified	1		08/01/99 1929	Gabriel Agosto
0394	pH	SW 846 9045C (modified)	1		08/03/99 2200	Luz M Groff
0542	Ignitability	40 CFR 261 21	1		08/04/99 1130	Catherine L Cammauf
1121	Reactivity	SW 846 Chapter 7 3	1		08/05/99 0805	Susan E Hibner
1122	Sulfide (Reactivity)	SW 846 9034	1		08/05/99 0805	Susan E Hibner

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LLI Sample No 3202270
SP01TP02 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
6292 TCL by 8260 (soil)		Batch E992121AD									
5444 Chloromethane											
2	ug/kg	N D		105	108	2	104			48	130
5446 Bromomethane											
3	ug/kg	N D		99	108	9	99			46	134
5445 Vinyl Chloride											
2	ug/kg	N D		108	113	5	100			60	127
5447 Chloroethane											
3	ug/kg	N D		99	104	5	96			30	142
5450 Methylene Chloride											
2	ug/kg	N D		9	1	6	104			69	126
6293 Acetone											
7	ug/kg	N D		104	99	6	78			46	133
6294 Carbon Disulfide											
3	ug/kg	N D		96	97	1	88			52	165
5449 1 1 Dichloroethene											
2	ug/kg	N D		112	112	0	103			69	146
5452 1 1 Dichloroethane											
1	ug/kg	N D		113	117	3	114			81	130
5455 Chloroform											
1	ug/kg	N D		107	114	7	113			82	123
5461 1 2 Dichloroethane											
2	ug/kg	N D		103	109	6	115			81	123
6296 2 Butanone											
7	ug/kg	N D		114	117	2	110			47	153
5457 1 1 1 Trichloroethane											
1	ug/kg	N D		110	115	4	120			84	132
5458 Carbon Tetrachloride											
1	ug/kg	N D		109	116	6	121			78	129
5465 Bromodichloromethane											
2	ug/kg	N D		106	112	6	114			80	121
5480 1 1 2 2 Tetrachloroethane											
1	ug/kg	N D		108	108	0	101			70	124
5463 1 2 Dichloropropane											
3	ug/kg	N D		113	117	4	114			77	127
6297 trans 1 3 Dichloropropene											
1	ug/kg	N D		103	108	4	105			69	131
5462 Trichloroethene											
1	ug/kg	N D		111	116	5	112			81	123
5470 Dibromochloromethane											
1	ug/kg	N D		106	109	3	112			80	120
5467 1 1 2 Trichloroethane											
2	ug/kg	N D		111	110	1	108			81	124
5460 Benzene											
1	ug/kg	N D		116	119	2	113			77	126
6298 cis 1 3 Dichloropropene											
1	ug/kg	N D		110	115	4	112			79	126

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LLI Sample No 3202270
SP01TP02 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

	SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
5478 Bromoform	1	ug/kg	N D		102	101	1	107			73	120
6299 4 Methyl 2 pentanone	3	ug/kg	N D		102	108	6	110			63	123
6300 2 Hexanone	3	ug/kg	N D		105	107	1	104			60	128
5468 Tetrachloroethene	1	ug/kg	N D		115	120	4	114			83	150
5466 Toluene	1	ug/kg	N D		114	113	1	105			74	128
5472 Chlorobenzene	1	ug/kg	N D		114	112	2	108			81	121
5474 Ethylbenzene	1	ug/kg	N D		117	116	0	112			86	129
5477 Styrene	1	ug/kg	N D		116	114	2	108			84	127
6301 Xylene (Total)	1	ug/kg	N D		117	116	1	111			88	128
5451 trans 1 2 Dichloroethene	2	ug/kg	N D		115	119	4	111			73	126
5454 cis 1 2 Dichloroethene	2	ug/kg	N D		113	117	3	112			84	123
1225 TCL Pesticides in Solids			Batch 992110011A									
1981 Alpha BHC	0 67	ug/kg	N D		84	85	1	102			38	156
1982 Beta BHC	0 67	ug/kg	N D		94	93	1	97			40	153
1983 Delta BHC	0 67	ug/kg	N D		76	76	0	97			44	145
1218 Gamma BHC Lindane	0 67	ug/kg	N D		84	83	1	102			51	142
1219 Heptachlor	0 67	ug/kg	N D		85	81	5	100			59	140
1220 Aldrin	0 67	ug/kg	N D		105	100	4	100			55	132
1984 Heptachlor Epoxide	0 67	ug/kg	N D		93	91	2	99			58	129
1989 Endosulfan I	0 67	ug/kg	N D		185	185	0	81			56	123
1222 Dieldrin	1 3	ug/kg	N D		86	85	1	90			63	133
1985 DDE	1 3	ug/kg	N D		102	101	1	101			47	159
1223 Endrin	1 3	ug/kg	N D		105	104	0	112			70	150
1990 Endosulfan II	1 3	ug/kg	N D		44	51	16	89			46	138

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LLI Sample No 3202270
SP01TP02 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
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Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
1986 DDD											
1 3	ug/kg	N D		108	107	1	101			53	141
1991 Endosulfan Sulfate											
1 3	ug/kg	N D		88	84	5	108			40	150
1221 DDT											
1 3	ug/kg	N D		107	107	0	110			60	138
3017 Endrin Ketone											
1 3	ug/kg	N D		90	90	0	92			62	137
1859 Methoxychlor											
6 7	ug/kg	N D		132	124	6	128			52	174
3025 Alpha Chlordane											
0 67	ug/kg	N D		151	149	1	100			68	141
3026 Gamma Chlordane											
0 67	ug/kg	N D		100	97	2	97			65	129
1988 Toxaphene											
67	ug/kg	N D									
1992 Endrin Aldehyde											
1 3	ug/kg	N D		82	82	1	83			75	125
1993 PCB 1016											
33	ug/kg	N D									
1994 PCB 1221											
33	ug/kg	N D									
1995 PCB 1232											
33	ug/kg	N D									
1996 PCB 1242											
33	ug/kg	N D									
1997 PCB 1248											
33	ug/kg	N D									
1998 PCB 1254											
33	ug/kg	N D									
1999 PCB 1260											
33	ug/kg	N D									
4688 TCL SW846 Semivolatiles Soil		Batch 99215SLD026									
1185 Phenol											
67	ug/kg	N D		63	49	24	87			40	128
3753 bis(2 Chloroethyl)ether											
33	ug/kg	N D		58	42	32	91			38	131
1186 2 Chlorophenol											
33	ug/kg	N D		62	47	28	90			44	127
3754 1 3 Dichlorobenzene											
33	ug/kg	N D		44	28	44	87			31	121
1187 1 4 Dichlorobenzene											
33	ug/kg	N D		44	29	43	86			36	119
3755 1 2 Dichlorobenzene											
33	ug/kg	N D		48	31	42	88			39	120
4690 2 Methylphenol											
33	ug/kg	N D		61	48	25	89			42	127

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Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
4691 2 2 oxybis(1 Chloropropane)											
33	ug/kg	N D		54	38	34	88			38	151
4692 4 Methylphenol											
67	ug/kg	N D		62	49	23	89			33	139
1188 N Nitroso di n propylamine											
33	ug/kg	N D		64	49	26	92			39	142
3757 Hexachloroethane											
33	ug/kg	N D		44	28	44	89			29	128
3758 Nitrobenzene											
33	ug/kg	N D		59	44	29	91			42	131
3759 Isophorone											
33	ug/kg	N D		61	47	25	89			46	130
3746 2 Nitrophenol											
67	ug/kg	N D		65	50	28	97			36	141
3747 2 4 Dimethylphenol											
67	ug/kg	N D		60	48	22	90			40	132
3760 bis(2 Chloroethoxy)methane											
67	ug/kg	N D		63	49	26	93			44	127
3748 2 4 Dichlorophenol											
67	ug/kg	N D		64	50	23	91			41	128
1189 1 2 4 Trichlorobenzene											
33	ug/kg	N D		54	39	32	92			44	121
3761 Naphthalene											
33	ug/kg	N D		55	41	31	89			34	133
4693 4 Chloroaniline											
33	ug/kg	N D		50	41	18	42			1	113
3762 Hexachlorobutadiene											
67	ug/kg	N D		52	36	36	92			39	133
1190 4 Chloro 3 methylphenol											
67	ug/kg	N D		65	52	22	93			47	135
4694 2 Methylnaphthalene											
33	ug/kg	N D		59	45	27	90			43	131
3763 Hexachlorocyclopentadiene											
170	ug/kg	N D		35	24	38	69			1	141
3749 2 4 6 Trichlorophenol											
67	ug/kg	N D		64	52	22	90			39	141
4695 2 4 5 Trichlorophenol											
67	ug/kg	N D		64	52	21	87			45	136
3764 2 Chloronaphthalene											
33	ug/kg	N D		64	51	23	92			48	127
4696 2 Nitroaniline											
33	ug/kg	N D		71	58	21	101			25	139
3766 Dimethylphthalate											
67	ug/kg	N D		67	55	21	95			53	127
3765 Acenaphthylene											
33	ug/kg	N D		62	50	21	89			44	126

4689 TCL SW846 Semivolatiles/Soil Batch 99215SLD026

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LLI Sample No 3202270
SP01TP02 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
4697 3 Nitroaniline											
67	ug/kg	N D		61	52	17	66			18	117
1191 Acenaphthene											
33	ug/kg	N D		63	51	21	91			47	127
3750 2 4 Dinitrophenol											
230	ug/kg	N D		35	26	29	55			1	133
1192 4 Nitrophenol											
170	ug/kg	N D		60	46	27	83			31	161
4698 Dibenzofuran											
33	ug/kg	N D		66	54	21	93			53	125
1193 2 4 Dinitrotoluene											
67	ug/kg	N D		67	54	21	95			50	131
3767 2 6 Dinitrotoluene											
33	ug/kg	N D		71	58	21	103			53	130
3770 Diethylphthalate											
67	ug/kg	N D		68	56	20	97			54	130
3769 4 Chlorophenyl phenylether											
33	ug/kg	N D		67	54	21	92			47	132
3768 Fluorene											
33	ug/kg	N D		65	53	20	92			42	142
4700 4 Nitroaniline											
67	ug/kg	N D		64	52	20	86			30	127
3751 4 6 Dinitro 2 methylphenol											
170	ug/kg	N D		52	37	33	76			14	143
3772 N Nitrosodiphenylamine											
33	ug/kg	N D		70	57	21	97			49	130
3773 4 Bromophenyl phenylether											
67	ug/kg	N D		70	57	22	96			53	132
3774 Hexachlorobenzene											
33	ug/kg	N D		70	56	22	95			40	144
1194 Pentachlorophenol											
170	ug/kg	N D		34	22	41	61			20	132
3775 Phenanthrene											
33	ug/kg	N D		69	45	30	94			42	141
3776 Anthracene											
33	ug/kg	N D		69	52	25	95			45	132
4702 Carbazole											
33	ug/kg	N D		70	55	23	94			48	129
3777 Di n butylphthalate											
67	ug/kg	N D		71	56	23	97			54	133
3778 Fluoranthene											
33	ug/kg	N D		64	36	33	92			37	142
1195 Pyrene											
33	ug/kg	N D		67	43	28	103			34	145
3780 Butylbenzylphthalate											
67	ug/kg	N D		72	59	21	104			47	138
3783 3 3 Dichlorobenzidine											
67	ug/kg	N D		58	50	15	69			2	132
3781 Benzo(a)anthracene											
33	ug/kg	N D		69	47	29	94			44	133

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LLI Sample No 3202270
SP01TP02 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3784 bis(2 Ethylhexyl)phthalate											
67	ug/kg	N D		77	62	21	109			41	145
3782 Chrysene											
33	ug/kg	N D		69	47	29	96			42	136
3785 Di n octylphthalate											
67	ug/kg	N D		83	67	21	117			43	156
3786 Benzo(b)fluoranthene											
33	ug/kg	N D		63	45	24	94			35	140
3787 Benzo(k)fluoranthene											
33	ug/kg	N D		71	54	25	99			38	145
3788 Benzo(a)pyrene											
33	ug/kg	N D		67	50	23	98			38	141
3789 Indeno(1 2 3 cd)pyrene											
33	ug/kg	N D		66	53	20	98			30	153
3790 Dibenz(a h)anthracene											
33	ug/kg	N D		70	56	21	97			32	151
3791 Benzo(g h i)perylene											
33	ug/kg	N D		68	53	22	97			29	151
1123 Cyanide (Reactivity)		Batch 99217104201									
100	mg/kg	N D	0 (1)	3	2	37	105			88	121
0111 Moisture		Batch 992130091820002A									
0 50	% by wt		1				100	100	0	99	101
0394 pH		Batch 992150239039400A									
0 010			0				99	100	1	98	102
0542 Ignitability		Batch 992160286054200A									
1121 Reactivity		Batch 992170416112100A									
	see below										
1122 Sulfide (Reactivity)		Batch 992170416112100A									
39	mg/kg	N D	0 (1)	24	29	21	85			80	120

(1) The result for one or both determinations was less than five times the LOQ

Lancaster Laboratories
Where quality is a science

LLI Sample No 3202270
SP01TP02 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SURROGATE SUMMARY

	TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS LOW	HIGH
1225 TCL Pesticides in Solids		TCX	106	30	163
		DCB	203	42	184
4688 TCL SW846 Semivolatiles Soil		Phenol d6	57	47	127
		2 Flphenol	54	47	126
		2 4 6 TBP	54	36	150
4689 TCL SW846 Semivolatiles/Soil		Nitrobz d5	50	45	128
		2 Fbiphnyl	53	49	123
		Tphenyld14	69	40	146
6292 TCL by 8260 (soil)		DBFM	106	80	120
		d4 1 2 DCA	104	80	120
		d8 toluene	103	81	117
		4 BFB	102	74	121

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AUG 23 1999

LLI Sample No TL 3202271
Collected 07/27/99 at 14 00 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP02 Grab Soil Sample (TCLP Non Volatile Ext)
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

+ Arc View

McP 8/26/99
mm
8-27-99

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS
1746	Barium	0 48	0 0015	mg/l
1751	Chromium	0 0107 J	0 0054	mg/l
1753	Copper	0 0089 J	0 0058	mg/l
1755	Lead	N D	0 023	mg/l
1766	Silver	N D	0 0057	mg/l
7035	Arsenic TR	N D	0 0070	mg/l
7036	Selenium TR	N D	0 0059	mg/l
7049	Cadmium TR	0 0018	0 00063	mg/l
7072	Zinc TR	0 030	0 0036	mg/l
0259	Mercury	N D	0 000042	mg/l

The metal analyses were performed on a non volatile leachate prepared according to the procedure specified in SW 846 Chapter 7 4 (Revision 3 December 1994) A sample is considered to have failed the Toxicity Characteristic (TC) test and is considered a hazardous waste if any of the metal concentrations (mg/l) in the leachate exceed the following maxima (100 times the Primary Drinking Water Standards)

Arsenic	5 0	Cadmium	1 0	Lead	5 0	Selenium	1 0
Barium	100 0	Chromium	5 0	Mercury	0 2	Silver	5 0

1 COPY TO Leggette Brashears & Graham ATTN Mr Ken Vogel

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300
21 20 55 D 0001 25 138873 676387
885 0 00 00013600 ASR000

Respectfully Submitted
Duane A Luckenbill B S
Group Leader GC/MS Volatiles

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PO Box 12425
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See reverse side for explanation of symbols and abbreviations

&&&

Analysis Report

LABORATORY CHRONICLE

Lancaster Laboratories
Where quality is a science

LLI Sample No TL 3202271
Collected 07/27/99 at 14 00 by MP

Submitted 07/29/99

Account No 10160
Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

SP01TP02 Grab Soil Sample (TCLP Non Volatile Ext)
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH
SDG#

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS ID	DATE AND TIME	ANALYST
1746	Barium	SW 846 6010B	1		08/10/99 2305	Donna R Sackett
1751	Chromium	SW 846 6010B	1		08/10/99 2305	Donna R Sackett
1753	Copper	SW 846 6010B	1		08/16/99 0528	Donna R Sackett
1755	Lead	SW 846 6010B	1		08/10/99 2305	Donna R Sackett
1766	Silver	SW 846 6010B	1		08/10/99 2305	Donna R Sackett
5705	WW/TL SW 846 ICP Digest (tot)	SW 846 3010A	1		08/03/99 2139	Marie D Kimmel
7035	Arsenic TR	SW 846 6010B	1		08/10/99 2305	Donna R Sackett
7036	Selenium TR	SW 846 6010B	1		08/16/99 0528	Donna R Sackett
7049	Cadmium TR	SW 846 6010B	1		08/10/99 2305	Donna R Sackett
7072	Zinc TR	SW 846 6010B	1		08/10/99 2305	Donna R Sackett
0259	Mercury	SW 846 7470A	1		08/04/99 1653	Nelli S Markaryan
5713	WW SW846 Hg Digest	SW 846 7470A	1		08/03/99 2115	Nelli S Markaryan
0947	TCLP Non volatile Extraction	SW 846 1311	1		08/02/99 1500	James D Cowan

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Where quality is a science

LLI Sample No 3202271
SP01TP02 Grab Soil Sample (TCLP Non Volatile Ext)
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

	SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
1746 Barium			Batch 992155705003									
	0 0015	mg/l	N D	0 (1)	84	85	1	100			80	120
1751 Chromium			Batch 992155705003									
	0 0054	mg/l	N D	0 (1)	83	84	2	102			80	120
1753 Copper			Batch 992155705003									
	0 0058	mg/l	N D	3	85	85	0	99			80	120
1755 Lead			Batch 992155705003									
	0 023	mg/l	N D	0 (1)	82	83	1	100			80	120
1766 Silver			Batch 992155705003									
	0 0057	mg/l	N D	0 (1)	77	78	1	98			80	120
7035 Arsenic TR			Batch 992155705003									
	0 0070	mg/l	N D	2	81	81	0	97			80	120
7036 Selenium TR			Batch 992155705003									
	0 0059	mg/l	N D	0 (1)	84	82	2	100			80	120
7049 Cadmium TR			Batch 992155705003									
	0 00063	mg/l	N D	0 (1)	84	85	1	100			80	120
7072 Zinc TR			Batch 992155705003									
	0 0036	mg/l	N D	0 (1)	85	86	1	99			80	120
0259 Mercury			Batch 992155713003									
	0 000042	mg/l	N D	0 (1)	80	76	6	102			80	120

(1) The result for one or both determinations was less than five times the LOQ

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AUG 2? 1999

LLI Sample No SW 3202272
Collected 07/27/99 at 14 30 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP03 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

ENTERED IN CAT BY/DATE MCP 3/26/99
CHECKED BY MM
DATE 8-27-99

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS	METHOD DETECTION LIMIT
6292	TCL by 8260 (soil)			See Page 2		
1225	TCL Pesticides in Solids			See Page 3		
4688	TCL SW846 Semivolatiles Soil			See Page 4		
4689	TCL SW846 Semivolatiles/Soil			See Page 5		
1123	Cyanide (Reactivity)	N D	100	mg/kg		
0111	Moisture	14 4	0 50	% by wt		
	Moisture represents the loss in weight of the sample after oven drying at 103 105 degrees Celsius					
0394	pH	7 59	0 010			
	The pH was performed on a 1 1 slurry (25 gms of sample and 25 ml of deionized water) after being tumbled for 30 min					
0496	Corrosivity	See Below	1 0	See Below		
	Corrosivity					
	The pH of a 1 1 slurry (with deionized water) was 7 59 indicating that the waste is not corrosive					
	A waste is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12 5					
0542	Ignitability	See Below		See Below		
	The sample did not spontaneously ignite when exposed to air or water					
	The sample did not ignite by friction					
	The sample vapors did not ignite when exposed to a flame using a closed cup apparatus					
1121	Reactivity	See Below		See Below		
	Reactivity					
	The sample was extracted by the interim method described in SW 846 Chapter 7 3 This solution was analyzed for cyanide and sulfide					
	This waste is not considered reactive and hazardous because it does not generate a quantity of hydrogen cyanide exceeding 250 mg/kg or hydrogen sulfide exceeding 500 mg/kg These interim threshold limits were established by the Solid Waste Branch of EPA July 1992 These results do not reflect total cyanide or total sulfide					
1122	Sulfide (Reactivity)	N D	39	mg/kg		
	The relative percent difference (RPD) between the MS and MSD on the batch associated with this sample was 21% The acceptable RPD for this analysis is 20% The MS and MSD were both within specifications					

1 COPY TO Leggette Brashears & Graham ATTN Mr Ken Vogel

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300
21 21 17 D 0001 25 138873 676387
885 0 00 00072200 ASR000

Respectfully Submitted
Duane A Luckenbill B S
Group Leader GC/MS Volatiles

Lancaster Laboratories
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LLI Sample No SW 3202272
Collected 07/27/99 at 14 30 by MP

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP03 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS	METHOD DETECTION LIMIT
TCL by 8260 (soil)						
5444	Chloromethane	N D	2	ug/kg	N D	2
5446	Bromomethane	N D	3	ug/kg	N D	4
5445	Vinyl Chloride	N D	2	ug/kg	N D	2
5447	Chloroethane	N D	3	ug/kg	N D	4
5450	Methylene Chloride	8	2	ug/kg	9	2
6293	Acetone	N D	7	ug/kg	N D	8
6294	Carbon Disulfide	N D	3	ug/kg	N D	4
5449	1 1 Dichloroethene	N D	2	ug/kg	N D	2
5452	1 1 Dichloroethane	N D	1	ug/kg	N D	1
5455	Chloroform	N D	1	ug/kg	N D	1
5461	1 2 Dichloroethane	N D	2	ug/kg	N D	2
6296	2 Butanone	N D	7	ug/kg	N D	8
5457	1 1 1 Trichloroethane	N D	1	ug/kg	N D	1
5458	Carbon Tetrachloride	N D	1	ug/kg	N D	1
5465	Bromodichloromethane	N D	2	ug/kg	N D	2
5480	1 1 2 2 Tetrachloroethane	N D	1	ug/kg	N D	1
5463	1 2 Dichloropropane	N D	3	ug/kg	N D	4
6297	trans 1 3 Dichloropropene	N D	1	ug/kg	N D	1
5462	Trichloroethene	10	1	ug/kg	12	1
5470	Dibromochloromethane	N D	1	ug/kg	N D	1
5467	1 1 2 Trichloroethane	N D	2	ug/kg	N D	2
5460	Benzene	N D	1	ug/kg	N D	1
6298	cis 1 3 Dichloropropene	N D	1	ug/kg	N D	1
5478	Bromoform	N D	1	ug/kg	N D	1
6299	4 Methyl 2 pentanone	N D	3	ug/kg	N D	4
6300	2 Hexanone	N D	3	ug/kg	N D	4
5468	Tetrachloroethene	N D	1	ug/kg	N D	1
5466	Toluene	N D	1	ug/kg	N D	1
5472	Chlorobenzene	N D	1	ug/kg	N D	1
5474	Ethylbenzene	N D	1	ug/kg	N D	1
5477	Styrene	N D	1	ug/kg	N D	1
6301	Xylene (Total)	N D	1	ug/kg	N D	1
5451	trans 1 2 Dichloroethene	N D	2	ug/kg	N D	2
5454	cis 1 2 Dichloroethene	N D	2	ug/kg	N D	2

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Duane A Luckenbill B S
Group Leader GC/MS Volatiles

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LLI Sample No SW 3202272
Collected 07/27/99 at 14 30 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP03 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS		METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS		METHOD DETECTION LIMIT
TCL Pesticides in Solids								
1981	Alpha BHC	N D		0 67	ug/kg	N D		0 78
1982	Beta BHC	N D		0 67	ug/kg	N D		0 78
1983	Delta BHC	N D		0 67	ug/kg	N D		0 78
1218	Gamma BHC Lindane	N D		0 67	ug/kg	N D		0 78
1219	Heptachlor	N D		0 67	ug/kg	N D		0 78
1220	Aldrin	N D		0 67	ug/kg	N D		0 78
1984	Heptachlor Epoxide	N D		0 67	ug/kg	N D		0 78
1989	Endosulfan I	N D		0 67	ug/kg	N D		0 78
1222	Dieldrin	N D		1 3	ug/kg	N D		1 5
1985	DDE	N D		1 3	ug/kg	N D		1 5
1223	Endrin	N D		1 3	ug/kg	N D		1 5
1990	Endosulfan II	N D		1 3	ug/kg	N D		1 5
1986	DDD	N D		1 3	ug/kg	N D		1 5
1991	Endosulfan Sulfate	N D		1 3	ug/kg	N D		1 5
1221	DDT	3 7	J	1 3	ug/kg	4 3	J	1 5
3017	Endrin Ketone	N D		1 3	ug/kg	N D		1 5
1859	Methoxychlor	50		6 7	ug/kg	58		7 8
3025	Alpha Chlordane	N D		0 67	ug/kg	N D		0 78
3026	Gamma Chlordane	N D		0 67	ug/kg	N D		0 78
1988	Toxaphene	N D		67	ug/kg	N D		78
1992	Endrin Aldehyde	N D		1 3	ug/kg	N D		1 5
1993	PCB 1016	N D		33	ug/kg	N D		39
1994	PCB 1221	N D		33	ug/kg	N D		39
1995	PCB 1232	N D		33	ug/kg	N D		39
1996	PCB 1242	N D		33	ug/kg	N D		39
1997	PCB 1248	N D		33	ug/kg	N D		39
1998	PCB 1254	N D		33	ug/kg	N D		39
1999	PCB 1260	N D		33	ug/kg	N D		39

Due to the nature of the sample matrix a dilution of the sample was used for analysis The Limits of Quantitation (LOQ s) were raised accordingly

This analysis was performed at a 10x dilution of the original sample

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Jenifer E Hess B S
Group Leader Pesticides/PCBs

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LLI Sample No SW 3202272
Collected 07/27/99 at 14 30 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP03 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	Phenol	N D	67	ug/kg	N D	78
3753	bis(2 Chloroethyl)ether	N D	33	ug/kg	N D	39
1186	2 Chlorophenol	N D	33	ug/kg	N D	39
3754	1 3 Dichlorobenzene	N D	33	ug/kg	N D	39
1187	1 4 Dichlorobenzene	N D	33	ug/kg	N D	39
3755	1 2 Dichlorobenzene	N D	33	ug/kg	N D	39
4690	2 Methylphenol	N D	33	ug/kg	N D	39
4691	2 2 oxybis(1 Chloropropane)	N D	33	ug/kg	N D	39
4692	4 Methylphenol	N D	67	ug/kg	N D	78
1188	N Nitroso di n propylamine	N D	33	ug/kg	N D	39
3757	Hexachloroethane	N D	33	ug/kg	N D	39
3758	Nitrobenzene	N D	33	ug/kg	N D	39
3759	Isophorone	N D	33	ug/kg	N D	39
3746	2 Nitrophenol	N D	67	ug/kg	N D	78
3747	2 4 Dimethylphenol	N D	67	ug/kg	N D	78
3760	bis(2 Chloroethoxy)methane	N D	67	ug/kg	N D	78
3748	2 4 Dichlorophenol	N D	67	ug/kg	N D	78
1189	1 2 4 Trichlorobenzene	N D	33	ug/kg	N D	39
3761	Naphthalene	N D	33	ug/kg	N D	39
4693	4 Chloroaniline	N D	33	ug/kg	N D	39
3762	Hexachlorobutadiene	N D	67	ug/kg	N D	78
1190	4 Chloro 3 methylphenol	N D	67	ug/kg	N D	78
4694	2 Methylnaphthalene	N D	33	ug/kg	N D	39
3763	Hexachlorocyclopentadiene	N D	170	ug/kg	N D	200
3749	2 4 6 Trichlorophenol	N D	67	ug/kg	N D	78
4695	2 4 5 Trichlorophenol	N D	67	ug/kg	N D	78
3764	2 Chloronaphthalene	N D	33	ug/kg	N D	39
4696	2 Nitroaniline	N D	33	ug/kg	N D	39
3766	Dimethylphthalate	N D	67	ug/kg	N D	78
3765	Acenaphthylene	N D	33	ug/kg	N D	39

3 Methylphenol and 4 methylphenol cannot be resolved under the chromatographic conditions used for sample analysis The result reported for 4 methylphenol represents the combined total of both compounds

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Charles J Neslund B S
Group Leader GC/MS SVOA

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LLI Sample No SW 3202272
Collected 07/27/99 at 14 30 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP03 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS		METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS		METHOD DETECTION LIMIT
TCL SW846 Semivolatiles/Soil								
4697	3 Nitroaniline	N D		67	ug/kg	N D		78
1191	Acenaphthene	N D		33	ug/kg	N D		39
3750	2 4 Dinitrophenol	N D		230	ug/kg	N D		270
1192	4 Nitrophenol	N D		170	ug/kg	N D		200
4698	Dibenzofuran	N D		33	ug/kg	N D		39
1193	2 4 Dinitrotoluene	N D		67	ug/kg	N D		78
3767	2 6 Dinitrotoluene	N D		33	ug/kg	N D		39
3770	Diethylphthalate	N D		67	ug/kg	N D		78
3769	4 Chlorophenyl phenylether	N D		33	ug/kg	N D		39
3768	Fluorene	N D		33	ug/kg	N D		39
4700	4 Nitroaniline	N D		67	ug/kg	N D		78
3751	4 6 Dinitro 2 methylphenol	N D		170	ug/kg	N D		200
3772	N Nitrosodiphenylamine	N D		33	ug/kg	N D		39
3773	4 Bromophenyl phenylether	N D		67	ug/kg	N D		78
3774	Hexachlorobenzene	N D		33	ug/kg	N D		39
1194	Pentachlorophenol	N D		170	ug/kg	N D		200
3775	Phenanthrene	280	J	33	ug/kg	320	J	39
3776	Anthracene	65	J	33	ug/kg	76	J	39
4702	Carbazole	N D		33	ug/kg	N D		39
3777	Di n butylphthalate	N D		67	ug/kg	N D		78
3778	Fluoranthene	450		33	ug/kg	520		39
1195	Pyrene	400		33	ug/kg	470		39
3780	Butylbenzylphthalate	N D		67	ug/kg	N D		78
3783	3 3 Dichlorobenzidine	N D		67	ug/kg	N D		78
3781	Benzo(a)anthracene	260	J	33	ug/kg	300	J	39
3784	bis(2 Ethylhexyl)phthalate	N D		67	ug/kg	N D		78
3782	Chrysene	270	J	33	ug/kg	310	J	39
3785	Di n octylphthalate	N D		67	ug/kg	N D		78
3786	Benzo(b)fluoranthene	270	J	33	ug/kg	320	J	39
3787	Benzo(k)fluoranthene	120	J	33	ug/kg	140	J	39
3788	Benzo(a)pyrene	190	J	33	ug/kg	220	J	39
3789	Indeno(1 2 3 cd)pyrene	120	J	33	ug/kg	140	J	39
3790	Dibenz(a h)anthracene	34	J	33	ug/kg	40	J	39
3791	Benzo(g h i)perylene	100	J	33	ug/kg	120	J	39

N nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine
The result reported for N nitrosodiphenylamine represents the combined total of both compounds

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Charles J Neslund B S
Group Leader GC/MS SVOA

&&&

Analysis Report

LABORATORY CHRONICLE

Lancaster Laboratories
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LLI Sample No SW 3202272
Collected 07/27/99 at 14 30 by MP

Submitted 07/29/99

Account No 10160
Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

SP01TP03 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH
1TP03 SDG#

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS ID	DATE AND TIME	ANALYST
6292	TCL by 8260 (soil)	SW 846 8260B	1		08/03/99 1612	Bryan J Polick
0819	Solid Sample Pesticide Extract	SW 846 3550B	1		07/31/99 0720	Ginelle L Haines
1225	TCL Pesticides in Solids	SW 846 8081A/8082	1		08/04/99 0535	Douglas D Seitz
0381	BNA Soil Extraction	SW 846 3550B	1		08/03/99 2000	Karen L Beyer
4688	TCL SW846 Semivolatiles Soil	SW 846 8270C	1		08/05/99 0959	Michele A Jarosick
4689	TCL SW846 Semivolatiles/Soil	SW 846 8270C	1		08/05/99 0959	Michele A Jarosick
1123	Cyanide (Reactivity)	SW 846 9012	1		08/05/99 2156	Venia M McFadden
0111	Moisture	EPA 160 3 modified	1		08/01/99 1929	Gabriel Agosto
0394	pH	SW 846 9045C (modified)	1		08/03/99 2200	Luz M Groff
0542	Ignitability	40 CFR 261 21	1		08/04/99 1130	Catherine L Cammauf
1121	Reactivity	SW 846 Chapter 7 3	1		08/05/99 0805	Susan E Hibner
1122	Sulfide (Reactivity)	SW 846 9034	1		08/05/99 0805	Susan E Hibner

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LLI Sample No 3202272
SP01TP03 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS		BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LIMITS LOW	LIMITS HIGH
6292 TCL by 8260 (soil)			Batch E992121AD									
5444		Chloromethane										
2	ug/kg		N D		105	108	2	104			48	130
5446		Bromomethane										
3	ug/kg		N D		99	108	9	99			46	134
5445		Vinyl Chloride										
2	ug/kg		N D		108	113	5	100			60	127
5447		Chloroethane										
3	ug/kg		N D		99	104	5	96			30	142
5450		Methylene Chloride										
2	ug/kg		N D		9	1	6	104			69	126
6293		Acetone										
7	ug/kg		N D		104	99	6	78			46	133
6294		Carbon Disulfide										
3	ug/kg		N D		96	97	1	88			52	165
5449		1 1 Dichloroethene										
2	ug/kg		N D		112	112	0	103			69	146
5452		1 1 Dichloroethane										
1	ug/kg		N D		113	117	3	114			81	130
5455		Chloroform										
1	ug/kg		N D		107	114	7	113			82	123
5461		1 2 Dichloroethane										
2	ug/kg		N D		103	109	6	115			81	123
6296		2 Butanone										
7	ug/kg		N D		114	117	2	110			47	153
5457		1 1 1 Trichloroethane										
1	ug/kg		N D		110	115	4	120			84	132
5458		Carbon Tetrachloride										
1	ug/kg		N D		109	116	6	121			78	129
5465		Bromodichloromethane										
2	ug/kg		N D		106	112	6	114			80	121
5480		1 1 2 2 Tetrachloroethane										
1	ug/kg		N D		108	108	0	101			70	124
5463		1 2 Dichloropropane										
3	ug/kg		N D		113	117	4	114			77	127
6297		trans 1 3 Dichloropropene										
1	ug/kg		N D		103	108	4	105			69	131
5462		Trichloroethene										
1	ug/kg		N D		111	116	5	112			81	123
5470		Dibromochloromethane										
1	ug/kg		N D		106	109	3	112			80	120
5467		1 1 2 Trichloroethane										
2	ug/kg		N D		111	110	1	108			81	124
5460		Benzene										
1	ug/kg		N D		116	119	2	113			77	126
6298		cis 1 3 Dichloropropene										
1	ug/kg		N D		110	115	4	112			79	126

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LLI Sample No 3202272
SP01TP03 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
5478 Bromoform											
1	ug/kg	N D		102	101	1	107			73	120
6299 4 Methyl 2 pentanone											
3	ug/kg	N D		102	108	6	110			63	123
6300 2 Hexanone											
3	ug/kg	N D		105	107	1	104			60	128
5468 Tetrachloroethene											
1	ug/kg	N D		115	120	4	114			83	150
5466 Toluene											
1	ug/kg	N D		114	113	1	105			74	128
5472 Chlorobenzene											
1	ug/kg	N D		114	112	2	108			81	121
5474 Ethylbenzene											
1	ug/kg	N D		117	116	0	112			86	129
5477 Styrene											
1	ug/kg	N D		116	114	2	108			84	127
6301 Xylene (Total)											
1	ug/kg	N D		117	116	1	111			88	128
5451 trans 1 2 Dichloroethene											
2	ug/kg	N D		115	119	4	111			73	126
5454 cis 1 2 Dichloroethene											
2	ug/kg	N D		113	117	3	112			84	123
1225 TCL Pesticides in Solids		Batch 992110011A									
1981 Alpha BHC											
0 67	ug/kg	N D		84	85	1	102			38	156
1982 Beta BHC											
0 67	ug/kg	N D		94	93	1	97			40	153
1983 Delta BHC											
0 67	ug/kg	N D		76	76	0	97			44	145
1218 Gamma BHC Lindane											
0 67	ug/kg	N D		84	83	1	102			51	142
1219 Heptachlor											
0 67	ug/kg	N D		85	81	5	100			59	140
1220 Aldrin											
0 67	ug/kg	N D		105	100	4	100			55	132
1984 Heptachlor Epoxide											
0 67	ug/kg	N D		93	91	2	99			58	129
1989 Endosulfan I											
0 67	ug/kg	N D		185	185	0	81			56	123
1222 Dieldrin											
1 3	ug/kg	N D		86	85	1	90			63	133
1985 DDE											
1 3	ug/kg	N D		102	101	1	101			47	159
1223 Endrin											
1 3	ug/kg	N D		105	104	0	112			70	150
1990 Endosulfan II											
1 3	ug/kg	N D		44	51	16	89			46	138

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LLI Sample No 3202272
SP01TP03 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
1986 DDD											
1 3	ug/kg	N D		108	107	1	101			53	141
1991 Endosulfan Sulfate											
1 3	ug/kg	N D		88	84	5	108			40	150
1221 DDT											
1 3	ug/kg	N D		107	107	0	110			60	138
3017 Endrin Ketone											
1 3	ug/kg	N D		90	90	0	92			62	137
1859 Methoxychlor											
6 7	ug/kg	N D		132	124	6	128			52	174
3025 Alpha Chlordane											
0 67	ug/kg	N D		151	149	1	100			68	141
3026 Gamma Chlordane											
0 67	ug/kg	N D		100	97	2	97			65	129
1988 Toxaphene											
67	ug/kg	N D									
1992 Endrin Aldehyde											
1 3	ug/kg	N D		82	82	1	83			75	125
1993 PCB 1016											
33	ug/kg	N D									
1994 PCB 1221											
33	ug/kg	N D									
1995 PCB 1232											
33	ug/kg	N D									
1996 PCB 1242											
33	ug/kg	N D									
1997 PCB 1248											
33	ug/kg	N D									
1998 PCB 1254											
33	ug/kg	N D									
1999 PCB 1260											
33	ug/kg	N D									
4688 TCL SW846 Semivolatiles Soil		Batch 99215SLD026									
1185 Phenol											
67	ug/kg	N D		63	49	24	87			40	128
3753 bis(2 Chloroethyl)ether											
33	ug/kg	N D		58	42	32	91			38	131
1186 2 Chlorophenol											
33	ug/kg	N D		62	47	28	90			44	127
3754 1 3 Dichlorobenzene											
33	ug/kg	N D		44	28	44	87			31	121
1187 1 4 Dichlorobenzene											
33	ug/kg	N D		44	29	43	86			36	119
3755 1 2 Dichlorobenzene											
33	ug/kg	N D		48	31	42	88			39	120
4690 2 Methylphenol											
33	ug/kg	N D		61	48	25	89			42	127

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Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
4691 2 2 oxybis(1 Chloropropane)											
33	ug/kg	N D		54	38	34	88			38	151
4692 4 Methylphenol											
67	ug/kg	N D		62	49	23	89			33	139
1188 N Nitroso di n propylamine											
33	ug/kg	N D		64	49	26	92			39	142
3757 Hexachloroethane											
33	ug/kg	N D		44	28	44	89			29	128
3758 Nitrobenzene											
33	ug/kg	N D		59	44	29	91			42	131
3759 Isophorone											
33	ug/kg	N D		61	47	25	89			46	130
3746 2 Nitrophenol											
67	ug/kg	N D		65	50	28	97			36	141
3747 2 4 Dimethylphenol											
67	ug/kg	N D		60	48	22	90			40	132
3760 bis(2 Chloroethoxy)methane											
67	ug/kg	N D		63	49	26	93			44	127
3748 2 4 Dichlorophenol											
67	ug/kg	N D		64	50	23	91			41	128
1189 1 2 4 Trichlorobenzene											
33	ug/kg	N D		54	39	32	92			44	121
3761 Naphthalene											
33	ug/kg	N D		55	41	31	89			34	133
4693 4 Chloroaniline											
33	ug/kg	N D		50	41	18	42			1	113
3762 Hexachlorobutadiene											
67	ug/kg	N D		52	36	36	92			39	133
1190 4 Chloro 3 methylphenol											
67	ug/kg	N D		65	52	22	93			47	135
4694 2 Methylnaphthalene											
33	ug/kg	N D		59	45	27	90			43	131
3763 Hexachlorocyclopentadiene											
170	ug/kg	N D		35	24	38	69			1	141
3749 2 4 6 Trichlorophenol											
67	ug/kg	N D		64	52	22	90			39	141
4695 2 4 5 Trichlorophenol											
67	ug/kg	N D		64	52	21	87			45	136
3764 2 Chloronaphthalene											
33	ug/kg	N D		64	51	23	92			48	127
4696 2 Nitroaniline											
33	ug/kg	N D		71	58	21	101			25	139
3766 Dimethylphthalate											
67	ug/kg	N D		67	55	21	95			53	127
3765 Acenaphthylene											
33	ug/kg	N D		62	50	21	89			44	126

4689 TCL SW846 Semivolatiles/Soil Batch 99215SLD026

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LLI Sample No 3202272
SP01TP03 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
4697 3 Nitroaniline											
67	ug/kg	N D		61	52	17	66			18	117
1191 Acenaphthene											
33	ug/kg	N D		63	51	21	91			47	127
3750 2 4 Dinitrophenol											
230	ug/kg	N D		35	26	29	55			1	133
1192 4 Nitrophenol											
170	ug/kg	N D		60	46	27	83			31	161
4698 Dibenzofuran											
33	ug/kg	N D		66	54	21	93			53	125
1193 2 4 Dinitrotoluene											
67	ug/kg	N D		67	54	21	95			50	131
3767 2 6 Dinitrotoluene											
33	ug/kg	N D		71	58	21	103			53	130
3770 Diethylphthalate											
67	ug/kg	N D		68	56	20	97			54	130
3769 4 Chlorophenyl phenylether											
33	ug/kg	N D		67	54	21	92			47	132
3768 Fluorene											
33	ug/kg	N D		65	53	20	92			42	142
4700 4 Nitroaniline											
67	ug/kg	N D		64	52	20	86			30	127
3751 4 6 Dinitro 2 methylphenol											
170	ug/kg	N D		52	37	33	76			14	143
3772 N Nitrosodiphenylamine											
33	ug/kg	N D		70	57	21	97			49	130
3773 4 Bromophenyl phenylether											
67	ug/kg	N D		70	57	22	96			53	132
3774 Hexachlorobenzene											
33	ug/kg	N D		70	56	22	95			40	144
1194 Pentachlorophenol											
170	ug/kg	N D		34	22	41	61			20	132
3775 Phenanthrene											
33	ug/kg	N D		69	45	30	94			42	141
3776 Anthracene											
33	ug/kg	N D		69	52	25	95			45	132
4702 Carbazole											
33	ug/kg	N D		70	55	23	94			48	129
3777 Di n butylphthalate											
67	ug/kg	N D		71	56	23	97			54	133
3778 Fluoranthene											
33	ug/kg	N D		64	36	33	92			37	142
1195 Pyrene											
33	ug/kg	N D		67	43	28	103			34	145
3780 Butylbenzylphthalate											
67	ug/kg	N D		72	59	21	104			47	138
3783 3 3 Dichlorobenzidine											
67	ug/kg	N D		58	50	15	69			2	132
3781 Benzo(a)anthracene											
33	ug/kg	N D		69	47	29	94			44	133

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LLI Sample No 3202272
SP01TP03 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3784 bis(2 Ethylhexyl)phthalate											
67	ug/kg	N D		77	62	21	109			41	145
3782 Chrysene											
33	ug/kg	N D		69	47	29	96			42	136
3785 Di n octylphthalate											
67	ug/kg	N D		83	67	21	117			43	156
3786 Benzo(b)fluoranthene											
33	ug/kg	N D		63	45	24	94			35	140
3787 Benzo(k)fluoranthene											
33	ug/kg	N D		71	54	25	99			38	145
3788 Benzo(a)pyrene											
33	ug/kg	N D		67	50	23	98			38	141
3789 Indeno(1 2 3 cd)pyrene											
33	ug/kg	N D		66	53	20	98			30	153
3790 Dibenz(a h)anthracene											
33	ug/kg	N D		70	56	21	97			32	151
3791 Benzo(g h i)perylene											
33	ug/kg	N D		68	53	22	97			29	151
1123 Cyanide (Reactivity)		Batch 99217104201									
100	mg/kg	N D	0 (1)	3	2	37	105			88	121
0111 Moisture		Batch 992130091820002A									
0 50	% by wt		1				100	100	0	99	101
0394 pH		Batch 992150239039400A									
0 010			0				99	100	1	98	102
0542 Ignitability		Batch 992160286054200A									
1121 Reactivity		Batch 992170416112100A									
	see below										
1122 Sulfide (Reactivity)		Batch 992170416112100A									
39	mg/kg	N D	0 (1)	24	29	21	85			80	120

(1) The result for one or both determinations was less than five times the LOQ

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LLI Sample No 3202272
SP01TP03 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS LOW	HIGH
1225 TCL Pesticides in Solids	TCX	122	30	163
	DCB	180	42	184
4688 TCL SW846 Semivolatiles Soil	Phenol d6	78	47	127
	2 Flphenol	71	47	126
	2 4 6 TBP	77	36	150
4689 TCL SW846 Semivolatiles/Soil	Nitrobz d5	65	45	128
	2 Fbiphnyl	68	49	123
	Tphenyld14	95	40	146
6292 TCL by 8260 (soil)	DBFM	105	80	120
	d4 1 2 DCA	101	80	120
	d8 toluene	101	81	117
	4 BFB	100	74	121

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AUG 23 1999

LLI Sample No TL 3202273
Collected 07/27/99 at 14 30 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP03 Grab Soil Sample (TCLP Non Volatile Ext)
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

ENTERED IN DATABASE + Arc View
BY/DATE MCP 8/16/99
CHECKED BY KLM
DATE 8-27-99

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS
1746	Barium	0 57	0 0015	mg/l
1751	Chromium	N D	0 0054	mg/l
1753	Copper	N D	0 0058	mg/l
1755	Lead	N D	0 023	mg/l
1766	Silver	N D	0 0057	mg/l
7035	Arsenic TR	N D	0 0070	mg/l
7036	Selenium TR	0 0060 J	0 0059	mg/l
7049	Cadmium TR	0 0024	0 00063	mg/l
7072	Zinc TR	0 071	0 0036	mg/l
0259	Mercury	N D	0 000042	mg/l

The metal analyses were performed on a non volatile leachate prepared according to the procedure specified in SW 846 Chapter 7 4 (Revision 3 December 1994) A sample is considered to have failed the Toxicity Characteristic (TC) test and is considered a hazardous waste if any of the metal concentrations (mg/l) in the leachate exceed the following maxima (100 times the Primary Drinking Water Standards)

Arsenic	5 0	Cadmium	1 0	Lead	5 0	Selenium	1 0
Barium	100 0	Chromium	5 0	Mercury	0 2	Silver	5 0

1 COPY TO Leggette Brashears & Graham ATTN Mr Ken Vogel

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300
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Respectfully Submitted
Duane A Luckenbill B S
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Analysis Report

LABORATORY CHRONICLE

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LLI Sample No TL 3202273
Collected 07/27/99 at 14 30 by MP

Submitted 07/29/99

Account No 10160
Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

SP01TP03 Grab Soil Sample (TCLP Non Volatile Ext)
Site Code SC001 RFA# YGQP9990241
Dayton Thermal Products/Dayton OH
SDG#

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS ID	DATE AND TIME	ANALYST
1746	Barium	SW 846 6010B	1		08/10/99 2310	Donna R Sackett
1751	Chromium	SW 846 6010B	1		08/10/99 2310	Donna R Sackett
1753	Copper	SW 846 6010B	1		08/10/99 2310	Donna R Sackett
1755	Lead	SW 846 6010B	1		08/10/99 2310	Donna R Sackett
1766	Silver	SW 846 6010B	1		08/10/99 2310	Donna R Sackett
5705	WW/TL SW 846 ICP Digest (tot)	SW 846 3010A	1		08/03/99 2139	Marie D Kimmel
7035	Arsenic TR	SW 846 6010B	1		08/10/99 2310	Donna R Sackett
7036	Selenium TR	SW 846 6010B	1		08/16/99 0453	Donna R Sackett
7049	Cadmium TR	SW 846 6010B	1		08/10/99 2310	Donna R Sackett
7072	Zinc TR	SW 846 6010B	1		08/10/99 2310	Donna R Sackett
0259	Mercury	SW 846 7470A	1		08/04/99 1654	Nelli S Markaryan
5713	WW SW846 Hg Digest	SW 846 7470A	1		08/03/99 2115	Nelli S Markaryan
0947	TCLP Non volatile Extraction	SW 846 1311	1		08/02/99 1500	James D Cowan

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LLI Sample No 3202273
SP01TP03 Grab Soil Sample (TCLP Non Volatile Ext)
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

	SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
1746 Barium			Batch 992155705003									
	0 0015	mg/l	N D	0 (1)	84	85	1	100			80	120
1751 Chromium			Batch 992155705003									
	0 0054	mg/l	N D	0 (1)	83	84	2	102			80	120
1753 Copper			Batch 992155705003									
	0 0058	mg/l	N D	3	85	85	0	99			80	120
1755 Lead			Batch 992155705003									
	0 023	mg/l	N D	0 (1)	82	83	1	100			80	120
1766 Silver			Batch 992155705003									
	0 0057	mg/l	N D	0 (1)	77	78	1	98			80	120
7035 Arsenic TR			Batch 992155705003									
	0 0070	mg/l	N D	2	81	81	0	97			80	120
7036 Selenium TR			Batch 992155705003									
	0 0059	mg/l	N D	0 (1)	84	82	2	100			80	120
7049 Cadmium TR			Batch 992155705003									
	0 00063	mg/l	N D	0 (1)	84	85	1	100			80	120
7072 Zinc TR			Batch 992155705003									
	0 0036	mg/l	N D	0 (1)	85	86	1	99			80	120
0259 Mercury			Batch 992155713003									
	0 000042	mg/l	N D	0 (1)	80	76	6	102			80	120

(1) The result for one or both determinations was less than five times the LOQ

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AUG 2 0 1999

LLI Sample No SW 3202274
Collected 07/27/99 at 14 55 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

+ Arc View

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP04 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS	METHOD DETECTION LIMIT
6292	TCL by 8260 (soil)			See Page 2		
1225	TCL Pesticides in Solids			See Page 3		
4688	TCL SW846 Semivolatiles Soil			See Page 4		
4689	TCL SW846 Semivolatiles/Soil			See Page 5		
1123	Cyanide (Reactivity)	N D	100	mg/kg		
0111	Moisture	15 8	0 50	% by wt		
	Moisture represents the loss in weight of the sample after oven drying at 103 105 degrees Celsius					
0394	pH	7 86	0 010			
	The pH was performed on a 1 1 slurry (25 gms of sample and 25 ml of deionized water) after being tumbled for 30 min					
0496	Corrosivity	See Below	1 0	See Below		
	Corrosivity					
	The pH of a 1 1 slurry (with deionized water) was 7 86 indicating that the waste is not corrosive					
	A waste is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12 5					
0542	Ignitability	See Below		See Below		
	The sample did not spontaneously ignite when exposed to air or water					
	The sample did not ignite by friction					
	The sample vapors did not ignite when exposed to a flame using a closed cup apparatus					
1121	Reactivity	See Below		See Below		
	Reactivity					
	The sample was extracted by the interim method described in SW 846 Chapter 7 3 This solution was analyzed for cyanide and sulfide This waste is not considered reactive and hazardous because it does not generate a quantity of hydrogen cyanide exceeding 250 mg/kg or hydrogen sulfide exceeding 500 mg/kg These interim threshold limits were established by the Solid Waste Branch of EPA July 1992 These results do not reflect total cyanide or total sulfide					
1122	Sulfide (Reactivity)	N D	39	mg/kg		
	The relative percent difference (RPD) between the MS and MSD on the batch associated with this sample was 21% The acceptable RPD for this analysis is 20% The MS and MSD were both within specifications					

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Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300
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LLI Sample No SW 3202274
Collected 07/27/99 at 14 55 by MP

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP04 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS		METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS		METHOD DETECTION LIMIT
TCL by 8260 (soil)								
5444	Chloromethane	N D		2	ug/kg	N D		2
5446	Bromomethane	N D		3	ug/kg	N D		4
5445	Vinyl Chloride	N D		2	ug/kg	N D		2
5447	Chloroethane	N D		3	ug/kg	N D		4
5450	Methylene Chloride	10		2	ug/kg	11		2
6293	Acetone	15	J	7	ug/kg	18	J	8
6294	Carbon Disulfide	N D		3	ug/kg	N D		4
5449	1 1 Dichloroethene	N D		2	ug/kg	N D		2
5452	1 1 Dichloroethane	N D		1	ug/kg	N D		1
5455	Chloroform	N D		1	ug/kg	N D		1
5461	1 2 Dichloroethane	N D		2	ug/kg	N D		2
6296	2 Butanone	N D		7	ug/kg	N D		8
5457	1 1 1 Trichloroethane	N D		1	ug/kg	N D		1
5458	Carbon Tetrachloride	N D		1	ug/kg	N D		1
5465	Bromodichloromethane	N D		2	ug/kg	N D		2
5480	1 1 2 2 Tetrachloroethane	N D		1	ug/kg	N D		1
5463	1 2 Dichloropropane	N D		3	ug/kg	N D		4
6297	trans 1 3 Dichloropropene	N D		1	ug/kg	N D		1
5462	Trichloroethene	3	J	1	ug/kg	4	J	1
5470	Dibromochloromethane	N D		1	ug/kg	N D		1
5467	1 1 2 Trichloroethane	N D		2	ug/kg	N D		2
5460	Benzene	N D		1	ug/kg	N D		1
6298	cis 1 3 Dichloropropene	N D		1	ug/kg	N D		1
5478	Bromoform	N D		1	ug/kg	N D		1
6299	4 Methyl 2 pentanone	N D		3	ug/kg	N D		4
6300	2 Hexanone	N D		3	ug/kg	N D		4
5468	Tetrachloroethene	N D		1	ug/kg	N D		1
5466	Toluene	N D		1	ug/kg	N D		1
5472	Chlorobenzene	N D		1	ug/kg	N D		1
5474	Ethylbenzene	N D		1	ug/kg	N D		1
5477	Styrene	N D		1	ug/kg	N D		1
6301	Xylene (Total)	N D		1	ug/kg	N D		1
5451	trans 1 2 Dichloroethene	N D		2	ug/kg	N D		2
5454	cis 1 2 Dichloroethene	7		2	ug/kg	8		2

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Duane A Luckenbill B S
Group Leader GC/MS Volatiles

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LLI Sample No SW 3202274
Collected 07/27/99 at 14 55 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP04 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS		METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS		METHOD DETECTION LIMIT
TCL Pesticides in Solids								
1981	Alpha BHC	N D		0 67	ug/kg	N D		0 80
1982	Beta BHC	N D		0 67	ug/kg	N D		0 80
1983	Delta BHC	N D		0 67	ug/kg	N D		0 80
1218	Gamma BHC Lindane	N D		0 67	ug/kg	N D		0 80
1219	Heptachlor	N D		0 67	ug/kg	N D		0 80
1220	Aldrin	N D		0 67	ug/kg	N D		0 80
1984	Heptachlor Epoxide	1 69	J	0 67	ug/kg	2 00	J	0 80
1989	Endosulfan I	N D		0 67	ug/kg	N D		0 80
1222	Dieldrin	N D		1 3	ug/kg	N D		1 5
1985	DDE	N D		1 3	ug/kg	N D		1 5
1223	Endrin	1 7	J	1 3	ug/kg	2 1	J	1 5
1990	Endosulfan II	N D		1 3	ug/kg	N D		1 5
1986	DDD	N D		1 3	ug/kg	N D		1 5
1991	Endosulfan Sulfate	N D		1 3	ug/kg	N D		1 5
1221	DDT	15 1		1 3	ug/kg	17 9		1 5
3017	Endrin Ketone	N D		1 3	ug/kg	N D		1 5
1859	Methoxychlor	13 5	J	6 7	ug/kg	16 0	J	8 0
3025	Alpha Chlordane	N D		0 67	ug/kg	N D		0 80
3026	Gamma Chlordane	N D		0 67	ug/kg	N D		0 80
1988	Toxaphene	N D		67	ug/kg	N D		80
1992	Endrin Aldehyde	N D		1 3	ug/kg	N D		1 5
1993	PCB 1016	N D		33	ug/kg	N D		39
1994	PCB 1221	N D		33	ug/kg	N D		39
1995	PCB 1232	N D		33	ug/kg	N D		39
1996	PCB 1242	N D		33	ug/kg	N D		39
1997	PCB 1248	N D		33	ug/kg	N D		39
1998	PCB 1254	N D		33	ug/kg	N D		39
1999	PCB 1260	N D		33	ug/kg	N D		39

Due to the nature of the sample matrix a dilution of the sample was used for analysis The Limits of Quantitation (LOQ s) were raised accordingly

This analysis was performed at a 10x dilution of the original sample

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Jenifer E Hess B S
Group Leader Pesticides/PCBs

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LLI Sample No SW 3202274
Collected 07/27/99 at 14 55 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP04 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS		METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS		METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil								
1185	Phenol	N D		67	ug/kg	N D		80
3753	bis(2 Chloroethyl)ether	N D		33	ug/kg	N D		39
1186	2 Chlorophenol	N D		33	ug/kg	N D		39
3754	1 3 Dichlorobenzene	N D		33	ug/kg	N D		39
1187	1 4 Dichlorobenzene	N D		33	ug/kg	N D		39
3755	1 2 Dichlorobenzene	N D		33	ug/kg	N D		39
4690	2 Methylphenol	N D		33	ug/kg	N D		39
4691	2 2 oxybis(1 Chloropropane)	N D		33	ug/kg	N D		39
4692	4 Methylphenol	N D		67	ug/kg	N D		80
1188	N Nitroso di n propylamine	N D		33	ug/kg	N D		39
3757	Hexachloroethane	N D		33	ug/kg	N D		39
3758	Nitrobenzene	N D		33	ug/kg	N D		39
3759	Isophorone	N D		33	ug/kg	N D		39
3746	2 Nitrophenol	N D		67	ug/kg	N D		80
3747	2 4 Dimethylphenol	N D		67	ug/kg	N D		80
3760	bis(2 Chloroethoxy)methane	N D		67	ug/kg	N D		80
3748	2 4 Dichlorophenol	N D		67	ug/kg	N D		80
1189	1 2 4 Trichlorobenzene	N D		33	ug/kg	N D		39
3761	Naphthalene	96	J	33	ug/kg	110	J	39
4693	4 Chloroaniline	N D		33	ug/kg	N D		39
3762	Hexachlorobutadiene	N D		67	ug/kg	N D		80
1190	4 Chloro 3 methylphenol	N D		67	ug/kg	N D		80
4694	2 Methylnaphthalene	40	J	33	ug/kg	48	J	39
3763	Hexachlorocyclopentadiene	N D		170	ug/kg	N D		200
3749	2 4 6 Trichlorophenol	N D		67	ug/kg	N D		80
4695	2 4 5 Trichlorophenol	N D		67	ug/kg	N D		80
3764	2 Chloronaphthalene	N D		33	ug/kg	N D		39
4696	2 Nitroaniline	N D		33	ug/kg	N D		39
3766	Dimethylphthalate	N D		67	ug/kg	N D		80
3765	Acenaphthylene	76	J	33	ug/kg	90	J	39

3 Methylphenol and 4 methylphenol cannot be resolved under the chromatographic conditions used for sample analysis The result reported for 4 methylphenol represents the combined total of both compounds

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Charles J Neslund B S
Group Leader GC/MS SVOA

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LLI Sample No SW 3202274
Collected 07/27/99 at 14 55 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP04 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS		METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS		METHOD DETECTION LIMIT
TCL SW846 Semivolatiles/Soil								
4697	3 Nitroaniline	N D		67	ug/kg	N D		80
1191	Acenaphthene	49	J	33	ug/kg	58	J	39
3750	2 4 Dinitrophenol	N D		230	ug/kg	N D		270
1192	4 Nitrophenol	N D		170	ug/kg	N D		200
4698	Dibenzofuran	69	J	33	ug/kg	82	J	39
1193	2 4 Dinitrotoluene	N D		67	ug/kg	N D		80
3767	2 6 Dinitrotoluene	N D		33	ug/kg	N D		39
3770	Diethylphthalate	N D		67	ug/kg	N D		80
3769	4 Chlorophenyl phenylether	N D		33	ug/kg	N D		39
3768	Fluorene	94	J	33	ug/kg	110	J	39
4700	4 Nitroaniline	N D		67	ug/kg	N D		80
3751	4 6 Dinitro 2 methylphenol	N D		170	ug/kg	N D		200
3772	N Nitrosodiphenylamine	N D		33	ug/kg	N D		39
3773	4 Bromophenyl phenylether	N D		67	ug/kg	N D		80
3774	Hexachlorobenzene	N D		33	ug/kg	N D		39
1194	Pentachlorophenol	N D		170	ug/kg	N D		200
3775	Phenanthrene	730		33	ug/kg	860		39
3776	Anthracene	220	J	33	ug/kg	260	J	39
4702	Carbazole	82	J	33	ug/kg	97	J	39
3777	Di n butylphthalate	N D		67	ug/kg	N D		80
3778	Fluoranthene	1 100		33	ug/kg	1 300		39
1195	Pyrene	970		33	ug/kg	1 200		39
3780	Butylbenzylphthalate	N D		67	ug/kg	N D		80
3783	3 3 Dichlorobenzidine	N D		67	ug/kg	N D		80
3781	Benzo(a)anthracene	560		33	ug/kg	660		39
3784	bis(2 Ethylhexyl)phthalate	N D		67	ug/kg	N D		80
3782	Chrysene	530		33	ug/kg	640		39
3785	Di n octylphthalate	N D		67	ug/kg	N D		80
3786	Benzo(b)fluoranthene	690		33	ug/kg	820		39
3787	Benzo(k)fluoranthene	290	J	33	ug/kg	340	J	39
3788	Benzo(a)pyrene	520		33	ug/kg	620		39
3789	Indeno(1 2 3 cd)pyrene	400		33	ug/kg	480		39
3790	Dibenz(a h)anthracene	100	J	33	ug/kg	120	J	39
3791	Benzo(g h i)perylene	340		33	ug/kg	400		39

N nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine
The result reported for N nitrosodiphenylamine represents the combined total of both compounds

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Charles J Neslund B S
Group Leader GC/MS SVOA

&&&

Analysis Report

LABORATORY CHRONICLE

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LLI Sample No SW 3202274
Collected 07/27/99 at 14 55 by MP

Submitted 07/29/99

Account No 10160
Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

SP01TP04 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH
1TP04 SDG#

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS ID	DATE AND TIME	ANALYST
6292	TCL by 8260 (soil)	SW 846 8260B	1		08/03/99 1650	Bryan J Polick
0819	Solid Sample Pesticide Extract	SW 846 3550B	1		07/31/99 0720	Ginelle L Haines
1225	TCL Pesticides in Solids	SW 846 8081A/8082	1		08/04/99 0555	Douglas D Seitz
0381	BNA Soil Extraction	SW 846 3550B	1		08/03/99 2000	Karen L Beyer
4688	TCL SW846 Semivolatiles Soil	SW 846 8270C	1		08/06/99 1557	Heidi L Ortenzi
4689	TCL SW846 Semivolatiles/Soil	SW 846 8270C	1		08/06/99 1557	Heidi L Ortenzi
1123	Cyanide (Reactivity)	SW 846 9012	1		08/05/99 2200	Venia M McFadden
0111	Moisture	EPA 160 3 modified	1		08/01/99 1929	Gabriel Agosto
0394	pH	SW 846 9045C (modified)	1		08/03/99 2200	Luz M Groff
0542	Ignitability	40 CFR 261 21	1		08/04/99 1130	Catherine L Cammauf
1121	Reactivity	SW 846 Chapter 7 3	1		08/05/99 0805	Susan E Hibner
1122	Sulfide (Reactivity)	SW 846 9034	1		08/05/99 0805	Susan E Hibner

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LLI Sample No 3202274
SP01TP04 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
6292 TCL by 8260 (soil)		Batch E992121AD									
5444 Chloromethane											
2	ug/kg	N D		105	108	2	104			48	130
5446 Bromomethane											
3	ug/kg	N D		99	108	9	99			46	134
5445 Vinyl Chloride											
2	ug/kg	N D		108	113	5	100			60	127
5447 Chloroethane											
3	ug/kg	N D		99	104	5	96			30	142
5450 Methylene Chloride											
2	ug/kg	N D		9	1	6	104			69	126
6293 Acetone											
7	ug/kg	N D		104	99	6	78			46	133
6294 Carbon Disulfide											
3	ug/kg	N D		96	97	1	88			52	165
5449 1 1 Dichloroethene											
2	ug/kg	N D		112	112	0	103			69	146
5452 1 1 Dichloroethane											
1	ug/kg	N D		113	117	3	114			81	130
5455 Chloroform											
1	ug/kg	N D		107	114	7	113			82	123
5461 1 2 Dichloroethane											
2	ug/kg	N D		103	109	6	115			81	123
6296 2 Butanone											
7	ug/kg	N D		114	117	2	110			47	153
5457 1 1 1 Trichloroethane											
1	ug/kg	N D		110	115	4	120			84	132
5458 Carbon Tetrachloride											
1	ug/kg	N D		109	116	6	121			78	129
5465 Bromodichloromethane											
2	ug/kg	N D		106	112	6	114			80	121
5480 1 1 2 2 Tetrachloroethane											
1	ug/kg	N D		108	108	0	101			70	124
5463 1 2 Dichloropropane											
3	ug/kg	N D		113	117	4	114			77	127
6297 trans 1 3 Dichloropropene											
1	ug/kg	N D		103	108	4	105			69	131
5462 Trichloroethene											
1	ug/kg	N D		111	116	5	112			81	123
5470 Dibromochloromethane											
1	ug/kg	N D		106	109	3	112			80	120
5467 1 1 2 Trichloroethane											
2	ug/kg	N D		111	110	1	108			81	124
5460 Benzene											
1	ug/kg	N D		116	119	2	113			77	126
6298 cis 1 3 Dichloropropene											
1	ug/kg	N D		110	115	4	112			79	126

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LLI Sample No 3202274
SP01TP04 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

	SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
5478 Bromoform	1	ug/kg	N D		102	101	1	107			73	120
6299 4 Methyl 2 pentanone	3	ug/kg	N D		102	108	6	110			63	123
6300 2 Hexanone	3	ug/kg	N D		105	107	1	104			60	128
5468 Tetrachloroethene	1	ug/kg	N D		115	120	4	114			83	150
5466 Toluene	1	ug/kg	N D		114	113	1	105			74	128
5472 Chlorobenzene	1	ug/kg	N D		114	112	2	108			81	121
5474 Ethylbenzene	1	ug/kg	N D		117	116	0	112			86	129
5477 Styrene	1	ug/kg	N D		116	114	2	108			84	127
6301 Xylene (Total)	1	ug/kg	N D		117	116	1	111			88	128
5451 trans 1 2 Dichloroethene	2	ug/kg	N D		115	119	4	111			73	126
5454 cis 1 2 Dichloroethene	2	ug/kg	N D		113	117	3	112			84	123
1225 TCL Pesticides in Solids			Batch 992110011A									
1981 Alpha BHC	0 67	ug/kg	N D		84	85	1	102			38	156
1982 Beta BHC	0 67	ug/kg	N D		94	93	1	97			40	153
1983 Delta BHC	0 67	ug/kg	N D		76	76	0	97			44	145
1218 Gamma BHC Lindane	0 67	ug/kg	N D		84	83	1	102			51	142
1219 Heptachlor	0 67	ug/kg	N D		85	81	5	100			59	140
1220 Aldrin	0 67	ug/kg	N D		105	100	4	100			55	132
1984 Heptachlor Epoxide	0 67	ug/kg	N D		93	91	2	99			58	129
1989 Endosulfan I	0 67	ug/kg	N D		185	185	0	81			56	123
1222 Dieldrin	1 3	ug/kg	N D		86	85	1	90			63	133
1985 DDE	1 3	ug/kg	N D		102	101	1	101			47	159
1223 Endrin	1 3	ug/kg	N D		105	104	0	112			70	150
1990 Endosulfan II	1 3	ug/kg	N D		44	51	16	89			46	138

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LLI Sample No 3202274
SP01TP04 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
1986 DDD											
1 3	ug/kg	N D		108	107	1	101			53	141
1991 Endosulfan Sulfate											
1 3	ug/kg	N D		88	84	5	108			40	150
1221 DDT											
1 3	ug/kg	N D		107	107	0	110			60	138
3017 Endrin Ketone											
1 3	ug/kg	N D		90	90	0	92			62	137
1859 Methoxychlor											
6 7	ug/kg	N D		132	124	6	128			52	174
3025 Alpha Chlordane											
0 67	ug/kg	N D		151	149	1	100			68	141
3026 Gamma Chlordane											
0 67	ug/kg	N D		100	97	2	97			65	129
1988 Toxaphene											
67	ug/kg	N D									
1992 Endrin Aldehyde											
1 3	ug/kg	N D		82	82	1	83			75	125
1993 PCB 1016											
33	ug/kg	N D									
1994 PCB 1221											
33	ug/kg	N D									
1995 PCB 1232											
33	ug/kg	N D									
1996 PCB 1242											
33	ug/kg	N D									
1997 PCB 1248											
33	ug/kg	N D									
1998 PCB 1254											
33	ug/kg	N D									
1999 PCB 1260											
33	ug/kg	N D									
4688 TCL SW846 Semivolatiles Soil		Batch 99215SLD026									
1185 Phenol											
67	ug/kg	N D		63	49	24	87			40	128
3753 bis(2 Chloroethyl)ether											
33	ug/kg	N D		58	42	32	91			38	131
1186 2 Chlorophenol											
33	ug/kg	N D		62	47	28	90			44	127
3754 1 3 Dichlorobenzene											
33	ug/kg	N D		44	28	44	87			31	121
1187 1 4 Dichlorobenzene											
33	ug/kg	N D		44	29	43	86			36	119
3755 1 2 Dichlorobenzene											
33	ug/kg	N D		48	31	42	88			39	120
4690 2 Methylphenol											
33	ug/kg	N D		61	48	25	89			42	127

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Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
4691 2 2 oxybis(1 Chloropropane)											
33	ug/kg	N D		54	38	34	88			38	151
4692 4 Methylphenol											
67	ug/kg	N D		62	49	23	89			33	139
1188 N Nitroso di n propylamine											
33	ug/kg	N D		64	49	26	92			39	142
3757 Hexachloroethane											
33	ug/kg	N D		44	28	44	89			29	128
3758 Nitrobenzene											
33	ug/kg	N D		59	44	29	91			42	131
3759 Isophorone											
33	ug/kg	N D		61	47	25	89			46	130
3746 2 Nitrophenol											
67	ug/kg	N D		65	50	28	97			36	141
3747 2 4 Dimethylphenol											
67	ug/kg	N D		60	48	22	90			40	132
3760 bis(2 Chloroethoxy)methane											
67	ug/kg	N D		63	49	26	93			44	127
3748 2 4 Dichlorophenol											
67	ug/kg	N D		64	50	23	91			41	128
1189 1 2 4 Trichlorobenzene											
33	ug/kg	N D		54	39	32	92			44	121
3761 Naphthalene											
33	ug/kg	N D		55	41	31	89			34	133
4693 4 Chloroaniline											
33	ug/kg	N D		50	41	18	42			1	113
3762 Hexachlorobutadiene											
67	ug/kg	N D		52	36	36	92			39	133
1190 4 Chloro 3 methylphenol											
67	ug/kg	N D		65	52	22	93			47	135
4694 2 Methylnaphthalene											
33	ug/kg	N D		59	45	27	90			43	131
3763 Hexachlorocyclopentadiene											
170	ug/kg	N D		35	24	38	69			1	141
3749 2 4 6 Trichlorophenol											
67	ug/kg	N D		64	52	22	90			39	141
4695 2 4 5 Trichlorophenol											
67	ug/kg	N D		64	52	21	87			45	136
3764 2 Chloronaphthalene											
33	ug/kg	N D		64	51	23	92			48	127
4696 2 Nitroaniline											
33	ug/kg	N D		71	58	21	101			25	139
3766 Dimethylphthalate											
67	ug/kg	N D		67	55	21	95			53	127
3765 Acenaphthylene											
33	ug/kg	N D		62	50	21	89			44	126

4689 TCL SW846 Semivolatiles/Soil Batch 99215SLD026

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LLI Sample No 3202274
SP01TP04 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
4697 3 Nitroaniline											
67	ug/kg	N D		61	52	17	66			18	117
1191 Acenaphthene											
33	ug/kg	N D		63	51	21	91			47	127
3750 2 4 Dinitrophenol											
230	ug/kg	N D		35	26	29	55			1	133
1192 4 Nitrophenol											
170	ug/kg	N D		60	46	27	83			31	161
4698 Dibenzofuran											
33	ug/kg	N D		66	54	21	93			53	125
1193 2 4 Dinitrotoluene											
67	ug/kg	N D		67	54	21	95			50	131
3767 2 6 Dinitrotoluene											
33	ug/kg	N D		71	58	21	103			53	130
3770 Diethylphthalate											
67	ug/kg	N D		68	56	20	97			54	130
3769 4 Chlorophenyl phenylether											
33	ug/kg	N D		67	54	21	92			47	132
3768 Fluorene											
33	ug/kg	N D		65	53	20	92			42	142
4700 4 Nitroaniline											
67	ug/kg	N D		64	52	20	86			30	127
3751 4 6 Dinitro 2 methylphenol											
170	ug/kg	N D		52	37	33	76			14	143
3772 N Nitrosodiphenylamine											
33	ug/kg	N D		70	57	21	97			49	130
3773 4 Bromophenyl phenylether											
67	ug/kg	N D		70	57	22	96			53	132
3774 Hexachlorobenzene											
33	ug/kg	N D		70	56	22	95			40	144
1194 Pentachlorophenol											
170	ug/kg	N D		34	22	41	61			20	132
3775 Phenanthrene											
33	ug/kg	N D		69	45	30	94			42	141
3776 Anthracene											
33	ug/kg	N D		69	52	25	95			45	132
4702 Carbazole											
33	ug/kg	N D		70	55	23	94			48	129
3777 Di n butylphthalate											
67	ug/kg	N D		71	56	23	97			54	133
3778 Fluoranthene											
33	ug/kg	N D		64	36	33	92			37	142
1195 Pyrene											
33	ug/kg	N D		67	43	28	103			34	145
3780 Butylbenzylphthalate											
67	ug/kg	N D		72	59	21	104			47	138
3783 3 3 Dichlorobenzidine											
67	ug/kg	N D		58	50	15	69			2	132
3781 Benzo(a)anthracene											
33	ug/kg	N D		69	47	29	94			44	133

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LLI Sample No 3202274
SP01TP04 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
3784 bis(2 Ethylhexyl)phthalate											
67	ug/kg	N D		77	62	21	109			41	145
3782 Chrysene											
33	ug/kg	N D		69	47	29	96			42	136
3785 Di n octylphthalate											
67	ug/kg	N D		83	67	21	117			43	156
3786 Benzo(b)fluoranthene											
33	ug/kg	N D		63	45	24	94			35	140
3787 Benzo(k)fluoranthene											
33	ug/kg	N D		71	54	25	99			38	145
3788 Benzo(a)pyrene											
33	ug/kg	N D		67	50	23	98			38	141
3789 Indeno(1 2 3 cd)pyrene											
33	ug/kg	N D		66	53	20	98			30	153
3790 Dibenz(a h)anthracene											
33	ug/kg	N D		70	56	21	97			32	151
3791 Benzo(g h i)perylene											
33	ug/kg	N D		68	53	22	97			29	151
1123 Cyanide (Reactivity)		Batch 99217104201									
100	mg/kg	N D	0 (1)	3	2	37	105			88	121
0111 Moisture		Batch 992130091820002A									
0 50	% by wt		1				100	100	0	99	101
0394 pH		Batch 992150239039400A									
0 010			0				99	100	1	98	102
0542 Ignitability		Batch 992160286054200A									
1121 Reactivity		Batch 992170416112100A									
	see below										
1122 Sulfide (Reactivity)		Batch 992170416112100A									
39	mg/kg	N D	0 (1)	24	29	21	85			80	120

(1) The result for one or both determinations was less than five times the LOQ

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LLI Sample No 3202274
SP01TP04 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

SURROGATE SUMMARY

TRIAL ID	SURROGATE	RECOVERY %	SURROGATE LIMITS LOW	HIGH
1225 TCL Pesticides in Solids	TCX	101	30	163
	DCB	134	42	184
4688 TCL SW846 Semivolatiles Soil	Phenol d6	86	47	127
	2 Flphenol	83	47	126
	2 4 6 TBP	89	36	150
4689 TCL SW846 Semivolatiles/Soil	Nitrobz d5	83	45	128
	2 Fbiphnyl	82	49	123
	Tphenyld14	94	40	146
6292 TCL by 8260 (soil)	DBFM	107	80	120
	d4 1 2 DCA	106	80	120
	d8 toluene	103	81	117
	4 BFB	100	74	121

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AUG 9 2 1999

LLI Sample No TL 3202275
Collected 07/27/99 at 14 55 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP04 Grab Soil Sample (TCLP Non Volatile Ext)
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

+ ArcView
MCP 8/26/99
DATE 8-27-99

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS
1746	Barium	0 65	0 0015	mg/l
1751	Chromium	N D	0 0054	mg/l
1753	Copper	0 0111 J	0 0058	mg/l
1755	Lead	0 028 J	0 023	mg/l
1766	Silver	N D	0 0057	mg/l
7035	Arsenic TR	N D	0 0070	mg/l
7036	Selenium TR	N D	0 0059	mg/l
7049	Cadmium TR	0 0024	0 00063	mg/l
7072	Zinc TR	0 167	0 0036	mg/l
0259	Mercury	0 000069J	0 000042	mg/l

The metal analyses were performed on a non volatile leachate prepared according to the procedure specified in SW 846 Chapter 7 4 (Revision 3 December 1994) A sample is considered to have failed the Toxicity Characteristic (TC) test and is considered a hazardous waste if any of the metal concentrations (mg/l) in the leachate exceed the following maxima (100 times the Primary Drinking Water Standards)

Arsenic	5 0	Cadmium	1 0	Lead	5 0	Selenium	1 0
Barium	100 0	Chromium	5 0	Mercury	0 2	Silver	5 0

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Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300
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885 0 00 00013600 ASR000

Respectfully Submitted
Duane A Luckenbill B S
Group Leader GC/MS Volatiles

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See reverse side for explanation of symbols and abbreviations

&&&

Analysis Report
LABORATORY CHRONICLE

Lancaster Laboratories
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LLI Sample No TL 3202275
Collected 07/27/99 at 14 55 by MP

Submitted 07/29/99

Account No 10160
Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

SP01TP04 Grab Soil Sample (TCLP Non Volatile Ext)
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH
SDG#

CAT NO	ANALYSIS NAME	METHOD	TRIAL	ANALYSIS ID	DATE AND TIME	ANALYST
1746	Barium	SW 846 6010B	1		08/10/99 2315	Donna R Sackett
1751	Chromium	SW 846 6010B	1		08/10/99 2315	Donna R Sackett
1753	Copper	SW 846 6010B	1		08/16/99 0533	Donna R Sackett
1755	Lead	SW 846 6010B	1		08/10/99 2315	Donna R Sackett
1766	Silver	SW 846 6010B	1		08/10/99 2315	Donna R Sackett
5705	WW/TL SW 846 ICP Digest (tot)	SW 846 3010A	1		08/03/99 2139	Marie D Kimmel
7035	Arsenic TR	SW 846 6010B	1		08/10/99 2315	Donna R Sackett
7036	Selenium TR	SW 846 6010B	1		08/16/99 0533	Donna R Sackett
7049	Cadmium TR	SW 846 6010B	1		08/10/99 2315	Donna R Sackett
7072	Zinc TR	SW 846 6010B	1		08/10/99 2315	Donna R Sackett
0259	Mercury	SW 846 7470A	1		08/04/99 1655	Nelli S Markaryan
5713	WW SW846 Hg Digest	SW 846 7470A	1		08/03/99 2115	Nelli S Markaryan
0947	TCLP Non volatile Extraction	SW 846 1311	1		08/02/99 1500	James D Cowan

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LLI Sample No 3202275
SP01TP04 Grab Soil Sample (TCLP Non Volatile Ext)
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Group No 676387
Chrysler Corporation

	SAMPLE MDL	SAMPLE UNITS	BLANK	DUP RPD	MS	MSD	MS RPD	LCS	LCS DUP	LCS RPD	LCS LIMITS LOW	LCS LIMITS HIGH
1746 Barium			Batch 992155705003									
	0 0015	mg/l	N D	0 (1)	84	85	1	100			80	120
1751 Chromium			Batch 992155705003									
	0 0054	mg/l	N D	0 (1)	83	84	2	102			80	120
1753 Copper			Batch 992155705003									
	0 0058	mg/l	N D	3	85	85	0	99			80	120
1755 Lead			Batch 992155705003									
	0 023	mg/l	N D	0 (1)	82	83	1	100			80	120
1766 Silver			Batch 992155705003									
	0 0057	mg/l	N D	0 (1)	77	78	1	98			80	120
7035 Arsenic TR			Batch 992155705003									
	0 0070	mg/l	N D	2	81	81	0	97			80	120
7036 Selenium TR			Batch 992155705003									
	0 0059	mg/l	N D	0 (1)	84	82	2	100			80	120
7049 Cadmium TR			Batch 992155705003									
	0 00063	mg/l	N D	0 (1)	84	85	1	100			80	120
7072 Zinc TR			Batch 992155705003									
	0 0036	mg/l	N D	0 (1)	85	86	1	99			80	120
0259 Mercury			Batch 992155713003									
	0 000042	mg/l	N D	0 (1)	80	76	6	102			80	120

(1) The result for one or both determinations was less than five times the LOQ

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AUG 9 0 1999

LLI Sample No SW 3202276
Collected 07/27/99 at 16 20 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP05 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS	METHOD DETECTION LIMIT
6292	TCL by 8260 (soil)			See Page 2		
1225	TCL Pesticides in Solids			See Page 3		
4688	TCL SW846 Semivolatiles Soil			See Page 4		
4689	TCL SW846 Semivolatiles/Soil			See Page 5		
1123	Cyanide (Reactivity)	N D	100	mg/kg		
0111	Moisture	14 1	0 50	% by wt		
	Moisture represents the loss in weight of the sample after oven drying at 103 105 degrees Celsius					
0394	pH	7 76	0 010			
	The pH was performed on a 1 1 slurry (25 gms of sample and 25 ml of deionized water) after being tumbled for 30 min					
0496	Corrosivity	See Below		See Below		
	Corrosivity The pH of a 1 1 slurry (with deionized water) was 7 76 indicating that the waste is not corrosive A waste is corrosive if it exhibits a pH equal to or less than 2 or equal to or greater than 12 5					
0542	Ignitability	See Below		See Below		
	The sample did not spontaneously ignite when exposed to air or water The sample did not ignite by friction The sample vapors did not ignite when exposed to a flame using a closed cup apparatus					
1121	Reactivity	See Below		See Below		
	Reactivity The sample was extracted by the interim method described in SW 846 Chapter 7 3 This solution was analyzed for cyanide and sulfide This waste is not considered reactive and hazardous because it does not generate a quantity of hydrogen cyanide exceeding 250 mg/kg or hydrogen sulfide exceeding 500 mg/kg These interim threshold limits were established by the Solid Waste Branch of EPA July 1992 These results do not reflect total cyanide or total sulfide					
1122	Sulfide (Reactivity)	N D	39	mg/kg		
	The relative percent difference (RPD) between the MS and MSD on the batch associated with this sample was 21% The acceptable RPD for this analysis is 20% The MS and MSD were both within specifications					

ENTERED IN DATABASE + Arc View
BY DATE MCP 8/26/99
CHECKED BY NUA
DATE 8-27-99

1 COPY TO Leggette Brashears & Graham ATTN Mr Ken Vogel

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300
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885 0 00 00072200 ASR000

Respectfully Submitted
Duane A Luckenbill B S
Group Leader GC/MS Volatiles

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LLI Sample No SW 3202276
Collected 07/27/99 at 16 20 by MP

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SP01TP05 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS		METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS		METHOD DETECTION LIMIT
TCL by 8260 (soil)								
5444	Chloromethane	N D		2	ug/kg	N D		2
5446	Bromomethane	N D		3	ug/kg	N D		3
5445	Vinyl Chloride	N D		2	ug/kg	N D		2
5447	Chloroethane	N D		3	ug/kg	N D		3
5450	Methylene Chloride	7		2	ug/kg	9		2
6293	Acetone	N D		7	ug/kg	N D		8
6294	Carbon Disulfide	N D		3	ug/kg	N D		3
5449	1 1 Dichloroethene	N D		2	ug/kg	N D		2
5452	1 1 Dichloroethane	4	J	1	ug/kg	5	J	1
5455	Chloroform	N D		1	ug/kg	N D		1
5461	1 2 Dichloroethane	N D		2	ug/kg	N D		2
6296	2 Butanone	N D		7	ug/kg	N D		8
5457	1 1 1 Trichloroethane	5		1	ug/kg	6		1
5458	Carbon Tetrachloride	N D		1	ug/kg	N D		1
5465	Bromodichloromethane	N D		2	ug/kg	N D		2
5480	1 1 2 2 Tetrachloroethane	N D		1	ug/kg	N D		1
5463	1 2 Dichloropropane	N D		3	ug/kg	N D		3
6297	trans 1 3 Dichloropropene	N D		1	ug/kg	N D		1
5462	Trichloroethene	8		1	ug/kg	9		1
5470	Dibromochloromethane	N D		1	ug/kg	N D		1
5467	1 1 2 Trichloroethane	N D		2	ug/kg	N D		2
5460	Benzene	N D		1	ug/kg	N D		1
6298	cis 1 3 Dichloropropene	N D		1	ug/kg	N D		1
5478	Bromoform	N D		1	ug/kg	N D		1
6299	4 Methyl 2 pentanone	N D		3	ug/kg	N D		3
6300	2 Hexanone	N D		3	ug/kg	N D		3
5468	Tetrachloroethene	2	J	1	ug/kg	2	J	1
5466	Toluene	N D		1	ug/kg	N D		1
5472	Chlorobenzene	N D		1	ug/kg	N D		1
5474	Ethylbenzene	N D		1	ug/kg	N D		1
5477	Styrene	N D		1	ug/kg	N D		1
6301	Xylene (Total)	N D		1	ug/kg	N D		1
5451	trans 1 2 Dichloroethene	N D		2	ug/kg	N D		2
5454	cis 1 2 Dichloroethene	3	J	2	ug/kg	3	J	2

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Duane A Luckenbill B S
Group Leader GC/MS Volatiles

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LLI Sample No SW 3202276
Collected 07/27/99 at 16 20 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP05 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS	METHOD DETECTION LIMIT
TCL Pesticides in Solids						
1981	Alpha BHC	N D	0 67	ug/kg	N D	0 78
1982	Beta BHC	N D	0 67	ug/kg	N D	0 78
1983	Delta BHC	N D	0 67	ug/kg	N D	0 78
1218	Gamma BHC Lindane	N D	0 67	ug/kg	N D	0 78
1219	Heptachlor	N D	0 67	ug/kg	N D	0 78
1220	Aldrin	N D	0 67	ug/kg	N D	0 78
1984	Heptachlor Epoxide	N D	0 67	ug/kg	N D	0 78
1989	Endosulfan I	N D	0 67	ug/kg	N D	0 78
1222	Dieldrin	N D	1 3	ug/kg	N D	1 5
1985	DDE	N D	1 3	ug/kg	N D	1 5
1223	Endrin	N D	1 3	ug/kg	N D	1 5
1990	Endosulfan II	N D	1 3	ug/kg	N D	1 5
1986	DDD	N D	1 3	ug/kg	N D	1 5
1991	Endosulfan Sulfate	N D	1 3	ug/kg	N D	1 5
1221	DDT	N D	1 3	ug/kg	N D	1 5
3017	Endrin Ketone	N D	1 3	ug/kg	N D	1 5
1859	Methoxychlor	8 0 J	6 7	ug/kg	9 3 J	7 8
3025	Alpha Chlordane	N D	0 67	ug/kg	N D	0 78
3026	Gamma Chlordane	N D	0 67	ug/kg	N D	0 78
1988	Toxaphene	N D	67	ug/kg	N D	78
1992	Endrin Aldehyde	N D	1 3	ug/kg	N D	1 5
1993	PCB 1016	N D	33	ug/kg	N D	38
1994	PCB 1221	N D	33	ug/kg	N D	38
1995	PCB 1232	N D	33	ug/kg	N D	38
1996	PCB 1242	N D	33	ug/kg	N D	38
1997	PCB 1248	N D	33	ug/kg	N D	38
1998	PCB 1254	N D	33	ug/kg	N D	38
1999	PCB 1260	N D	33	ug/kg	N D	38

Due to the nature of the sample matrix a dilution of the sample was used for analysis The Limits of Quantitation (LOQ s) were raised accordingly

This analysis was performed at a 10x dilution of the original sample

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Jenifer E Hess B S
Group Leader Pesticides/PCBs

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LLI Sample No SW 3202276
Collected 07/27/99 at 16 20 by MP

Account No 10160

Chrysler Corporation
PO Box 537933
Livonia MI 48153 7933

P O N99C403749 A
Rel YGQP9900241

Submitted 07/29/99 Reported 08/16/99
Discard 10/16/99

SP01TP05 Grab Soil Sample
Site Code SC001 RFA# YGQP9900241
Dayton Thermal Products/Dayton OH

CAT NO	ANALYSIS NAME	AS RECEIVED RESULTS	METHOD DETECTION LIMIT	UNITS	DRY WEIGHT RESULTS	METHOD DETECTION LIMIT
TCL SW846 Semivolatiles Soil						
1185	Phenol	N D	67	ug/kg	N D	78
3753	bis(2 Chloroethyl)ether	N D	33	ug/kg	N D	38
1186	2 Chlorophenol	N D	33	ug/kg	N D	38
3754	1 3 Dichlorobenzene	N D	33	ug/kg	N D	38
1187	1 4 Dichlorobenzene	N D	33	ug/kg	N D	38
3755	1 2 Dichlorobenzene	N D	33	ug/kg	N D	38
4690	2 Methylphenol	N D	33	ug/kg	N D	38
4691	2 2 oxybis(1 Chloropropane)	N D	33	ug/kg	N D	38
4692	4 Methylphenol	N D	67	ug/kg	N D	78
1188	N Nitroso di n propylamine	N D	33	ug/kg	N D	38
3757	Hexachloroethane	N D	33	ug/kg	N D	38
3758	Nitrobenzene	N D	33	ug/kg	N D	38
3759	Isophorone	N D	33	ug/kg	N D	38
3746	2 Nitrophenol	N D	67	ug/kg	N D	78
3747	2 4 Dimethylphenol	N D	67	ug/kg	N D	78
3760	bis(2 Chloroethoxy)methane	N D	67	ug/kg	N D	78
3748	2 4 Dichlorophenol	N D	67	ug/kg	N D	78
1189	1 2 4 Trichlorobenzene	N D	33	ug/kg	N D	38
3761	Naphthalene	N D	33	ug/kg	N D	38
4693	4 Chloroaniline	N D	33	ug/kg	N D	38
3762	Hexachlorobutadiene	N D	67	ug/kg	N D	78
1190	4 Chloro 3 methylphenol	N D	67	ug/kg	N D	78
4694	2 Methylnaphthalene	N D	33	ug/kg	N D	38
3763	Hexachlorocyclopentadiene	N D	170	ug/kg	N D	200
3749	2 4 6 Trichlorophenol	N D	67	ug/kg	N D	78
4695	2 4 5 Trichlorophenol	N D	67	ug/kg	N D	78
3764	2 Chloronaphthalene	N D	33	ug/kg	N D	38
4696	2 Nitroaniline	N D	33	ug/kg	N D	38
3766	Dimethylphthalate	N D	67	ug/kg	N D	78
3765	Acenaphthylene	N D	33	ug/kg	N D	38

3 Methylphenol and 4 methylphenol cannot be resolved under the chromatographic conditions used for sample analysis The result reported for 4 methylphenol represents the combined total of both compounds

Questions? Contact your Client Services Representative
Kathy Klinefelter at (717) 656 2300

Respectfully Submitted
Charles J Neslund B S
Group Leader GC/MS SVOA