

# WORK PLAN FOR THE REMOVAL OF STOCKPILED AND DRUMMED SOILS

BUILDING NO. 52 AREA CHRYSLER CORPORATION MAIN PLANT KENOSHA, WISCONSIN WDAR TID NO. 230004500

SEP 1 1998

CEPT. of NATURAL PESOURCE: SERVICE FRITER S. RIEVALIT, WI

## PREPARED FOR:

Chrysler Corporation 800 Chrysler Drive Auburn Hills, Michigan 48326-2757

## PREPARED BY:

GZA GeoEnvironmental, Inc. N4140 DuPlainville Road Pewaukee, Wisconsin 53072

September 8, 1998 File No. 150313.19

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GZA GeoEnvironmental, Inc. Engineers and Scientists

September 8, 1998 File No. 150313.19

Chrysler Corporation 800 Chrysler Drive Auburn Hills, Michigan 48326-2757

Attention:

Mr. Louis Alan Johnston

CIMS 482-00-51

Supervisor, Environmental Remediation Pollution Prevention and Remediation

Subject:

Work Plan for Removal of Stockpiled and Drummed Soils

Building No. 52 Area

Chrysler Corporation Main Plant

Kenosha, Wisconsin

WDNR FID No. 230004500

N4140 DuPlainville Road Pewaukee, Wisconsin 53072 414-691-2662 FAX 414-691-9279

Dear Mr. Johnston:

GZA GeoEnvironmental, Inc. (GZA), on behalf of Chrysler Corporation (Chrysler), has prepared this Work Plan to document the removal of a soil stockpile and seven drums of soil located near Building No. 52 (MP-7 Area) of the Chrysler Main Plant (Site) in Kenosha, Wisconsin (refer to Figure No. 1). This Work Plan presents the scope of services to be performed and a schedule for their execution. The location of the stockpiled and drummed soils, relative to Building No. 52, is illustrated on Figure No. 2.

This Work Plan has been prepared in general accordance with the notification requirements stipulated in Wisconsin Administrative Code (WAC) Chapters NR 700. Upon authorization by Chrysler, a copy of this Work Plan will be submitted to the Wisconsin Department of Natural Resources (WDNR) to document the removal and disposition of contaminated soil from the Site.

### **BACKGROUND SUMMARY**

A Subsidiary of GZA GeoEnvironmental Technologies, Inc. The drummed and stockpiled soils are currently staged outside in the southern region of Building No. 52 (refer to Figure No. 2). The generation of approximately 200 cubic yards of petroleum impacted (stockpiled) soil resulted from the excavation of equipment footings during the recent equipment line change-out activities associated with Building No. 19 (Engine Head Finishing Area). The drummed soils were generated during geotechnical drilling activities in the vicinity of Building No. 52, performed by Triad Engineering Services, Inc. (Triad) from December 2, through December 4, 1997.

### SUMMARY OF SOIL ANALYTICAL RESULTS

The stockpiled soils were sampled by Triad on December 19, 1997. A summary of the laboratory results from the disposal characterization soil sample collected from the stock pile and drummed soils is presented in Table 1. Drummed soils were sampled by GZA on September 1, 1998. Copies of the Waste Management of Wisconsin Generators Profile Sheet with an

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accompanying profile number and soil sample laboratory results for the soil drums and stockpile are included in Appendix A.

### SCOPE OF WORK

# Task 1: Scheduling and Permitting



GZA will schedule with Chrysler personnel and Chrysler-approved service providers for the excavation of contaminated soils. Soil sample laboratory results and waste profile documentation from the Site are pre-approved by Waste Management of Wisconsin, Inc. GZA will notify Waste Management of Wisconsin, Inc. of the scheduled excavation activities.

# Task 2: Soil Loading, Transport, and Disposal

The contaminated soil stockpile and drum removal activities include the removal of approximately 200 cubic yards (300 tons) of impacted soil. GZA will provide oversight of the Chrysler-approved service providers to document that the soils are properly loaded and removed from the Site. A Chrysler-approved service provider will perform the loading of impacted soil. Soils will be directly loaded into trucks provided by Waste Management of Wisconsin, Inc. Soils will be transported to the Pheasant Run Recycling and Disposal Facility for treatment in a biocell<sup>sm</sup> and eventual reuse within the landfill as daily cover or temporary roads.

# Task 3: Summary Letter Report Preparation

GZA will provide a brief summary letter to document the completion of the soil removal action and provide a brief description of the activities performed. Copies of all waste manifest documentation will also be provided in the letter report.

### WORK SCHEDULE

A work schedule is included in Appendix B. Soils are scheduled for removal and disposal during the week of September 11, 1998.

## **CERTIFICATIONS**

"I, Kevin T. Bugel, hereby certify that I am a Hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

Kevin T. Buget, P.G.

Project Manager Hydrogeologist GZA appreciates the opportunity to be of continued service to Chrysler Corporation and looks forward to our continued association with you on this project. Should you have any questions or require additional information, please do not hesitate to contact the undersigned at your convenience.

Very truly yours,

GZA GeoEnvironmental, Inc.

Hydrogeologist

GA

Mark K. Borucki, P.G. Senior Project Manager

Hydrogeologist

John C. Osborne, P.G. Associate Principal District Manager

Kevin T. Bugel, P.G. Project Manager

c: Andy Boettcher (WDNR-Sturtevant, WI)
Jack Bugno (Chrysler-Kenosha, WI)

f:\wp51\chrysler\kenosha\reports\WP52bldg.doc

Attachments: Table 1 Disposal Characterization Soil Analytical Summary

Figure No. 1 Site Plan

Figure No. 2 Soil Stockpile and Drum Staging Area Detail

Appendix A Waste Management Generators Profile Sheet and Soil Sample

Laboratory Results

Appendix B Schedule

# TABLE 1 DISPOSAL CHARACTERIZATION SOIL ANALYTICAL SUMMARY



Chrysler Main Engine Plant Chrysler Corporation Kenosha, Wisconsin

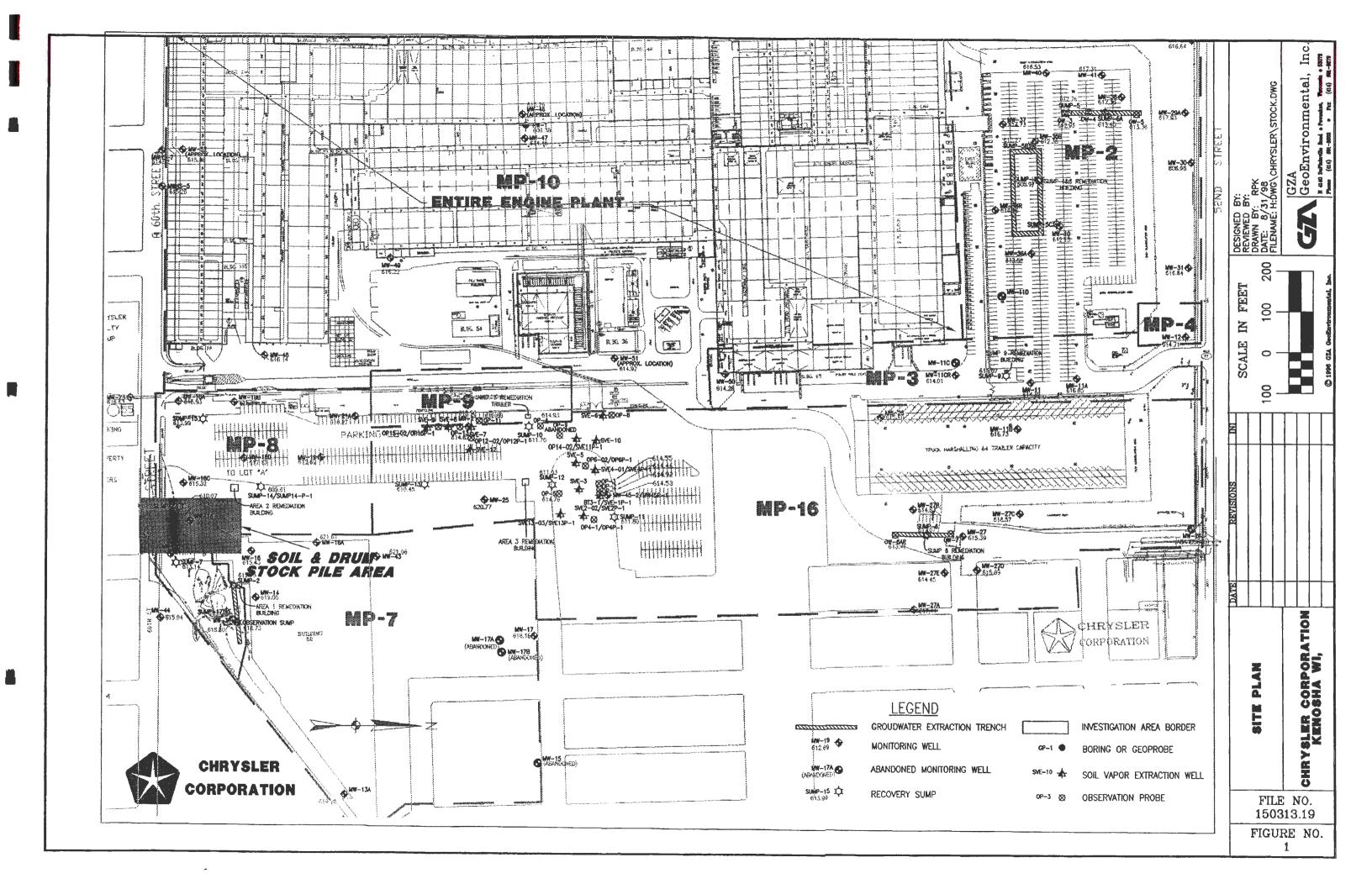
Analytical Parameter	Matrix	Max. Landfill Concentration	STC-LEX /	Units
Volatile Organic Compounds (VOCs)  Methylene Chloride	Soil	5,000 mg/kg for total DRO & VOC	570 (B)	μg/kg
Diesel Range Organic (DRO)	Soil		810	mg/kg
Metals Arsenic Chromium (Total)	Water Water	5,000 mg/kg for total metals	3.7 (B) 2.7 (B)	μg/l μg/l

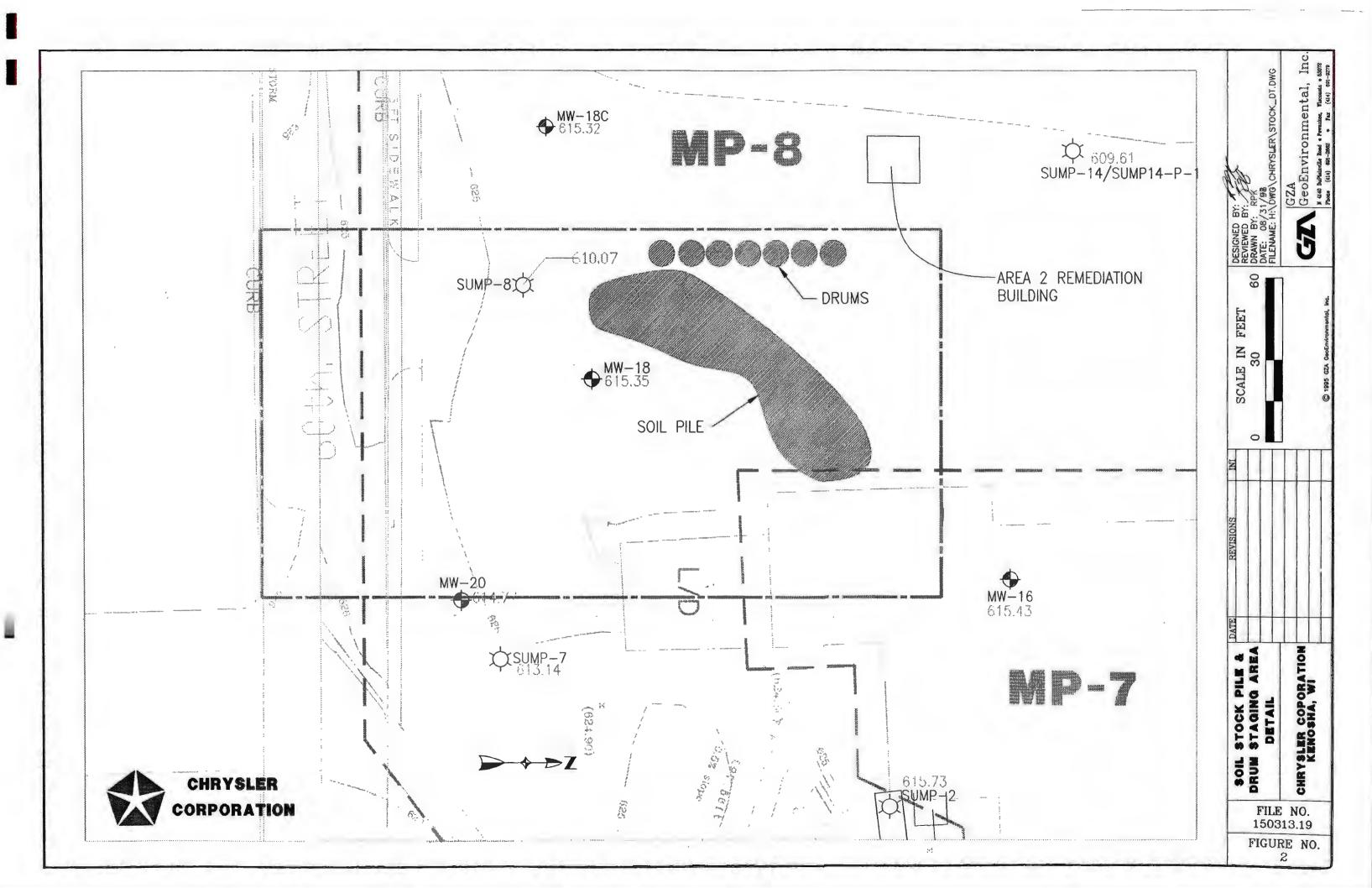
#### Notes:

- 1. Samples were collected by Triad Engineering, Inc. on December 19, 1997.
- 2. mg/kg = milligrams per kilogram; ug/kg = micrograms per kilogram; and ug/l = micrograms per liter.
- 3. "B" indicates that the analyte was found in the associated blank as well as in the sample.



# **FIGURES**







# APPENDIX A

Waste Management Generators Profile Sheet and Soil Sample Laboratory Results



# MIDWEST REGION GENERATOR'S WASTE PROFILE SHEET

PLEASE PRINT IN INK OR TYPE

 Waste	Profile Sheet Code
 MW	28052

						Proposed M.	anage	ment F	acility		NT RUN ING &
form is to b	e used to comp	ly with the re	quiremen	ts of a wa	ste agreement.						AL FACILITY
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enerator Na	ame: CHRYS	SLER CORP			OSHA ENGIN	E PLANT	2	a. SIC C	ode: 3711		
acility Addre	ess (site of wast	e generation	): <u>555</u>	30TH A	VE	<del></del>				E 27 A	2 2000
enerator Cit	ty, State: _KEN	OSHA, WI	SCONSI	<u> </u>			5	5. Zip/Pi	ostal Code:_	5314	2-2800
	T0050269372 ontact:MR_JC		TCNO				G	Ohaa	e: (414 ) <u>6</u>	58	6000
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PHYSICAL	CHARACTERIS	STICS OF W	'ASTE (S	ee Instruc	ctions) (Omit fo	or Type B)					
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	2. Does the value a strong incide	vaste have ental odor?	3. Phys	sical State	@ 70° F/21°C: Semi-Solid	4. Layers  ☐ Multi-lay			-		Yes 🔯 No
Color	2. Does the value a strong incid	vaste have ental odor?	3. Physical Solid	ical State	@ 70° F/21°C:	4. Layers  Multi-lay  Bi-layers	eđ	5. Sp.	-		•
Color ROWN	2. Does the vastrong incid  No describe:	vaste have ental odor? Yes; if so,	3. Physical Solid	sical State I  id  cr	@ 70° F/21°C: ] Semi-Solid ] Powder	4. Layers ☐ Mutti-lay ☐ Bi-layers ⚠ Single F	ed Hased		2.2		Yes 🗓 No ume:
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ROWN  PH: □ ≤2  Flash Point:  CHEMICAL  SOILS	2. Does the value of the value	waste have ental odor? Yes; if so,	3. Phys Solid Liqui Othe	sical State	@ 70' F/21°C; I Semi-Solid I Powder 10- <1 40 - 199°F/60 - 9 (MIN-MAX)	4. Layers  Mutti-lay Bi-layere Single F  2.5	hased 12.5 200°F/S	Range 1.9	_2.2 □ Range ☑ Closed	Volu	Yes 👿 No ume: NA Open Cup
ROWN  DH: U <2 Flash Point: CHEMICAL SOILS  VOCS/DI	2. Does the value of the value	waste have ental odor? Yes; if so,	3. Phys Solid Liqui Othe	sical State	@ 70° F/21°C;   Semi-Solid   Powder   10-<1 40 - 199°F/60 - 9 (MIN-MAX) > 99 % < 0.5 %	4. Layers  Mutti-lay Bi-layere Single F  2.5	hased 12.5 200°F/S ne wast	Range 1.9	_ 2.2 ☐ Range ☐ Closed in any of the if known):	Volu	Yes 🖫 No ume:  NA Open Cup
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ROWN  OH: U <2  Flash Point: CHEMICAL SOILS  VOCS/DI	2. Does the value of the value	waste have ental odor? Yes; if so,	3. Phys Solid Liqui Othe	sical State	@ 70' F/21°C;   Semi-Solid   Powder    10-<1   40 - 199°F/60 - 9   (MIN-MAX)   99 %   0.5 %   - %	4. Layers      Mutti-lay     Bi-layers     Single F 2.5     ⊇²  2. Does the (provide PCBs)  Cyanides	ed hased 12.5 200°F/S ne wash concerns NO	Range 1.9 93°C te conta entration or	2.2 ☐ Range ☐ Closed in any of the if known): LESS THAN [公 < 50 ppm	Cup	Yes 🗓 No  Ime:  NA  Open Cup  ing?  ACTUAL  ppm ppm
ROWN  DH: S2  Flash Point: CHEMICAL SOILS  VOCS/DI	2. Does the value of the value	waste have ental odor? Yes; if so,	3. Phys Solid Liqui Othe	sical State	@ 70° F/21°C;    Semi-Solid   Powder    10-<1   40 - 199°F/60 - 9   (MIN-MAX)  > 99 %  < 0.5 %  - %  - %	4. Layers  Mutti-lay Bi-layere Single F 2.5	ed Hased 12.5 200°F/S ne was 13 conce	Range 1.9 93°C te conta entration or	□ Range □ Closed in any of the if known): LESS THAN □ < 50 ppm □ < 50 ppm □ < 50 ppm	Cup	Yes No lume:  NA Open Cup ing?  ACTUAL ppm ppm ppm
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BROWN  pH:   Flash Point:  CHEMICAL SOILS  VOCS/DI	2. Does the value of the value	waste have ental odor? Yes; if so,	3. Phys Solid Liqui Othe	sical State	@ 70' F/21°C;    Semi-Solid   Powder    10-<1   10-<1   10- 199°F/60 - 9   10- 5 %   10- 5 %   10- 5 %   10- 5 %   10- 7 %   1	4. Layers  Mutti-lay Bi-layere Single F 2.5	ed Hased 12.5 200°F/S ne was 13 conce	Range 1.9 93°C te conta entration or	□ Range □ Closed in any of the if known): LESS THAN □ < 50 ppm □ < 50 ppm □ < 50 ppm	Cup	Yes No

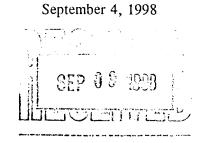
Side 1 of 2 VW-4151 (4/92)

F.	SAMPLING SOURCE (Omit for Type B) (e.g., Drum, Lagoon, Pit, Pond, Tank, Vat)
1.	REPRESENTATIVE SAMPLE CERTIFICATION (Omit for Type B)  Print Sampler's Name: JEANNE M. RAMPONI 2. Sample Date: 6/21/95  Sampler's Title: HYDROGEOLOGIST
4.	Sampler's Employer (if other than Generator): TRIAD ENGINEERING INCORPORATED
5.	The sampler's signature certifies that any sample submitted is representative of the waste described above pursuant to 40 CFR 261.20(c) or equivalent rules.  Sampler's Signature
H	GENERATOR CERTIFICATION
1. 2.	y signing this profile sheet, the Generator certifies:  This waste is not "Hazardous Waste" as defined by USEPA and/or state regulation.  This waste does not contain regulated radioactive materials or regulated concentrations of PCB's (Polychlorinated Biphenyls).  The waste does not contain regulated concentrations of the following pesticides and herbicides: Chlordane, Endrin, Heptachlor (and it's epoxide). Lindane, Methoxychlor, Toxaphene, 2, 4-D, or 2, 4, 5-TP (Silvex).
4.	The waste does not contain halogenated compounds such as: tetrachloroethylene, trichloroethylene, methylene chloride, 1, 1, 1-trichloroethane, carbon tetrachloride, chloroform, ortho-dichlorobenzene, dichlorodifluoromethane, 1, 1, 2-trichloro-1, 2, 2-trifluoroethane, trichlorofluoromethane 1, 1-dichloroethylene, and 1, 2-dichloroethylene at greater than 1% (10,000ppm) total solvent concentration. This listing includes any combination of the above named halogenated compounds where the total concentration or the sum of the concentrations of the individual compounds exceed 1% or 10,000 ppm on a weight to weight basis.
5.	This sheet and the attachments contain true and accurate descriptions of the waste material. All relevant information regarding known or suspected hazards in the possession of the Generator has been disclosed.
6.	The Generator has read and understands the Contractor's Definition of Special Waste included in Part B.5. of the attached instructions form. All types and amounts of special wastes provided in incidental amounts have been identified in section B.6. of this form.
7.	The analytical data presented herein or attached hereto were derived from testing a representative sample taken in accordance with 40 CFR 261.20(c) or equivalent rules.
8.	If any changes occur in the character of the waste, the Generator shall notify the Contractor prior to providing the waste to the Contractor.
9.	Signature John & Bugno 10, Title SITE ADMINISTRATOR/WISCONSIN OPERATIONS
]	Name (Type or Print) JOHN P. BUGNO 12. Date 7/11/95
ì	IOTE: Omlt sections D., E., F., and G., for Type B waste.
	Comments:

•

Mide 2 of 3 Mark 2 of 3 CompuChem A Division of Liberty Analytical Corp. 501 Madison Avenue Cary, NC 27513

> Mr. Mark Krumenacher GZA Geoenvironmental North 4140 Duplainville Road Pewaukee, WI 53072



Dear Mr. Krumenacher:

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

CompuChem ID Number	Analysis Code	Case Number	Description of Work Requested	
908442	1316	33805. 13001	Reactive Cyanide	
	ID Number	ID Number Code	ID Number Code Number	ID Number Code Number Work Requested

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

Colleen Wilson

# ANALYTICAL REPORT OF DATA - CASE # 33805. 13001

SUBMITTED TO: Mr. Mark Krumenacher GZA Geoenvironmental North 4140 Duplainville Road Pewaukee, WI 53072

# LABORATORY CHRONICLE - REACTIVE CYANIDE ANALYSIS

ITEM NO.	SAMPLE IDENTIFIER	COMPUCHEM NUMBER		DATE EXTRACTION COMPLETED	· -
NO	BLDG52-DRUM		09/02/98	09/03/98	09/03/98

# REACTIVE CYANIDE ANALYSIS

# SUMMARY REPORT

ITEM NO.	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	CONCENTRATION (mg/kg)	REPORTING LIMIT (mg/kg)
1.	BLDG52-DRUMS	908442	BRL	125

BRL = BELOW REPORTING LIMIT NWR = NOT WITHIN RANGE

Reviewed by/ID#: 5. Bull 1, 2326 Date: 9/4/98

# REACTIVE CYANIDE ANALYSIS

# QUALITY CONTROL REPORT

CASE: 33805. 13001

Analyst:2059

MATRIX: SOIL

Date Analyzed: 09/03/98

BLANK SPIKE (BS)	COMPUCHEM #:	908443	
SPIKE	BS	BS	
ADDED	CONC.	%	
(mg/kg)	(mg/kg)	RECOVERY	
40.00	7.993	20.00	

COMPUCHEM #	QC ТҮРЕ	AMOUNT DETECTED (mg/kg)	
PBS	METHOD BLANK	BRL	

The reporting limit for Reactive Cyanide is 125 mg/kg

BRL = BELOW REPORTING LIMIT

RPD = RELATIVE PERCENT DIFFERENCE

NWR = NOT WITHIN RANGE

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Project: RFA130	Freight # 80	DLe3126677	63	Lab Instructions:	divity.	- Cyano	le ory	<del>/_</del> _
Quote # <u>98 - 7040</u>	Subcontract							
Account # 50// 19	TAT : Verbal	48/1R Hardo	opy 10 day					
SDG REQ SAMPLE ID	CCN	AMOUNT / CONTAINER	PARAMETER	ANALYSIS CODE	LINE ITEM	SAMPLE DATE		рН
1/300/ / BLD52-Drums	108442	_ <del></del>	Reactive Cyn. B	13/6	1	9/1/98	50	NA
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Client did not relinques C-0-C 9/2/98

Sample placed in struge 1D1
On 9h/98 11:00

Chain-of-Custody



a division of Liberty Analytical Corp.

Recurs 1/5/98

02/JAN/98

TRIAD ENGINEERING INC.
ATTN: ROSS CREIGHTON
325 E CHICAGO STREET
SUITE 400
MILWAUKEE, WI 53202

Subject: Report of Data - Account Number# 500957 Order# 33352

ATTN: ROSS CREIGHTON

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,

 ${\tt CompuChem\ Environmental}\ \cdot$ 

a division of Liberty Analytical

Attachment



a division of Liberty Analytical Corp.

02/JAN/98

TRIAD ENGINEERING INC. ATTN: ROSS CREIGHTON 325 E CHICAGO STREET SUITE 400 MILWAUKEE, WI 53202

ACCOUNT #: 500957

CC# SAMPLE-ID RECEIPT DATE

879011 STC-LEX 12/23/97 879029 METHANBLNK 12/23/97

TOTAL NUMBER OF SAMPLES = 2

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

> SDG NARRATIVE CASE:33352 SDG:83564 CONTRACT:500957

SAMPLE IDENTIFICATIONS: STC-LEX

The one(1) soil sample listed above was received intact, properly refrigerated, with chain of custody documentation on December 23, 1997. The samples were prepared and analyzed following SW846 method 8260 by medium level analysis.

## **VOLATILES:**

Analysis holding time requirements were met for this sample. No target analytes were identified above the reporting limit except methylene chloride.

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

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

The associated method blank met all quality control criteria. The method blank contained methylene chloride below the reporting limit.

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

Duplicate matrix spikes were generated from the original STC-LEX. All advisory accuracy and precision criteria were met with one exception. The spike compound toluene exceeded the recovery limits in the matrix spike duplicate.

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 January 02, 1998

CHRYSL CORPOR	.ER							_			Cha	ain-o	f-Cu	sto	dy					0	1040	$04$ $\mathbf{A}$
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CompuChem		Proje	ct Name		6	hrus		Co	P.		3	onsultant:		111	iac	7	FI	701	1000	in	In	
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Phone Number: 1-800-833-5097		I	Number		7.0	P97	008	35-	836	**************************************	Cons	ultant PM: .			220				94-10,			
Fax Number: (919) 379-4050		1	sler PM		<u> </u>	DIA			more		1	Phone.		291	88	40			7x: 14	र्गयो 2	91-8	8841
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STC-LEX	12/19/9	11/2	G	5	6	X	<del> </del>	<del>                                     </del>	<del> </del>	<del> </del>				***************************************			7	4		Ken	IUI K3	
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Is RFA sampling complete?	Relinquished	by:			Date:		Time:		Received	for Labor	slory by:			Date:		Time		•	Custody Beal	l Intact?		
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		Chr	ysler Co.	porat	io <b>n 8</b> 0	0 Chrys	ler Dr <del>i</del> ve,	CIMS	482-00-5	I, Aubur	n Hills, i	Michigan	48326-2	757								

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

METHANBLNK

Project: RFA835 Date Sampled: \_\_\_\_\_\_\_\_

Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83564

Matrix: (soil/water) SOIL Lab Sample ID: 879029

Sample wt/vol: 20.0 (g/mL) G Lab File ID: CN079029A52.D

Level: (low/med) MED Date Received:

% Moisture: not dec. \_\_\_\_ Date Analyzed: 12/30/97

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 0 (uL) Soil Aliquot Volume: 0.00 (uL)

CONCENTRATION UNITS: UG/KG
CAS NO. COMPOUND DL CONC

CAS NO.	COMPOUND	$\mathtt{DL}$	CONC	Q
		***************************************		
75-01-4	Vinyl Chloride	480		U
	Chloroethane	480		Ŭ
	Methylene Chloride	480	480	J
	1,1-Dichloroethene	480		U
75-34-3	1,1-Dichloroethane	480		U
	Chloroform	480		Ū
	1,2-Dichloroethane	480		U
	1,1,1-Trichloroethane	480		U
56-23-5	Carbon Tetrachloride	480		U
	Bromodichloromethane	480		U
	Trichloroethene	480		U
124-48-1	Dibromochloromethane	480		U
	1,1,2-Trichloroethane	480		U
71-43-2		480		U
127-18-4	Tetrachloroethene	480		U
79-34-5	1,1,2,2-Tetrachloroethane	480		U
108-88-3	Toluene	480		U
108-90-7	Chlorobenzene	480		U
	Ethylbenzene	480		U
	1,2-Dibromoethane	480	•	U
96-12-8	1,2-Dibromo-3-Chloropropane	480		U
75-69-4	Trichlorofluoromethane	480		U
594-20-7	2,2-Dichloropropane	480		U
	Isopropyl Benzene	480		U
108-86-1	Bromobenzene	480		U
95-49-8	2-Chlorotoluene	480		U
106-43-4	4-Chlorotoluene	480		U
108-67-8	1,3,5-Trimethyl Benzene	480		U
	tert-Butyl Benzene	480		U
	1,2,4-Trimethyl Benzene	480		U
	sec-Butyl Benzene	480		Ū
	1,3-Dichlorobenzene	480		Ū
	1,4-Dichlorobenzene	480		Ū
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SAMPLE NO.

METHANBLNK	ļ
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Project: RFA835 Date Sampled: \_\_\_\_\_ Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83564 Matrix: (soil/water) SOIL Lab Sample ID: 879029 Sample wt/vol: 20.0 (g/mL) G Lab File ID: CN079029A52.D Level: (low/med) MED Date Received: % Moisture: not dec. Date Analyzed: 12/30/97 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0 Soil Extract Volume: 0 (uL) Soil Aliquot Volume: 0.00 (uL) CONCENTRATION UNITS: UG/KG CAS NO. COMPOUND DLCONC Q 480 U 99-87-6----p-Isopropyl Toluene 95-50-1-----1,2-Dichlorobenzene\_ 480 U 104-51-8----n-Butyl Benzene 480 U 120-82-1----1,2,4-Trichlorobenzene 480 U 87-68-3-----Hexachlorobutadiene U 480 91-20-3----Naphthalene U 480 78-87-5-----1,2-Dichloropropane U 480 142-28-9-----1,3-Dichloropropane U 480 U 103-65-1----n-Propyl Benzene 480 U 74-87-3-----Chloromethane 480 U 87-61-6----1,2,3-Trichlorobenzene 480 U 75-71-8-----Dichlorodifluoromethane 480 1634-04-4----Methyl-tert-butyl ether U 480 540-59-0----1,2-Dichloroethene (total) 480 U 1330-20-7-----Xylene (total) 480 U

STC-LEX

Project: RFA835 Date Sampled: 12/19/97

Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83564

Matrix: (soil/water) SOIL Lab Sample ID: 879011

Sample wt/vol: 20.0 (g/mL) G Lab File ID: CN079011A52.D

Level: (low/med) MED Date Received: 12/23/97

% Moisture: not dec. 14 Date Analyzed: 12/30/97

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 0(uL) Soil Aliquot Volume: 0.00 (uL)

CONCENTRATION UNITS: UG/KG

CAS NO. COMPOUND DLCONC Q 75-01-4------Vinyl Chloride 480 U 75-00-3-----Chloroethane 480 U 75-09-2-----Methylene Chloride 480 570 В 75-35-4----1,1-Dichloroethene 480 U 75-34-3-----1,1-Dichloroethane 480 U 67-66-3-----Chloroform 480 U 107-06-2----1,2-Dichloroethane 480 U 71-55-6----1,1,1-Trichloroethane 480 68 J 56-23-5-----Carbon Tetrachloride 480 U 75-27-4-----Bromodichloromethane 480 U 79-01-6-----Trichloroethene 480 390 J 124-48-1-----Dibromochloromethane 480 U U 79-00-5----1,1,2-Trichloroethane 480 U 71-43-2----Benzene 480 U 127-18-4-----Tetrachloroethene 480 79-34-5----1,1,2,2-Tetrachloroethane U 480 76 108-88-3-----Toluene 480 J 108-90-7-----Chlorobenzene 480 U 100-41-4----Ethylbenzene 480 U 106-93-4----1, 2-Dibromoethane 480 U 96-12-8-----1,2-Dibromo-3-Chloropropane U 480 75-69-4-----Trichlorofluoromethane 480 U U 594-20-7----2, 2-Dichloropropane 480 98-82-8-----Isopropyl Benzene 480 U 108-86-1-----Bromobenzene 480 U U 95-49-8-----2-Chlorotoluene 480 106-43-4----4-Chlorotoluene 480 U 108-67-8-----1,3,5-Trimethyl Benzene 480 U U 98-06-6-----tert-Butyl Benzene 480 95-63-6----1,2,4-Trimethyl Benzene 480 U 135-98-8----sec-Butyl Benzene 480 U 541-73-1----1,3-Dichlorobenzene 480 U 106-46-7----1,4-Dichlorobenzene 480 U

STC-LEX

Project: RFA835 Date Sampled: 12/19/97

Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83564

Matrix: (soil/water) SOIL Lab Sample ID: 879011

Sample wt/vol: 20.0 (g/mL) G Lab File ID: CN079011A52.D

Level: (low/med) MED Date Received: 12/23/97

% Moisture: not dec. 14 Date Analyzed: 12/30/97

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 0(uL) Soil Aliquot Volume: 0.00 (uL)

CONCENTRATION UNITS: UG/KG

CAS NO. COMPOUND CONC Q 480 99-87-6----p-Isopropyl Toluene U 95-50-1----1,2-Dichlorobenzene 480 U 104-51-8----n-Butyl Benzene 480 U 120-82-1----1,2,4-Trichlorobenzene 480 U 87-68-3-----Hexachlorobutadiene 480 U 91-20-3-----Naphthalene 480 U 78-87-5----1, 2-Dichloropropane 480 U 142-28-9-----1,3-Dichloropropane 480 U 103-65-1----n-Propyl Benzene 480 U 74-87-3-----Chloromethane 480 U 87-61-6-----1,2,3-Trichlorobenzene 480 100 J 480 U 75-71-8-----Dichlorodifluoromethane 480 U 1634-04-4-----Methyl-tert-butyl ether 480 U 540-59-0----1, 2-Dichloroethene (total) 480 U 1330-20-7-----Xylene (total)

STC-LEXMS

Project: RFA835 Date Sampled: 12/19/97

Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83564

Matrix: (soil/water) SOIL Lab Sample ID: 879014

Sample wt/vol: 20.0 (g/mL) G Lab File ID: CN079014A52.D

Level: (low/med) MED Date Received: 12/23/97

% Moisture: not dec. 14 Date Analyzed: 12/30/97

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 0(uL) Soil Aliquot Volume: 0.00 (uL)

CONCENTRATION UNITS: UG/KG
CAS NO. COMPOUND DI CONC

CAS NO.	COMPOUND	${ m DL}$	CONC	Q
55 01 4				
75-01-4	Vinyl Chloride	480		U
	Chloroethane	480		U
75-09-2	Methylene Chloride	480	460	ĴΒ
75-35-4	1,1-Dichloroethene	480	2600	
	1,1-Dichloroethane	480		U
	Chloroform	480		U
	1,2-Dichloroethane	480		U
	1,1,1-Trichloroethane	480	64	J
	Carbon Tetrachloride	480		U
	Bromodichloromethane	480		U
	Trichloroethene	480	3400	
	Dibromochloromethane	480		U
79-00-5	1,1,2-Trichloroethane	480		U
	Benzene	480	3000	
127-18-4	Tetrachloroethene	480		U
79-34-5	1,1,2,2-Tetrachloroethane	480	•	U
108-88-3	Toluene	480	3600	
108-90-7	Chlorobenzene	480	2400	
100-41-4	Ethylbenzene	480		U
	1,2-Dibromoethane	480	,	U
96-12-8	1,2-Dibromo-3-Chloropropane	480		U
75-69-4	Trichlorofluoromethane	480		U
	2,2-Dichloropropane	480		U
98-82-8	Isopropyl Benzene	480		U
108-86-1	Bromobenzene	480		Ū
	2-Chlorotoluene	480		U
	4-Chlorotoluene	480		Ū
	1,3,5-Trimethyl Benzene	480		Ū
98-06-6	tert-Butyl Benzene	480		Ū
	1,2,4-Trimethyl Benzene	480		บี
135-98-8	sec-Butyl Benzene	480		บ
541-73-1	1,3-Dichlorobenzene	480		บ
106-45 7-	1,4-Dichlorobenzene	480		บั
100-40-/	I, 4-DICHIOLODEHZEHE	400		10
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STC-LEXMS

Project: RFA835 Date Sampled: 12/19/97

Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83564

Matrix: (soil/water) SOIL Lab Sample ID: 879014

Sample wt/vol: 20.0 (g/mL) G Lab File ID: CN079014A52.D

Level: (low/med) MED Date Received: 12/23/97

% Moisture: not dec. 14 Date Analyzed: 12/30/97

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 0(uL) Soil Aliquot Volume: 0.00 (uL)

CONCENTRATION UNITS: UG/KG CAS NO. COMPOUND CONC DLQ 99-87-6----p-Isopropyl Toluene 480 U 95-50-1----1,2-Dichlorobenzene 480 U 104-51-8----n-Butyl Benzene 480 U 120-82-1----1,2,4-Trichlorobenzene 480 U 480 U 87-68-3-----Hexachlorobutadiene U 91-20-3-----Naphthalene 480 U 78-87-5-----1, 2-Dichloropropane 480 U 142-28-9-----1,3-Dichloropropane 480 U 103-65-1----n-Propyl Benzene 480 480 U 74-87-3-----Chloromethane 480 U 87-61-6----1,2,3-Trichlorobenzene 480 U 75-71-8-----Dichlorodifluoromethane 480 U 1634-04-4-----Methyl-tert-butyl ether 480 U 540-59-0----1,2-Dichloroethene (total) U 480 1330-20-7-----Xylene (total)

STC-LEXMSD

Project: RFA835 Date Sampled: 12/19/97

Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83564

Matrix: (soil/water) SOIL Lab Sample ID: 879015

Sample wt/vol: 20.0 (g/mL) G Lab File ID: CN079015A52.D

Level: (low/med) MED Date Received: 12/23/97

% Moisture: not dec. 14 Date Analyzed: 12/30/97

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 0(uL) Soil Aliquot Volume: 0.00 (uL)

CONCENTRATION UNITS: UG/KG

CAS NO. COMPOUND DLCONC Q 75-01-4-----Vinyl Chloride 480 U 75-00-3-----Chloroethane 480 U 75-09-2-----Methylene Chloride 480 400 JB 75-35-4-----1,1-Dichloroethene 480 2700 75-34-3-----1,1-Dichloroethane U 480 67-66-3-----Chloroform 480 U 107-06-2----1,2-Dichloroethane 480 U 71-55-6----1,1,1-Trichloroethane 480 Ũ 56-23-5-----Carbon Tetrachloride U 480 75-27-4-----Bromodichloromethane 480 U 79-01-6-----Trichloroethene 3400 480 U 124-48-1-----Dibromochloromethane 480 79-00-5-----1,1,2-Trichloroethane 480 U 71-43-2-----Benzene 480 3000 127-18-4----Tetrachloroethene 480 U 79-34-5----1,1,2,2-Tetrachloroethane 480 U 108-88-3-----Toluene 4000 480 108-90-7-----Chlorobenzene 480 2500 100-41-4-----Ethylbenzene 480 U U 106-93-4----1,2-Dibromoethane 480 96-12-8-----1, 2-Dibromo-3-Chloropropane 480 U U 75-69-4-----Trichlorofluoromethane 480 U 480 594-20-7----2,2-Dichloropropane U 98-82-8-----Isopropyl Benzene 480 108-86-1-----Bromobenzene 480 U U 95-49-8-----2-Chlorotoluene 480 106-43-4----4-Chlorotoluene 480 U 108-67-8-----1,3,5-Trimethyl Benzene U 480 98-06-6-----tert-Butyl Benzene 480 U 95-63-6----1,2,4-Trimethyl Benzene 480 IJ 135-98-8----sec-Butyl Benzene 480 U 541-73-1----1,3-Dichlorobenzene 480 U 106-46-7----1,4-Dichlorobenzene 480 U

STC-LEXMSD

Project: RFA835 Date Sampled: 12/19/97

Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83564

Matrix: (soil/water) SOIL Lab Sample ID: 879015

Sample wt/vol: 20.0 (g/mL) G Lab File ID: CN079015A52.D

Level: (low/med) MED Date Received: 12/23/97

% Moisture: not dec. 14 Date Analyzed: 12/30/97

GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 1.0

1330-20-7-----Xylene (total)

Soil Extract Volume: 0(uL) Soil Aliquot Volume: 0.00 (uL)

CONCENTRATION UNITS: UG/KG CAS NO. COMPOUND DLCONC Q 99-87-6----p-Isopropyl Toluene 480 U 95-50-1----1,2-Dichlorobenzene 480 U 104-51-8----n-Butyl Benzene 480 U 120-82-1----1,2,4-Trichlorobenzene 480 U 87-68-3-----Hexachlorobutadiene 480 U 91-20-3-----Naphthalene 480 U 78-87-5-----1,2-Dichloropropane 480 U 142-28-9-----1,3-Dichloropropane 480 IJ U 103-65-1---n-Propyl Benzene 480 74-87-3-----Chloromethane 480 U 87-61-6----1,2,3-Trichlorobenzene 480 U U 75-71-8-----Dichlorodifluoromethane 480 U 1634-04-4----Methyl-tert-butyl ether 480 540-59-0----1,2-Dichloroethene (total) 480 U

480

U



Rein 1/6/97

a division of Liberty Analytical Corp.

05/JAN/98

TRIAD ENGINEERING INC. ATTN: ROSS CREIGHTON 325 E CHICAGO STREET SUITE 400 MILWAUKEE, WI 53202

Subject: Report of Data - Account Number# 500957 Order# 33352

ATTN: ROSS CREIGHTON

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

This report covers 1 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,

CompuChem Environmental

a division of Liberty Analytical

Attachment



a division of Liberty Analytical Corp.

05/JAN/98

TRIAD ENGINEERING INC. ATTN: ROSS CREIGHTON 325 E CHICAGO STREET SUITE 400 MILWAUKEE, WI 53202

ACCOUNT #: 500957

CC#

SAMPLE-ID

RECEIPT DATE

879000

STC-LEX

12/23/97

TOTAL NUMBER OF SAMPLES = 1

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

> SDG NARRATIVE CASE:33352 SDG:83561 CONTRACT:500957

SAMPLE IDENTIFICATIONS: STC-LEX

The one(1) soil sample listed above was received intact, properly refrigerated, with proper chain of custody(COC) documentation on December 23, 1997. The sample was prepared and analyzed following ZHE extraction for SW846 method 8240.

### **VOLATILES:**

Analysis holding time requirements were met for this sample. Chloroform was present below the reporting limit.

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 method blank met all quality control criteria. The method blank did not contain any reportable target analytes.

The duplicate matrix spikes met all QC recovery and RPD advisory limits without exception.

The associated LCS met all QC acceptance 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 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 December 30, 1997

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Cary, NC 27513.		_ s	ite Code:			الميت	<u> </u>	<del></del> _	1					m	ilu	1.			115tonsin 53202
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Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	0									Volatiles pH <2	Metals pH < 2	Cyanide pH	Other	Remarks
STC-LEX	12/19/9	11/4-	G	5	6	X		<b> </b>	<b>†</b>						f				144141
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Sampler(s)	Bottles Reliqu	uisked under A	irbiii No.	J		J	_L	<del>-l</del>	Samples 1	i Relinquish	ed under A	Lirbill No.	L	.1		1	1	1	Temperature (corrected) C
ARK, JMK	Relinquished	pà:			Date:		Time:	-	Received	by:				Date:		Tim			Custody Soul Intact?
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Cooler ID #					1														Yes No
Is RFA sampling complete?	Relinquished	by:			Date:		Tlane:		Received	for Labor	elory by:			Date:	,,, <del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>	TI=	<b>M</b> :		Custody Seel Letuci?
Yes No					بيل		<u></u>		<u> </u>		*****			<u></u>		上			Yes No
		Chi	ysier Co.	rporati	wn 80	U Chrys	ter Drive	, CIMS	482-00-5	i, Aubur	n Hills, i	Michigan	48326	2757					

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

SAMPLE NO.

Q

STC-LEX

Project: RFA835 Date Sampled: 12/19/97.

Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83561

Matrix: (soil/water) WATER Lab Sample ID: 879000

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN079000B52.D

Level: (low/med) LOW Date Received: 12/23/97

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 12/29/97

GC Column:DB624 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

75-01-4Vinyl Chloride 75-35-41,1-Dichloroethene 67-66-3Chloroform 107-06-21,2-Dichloroethane 78-93-32-Butanone 56-23-5Carbon Tetrachloride 79-01-6Trichloroethene 71-43-2Benzene	50 25 25 25 25 100 50 25	5	U U U U U U U U U U U U U U U U U U U
	i		Ü
127-18-4Tetrachloroethene 108-90-7Chlorobenzene	50 50		U U

SAMPLE NO.

Q

STC-LEXMS

Project: RFA835 Date Sampled: 12/19/97,

Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83561

Matrix: (soil/water) WATER Lab Sample ID: 879001

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN079001B52.D

Level: (low/med) LOW Date Received: 12/23/97

% Moisture: not dec. Date Analyzed: 12/29/97

GC Column:DB624 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

50 75-01-4-----Vinyl Chloride 400 75-35-4-----1,1-Dichloroethene 25 680 67-66-3-----Chloroform 25 580 107-06-2----1,2-Dichloroethane 25 600 78-93-3----2-Butanone 100 470 56-23-5-----Carbon Tetrachloride 50 560 79-01-6-----Trichloroethene 25 540 50 600 71-43-2----Benzene 127-18-4-----Tetrachloroethene 50 490 108-90-7-----Chlorobenzene 50 510

SAMPLE NO.

STC-LEXMSD

CONCENTRATION UNITS: UG/L

Project: RFA835 Date Sampled: 12/19/97.

Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83561

Matrix: (soil/water) WATER Lab Sample ID: 879002

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN079002B52.D

Level: (low/med) LOW Date Received: 12/23/97

% Moisture: not dec. Date Analyzed: 12/29/97

GC Column:DB624 ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: \_\_\_\_(uL) Soil Aliquot Volume: \_\_\_(uL)

CAS NO. COMPOUND CONC  ${
m DL}$ 0 75-01-4------Vinyl Chloride 50 410 75-35-4----1,1-Dichloroethene 25 690 67-66-3-----Chloroform 25 580 107-06-2----1,2-Dichloroethane 25 600 78-93-3----2-Butanone 100 450 50 56-23-5-----Carbon Tetrachloride 570 25 79-01-6-----Trichloroethene 560 71-43-2----Benzene 50 620 127-18-4-----Tetrachloroethene 50 510 108-90-7-----Chlorobenzene 50 530

## 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

·	VBLKUN			
Project: RFA174	Date Sampled:			
Lab Code: COMPU Case No.: 33352 SAS No.	: SDG No.: 83561			
Matrix: (soil/water) WATER	Lab Sample ID: VBLKUN			
Sample wt/vol: 5.0 (g/mL) ML	Lab File ID: CB971229A52.D			
Level: (low/med) LOW	Date Received:			
% Moisture: not dec.	Date Analyzed: 12/29/97			
GC Column:DB624 ID: 0.53 (mm)	Dilution Factor: 1.0			
Soil Extract Volume:(uL)	Soil Aliquot Volume:(uL)			
CAS NO. COMPOUND	CONCENTRATION UNITS: UG/L DL CONC Q			
75-01-4Vinyl Chloride 75-35-41,1-Dichloroethene 67-66-3Chloroform 107-06-21,2-Dichloroethane 78-93-32-Butanone 56-23-5Carbon Tetrachloride 79-01-6Trichloroethene 71-43-2Benzene 127-18-4Tetrachloroethene 108-90-7Chlorobenzene	10 U U U U U U U U U U U U U U U U U U U			

#### 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

ZHEBLKF7

Project: RFA174 Date Sampled: \_\_\_\_\_ Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83561 Matrix: (soil/water) WATER Lab Sample ID: 879104 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN079104A52.D Level: (low/med) LOW Date Received: % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 12/29/97 GC Column: DB624 ID: 0.53 (mm) Dilution Factor: 5.0 Soil Extract Volume: \_\_\_\_(uL) Soil Aliquot Volume: (uL) CONCENTRATION UNITS: UG/L CAS NO. COMPOUND Q 75-01-4-----Vinyl Chloride 50 U 75-35-4----1,1-Dichloroethene 25 U 67-66-3-----Chloroform 25 U 107-06-2----1,2-Dichloroethane U 25 78-93-3----2-Butanone U 100 56-23-5-----Carbon Tetrachloride U 50 79-01-6-----Trichloroethene 25 U 71-43-2----Benzene 50 U 127-18-4-----Tetrachloroethene 50 U U 108-90-7-----Chlorobenzene 50

### 3A WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM ENV. CORP. Contract: 500957

Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83561

Matrix Spike - Sample No.: STC-LEX

COMPONE	SPIKE ADDED	SAMPLE CONCENTRATION	MS CONCENTRATION	MS %	QC. LIMITS
COMPOUND	(ug/L)	(ug/L)	(ug/L)	REC #	REC.
Vinyl Chloride	500.0	0.000	402.6	80	1-251
1,1-Dichloroethene	500.0	0.000	680.9	136	1-234
Chloroform	500.0	5.08	582.1	115	51-138
1,2-Dichloroethane	500.0	0.000	600.6	120	49-155
2-Butanone	500.0	0.000	466.7	93	1-200
Carbon Tetrachloride	500.0	0.000	558.8	112	70-140
Trichloroethene	500.0	0.000	536.2	107	71-157
Benzene	500.0	0.000	600.9	120	37-151
Tetrachloroethene	500.0	0.000	488.6	98	64-148
Chlorobenzene	500.0	0.000	507.4	101	37-160

	SPIKE	MSD	MSD			
	ADDED	CONCENTRATION	<b>ે</b>	ક	QC L	IMITS
COMPOUND	(ug/L)	(ug/L)	REC #	RPD#	RPD	REC.
	=======================================	==========	=====	=====	=====	=====
Vinyl Chloride	500.0	408.0	82	2	20	1-251
1,1-Dichloroethene	500.0	690.5	138	1	20	1-234
Chloroform	500.0	579.1	115	0	20	51-138
1,2-Dichloroethane	500.0	598.7	120	0	20	49-155
2-Butanone	500.0	451.2	90	3	20	1-200
Carbon Tetrachloride	500.0	567.5	114	2	20	70-140
Trichloroethene	500.0	556.9	111	4	20	71-157
Benzene	500.0	617.7	124	3	20	37-151
Tetrachloroethene	500.0	505.7	101	3.	20	64-148
Chlorobenzene	500.0	527.8	106	5	20	37-160

<sup>#</sup> Column to be used to flag recovery and RPD values with an asterisk

RPD: 0 out of 10 outside limits

Spike Recovery: 0 out of 20 outside limits

COMMENTS:	

<sup>\*</sup> Values outside of QC limits

Lab Name: COMPUCHEM ENV. CORP.

Contract: 500957

VLCS59

Lab Code: COMPU

Case No.: 33352 SAS No.:

SDG No.: 83561

Lab Sample ID: 879121

LCS Lot No.: 46702

Lab File ID:

CN079121A52.D

Date Analyzed: 12/29/97

Purge Volume:

5.0 (mL)

Dilution Factor: 1.0

COMPOUND	AMOUNT ADDED (ug/L )	AMOUNT RECOVERED (ug/L )	%REC #	QC LIMITS
Carbon Tetrachloride Tetrachloroethene Benzene 1,2-Dichloroethane Trichloroethene 2-Butanone Chloroform Chlorobenzene 1,1-Dichloroethene Vinyl Chloride	100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	116.5 103.2 123.0 122.4 111.0 95.87 117.6 108.3 138.2 82.76	116 103 123 122 111 96 118 108 138 83	70-140 64-148 37-151 49-155 71-157 1-200 51-138 37-160 1-234 1-251

<sup>#</sup> Column to be used to flag LCS recovery with an asterisk.

LCS Recovery: 0 outside limits out of 10 total.

COMMENTS:			
and the second s		 	

<sup>\*</sup> Values outside of QC limits.

## VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

Lab Name: COMPUCHEM ENV. CORP. Contract: 500957

VBLKUN

Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83561

Lab File ID: CB971229A52.D

Lab Sample ID: VBLKUN

Date Analyzed: 12/29/97

Time Analyzed: 1205

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: F50052

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01 02	VLCS59	879121	CN079121A52.D	1306
03 04				
05 06				
07 08				******
09 10				
11 12				
13 14				
15 16 17				
18 19				
20				
22				
24 25				
26 27				
28 29				
30				

COMMENTS:				
		· · · · · · · · · · · · · · · · · · ·	 	

page 1 of 1

#### 4A VOLATILE METHOD BLANK SUMMARY

Lab Name: COMPUCHEM ENV. CORP. Contract: 500957

ZHEBLKF7

Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83561

Lab File ID: CN079104A52.D

Lab Sample ID: 879104

Date Analyzed: 12/29/97

Time Analyzed: 1351

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: F50052

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

		LAB	LAB	TIME
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
				========
01	STC-LEX	879000	CN079000B52.D	1756
02	STC-LEXMS	879001	CN079001B52.D	1835
03	STC-LEXMSD	879002	CN079002B52.D	1911
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COMMENTS:					
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Quanterra Incorporated 4101 Shuffel Drive, NW North Canton, Ohio 44720

330 497-9396 Telephone 330 497-0772 Fax Received 1/21/98 262

## **ANALYTICAL REPORT**

PROJECT NO. RFA835/836

Lot #: A7L240112

Cathy Dover

Compuchem Environmental

QUANTERRA INCORPORATED

Jeffrey C. Smith Project Manager

January 19, 1998

## **CASE NARRATIVE**

The following report contains the analytical results for one solid sample submitted to Quanterra-North Canton by Compuchem Environmental from project number RFA835/836. The sample was received December 24, 1997, according to documented sample acceptance procedures.

Quanterra-North Canton utilizes only USEPA approved methods and instrumentation in all analytical work. The sample presented in this report was analyzed for the parameters listed on the method reference page in accordance with the methods indicated. Preliminary results were provided by facsimile transmission to Cathy Dover on January 14, 1998.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

## SUPPLEMENTAL QC INFORMATION

#### SAMPLE RECEIVING

The sample was received at the laboratory at a temperature of 5.3° C.

The sample submitted for WI Diesel Range Organics and WI Gasoline Range Organics analyses, was split into two containers.

#### **GC VOLATILES**

The matrix spike/matrix spike duplicate associated with sample STC-LEX CCN: 879028 failed recovery and RPD criteria. The laboratory control sample associated with this batch was in control. This is believed to be a matrix effect; therefore, no further corrective action was taken.

## **ANALYTICAL METHODS SUMMARY**

## A7L240112

PARAMETE	ANALYTICAL METHOD	
Gasoline	ange Organics WI-DRO DRO Range Organics WI-GRO GRO sidue as Percent Solids MCAWW 160.3 MOD	
Reference	es:	
MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.	,
WI-DRO	"Modified DRO: Method for Determining Diesel Range Organics", Wisconsin DNR, PUBL-SW-141, September, 1995.	
WI-GRO	"Modified GRO: Method for Determining Gasoline Range Organics", Wisconsin DNR, PUBL-SW-140, September, 1995.	

## **SAMPLE SUMMARY**

#### A7L240112

<u>WO #</u>	SAMPLE#	CLIENT SA	AMPLE	ID			DATE	TIME
CEP5T	001	STC-LEX C	CCN:	879028		•	12/19/97	00:00
					•			

#### NOTE (S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

#### COMPUCHEM KNVIRONMENTAL

Client Sample ID: STC-LEX CCN: 879028

#### GC Volatiles

Analysis Date..: 12/31/97

Lot-Sample #...: A7L240112-001 Work Order #...: CEP5T103 Matrix.....: SOLID

Date Sampled...: 12/19/97 00:00 Date Received..: 12/24/97

Prep Date....: 12/31/97

Prep Batch #...: 8002129

Dilution Factor: 1
\* Moisture....: 15

REPORTING

PARAMETER RESULT LIMIT UNITS METHOD

Gasoline Range Organics ND 12 mg/kg WI-GRO GRO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

#### COMPUCHEM ENVIRONMENTAL

Client Sample ID: STC-LEX CCN: 879028

#### GC Semivolatiles

Lot-Sample #...: A7L240112-001 Work Order #...: CEP5T102 Matrix.....: SOLID

Date Sampled...: 12/19/97 00:00 Date Received..: 12/24/97

Prep Date....: 01/04/98 Analysis Date..: 01/09/98

Prep Batch #...: 8002114

Dilution Factor: 10 % Moisture....: 15

REPORTING

PARAMETER RESULT LIMIT UNITS METHOD

Diesel Range Organics 810 59 mg/kg WI-DRO DRO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.



#### LABORATORY CONTROL SAMPLE EVALUATION REPORT

#### GC Volatiles

Client Lot #...: A7L240112 Work Order #...: CEQPT102 Matrix.....: SOLID

LCS Lot-Sample#: A8A020000-129

Prep Date....: 12/31/97 Analysis Date..: 01/02/98

Prep Batch #...: 8002129

Dilution Factor: 1

PERCENT RECOVERY

PARAMETER RECOVERY LIMITS METHOD

Gasoline Range Organics 91 (50 - 100) WI-GRO GRO

NOTE(S):

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

#### LABORATORY CONTROL SAMPLE EVALUATION REPORT

#### GC Semivolatiles

Client Lot #...: A7L240112 Work Order #...: CEQNM102-LCS Matrix.....: SOLID

LCS Lot-Sample#: A8A020000-114 CEQNM103-LCSD

Prep Date....: 01/04/98 Analysis Date..: 01/13/98

Prep Batch #...: 8002114

Dilution Factor: 1

	PERCENT	RECOVERY		RPD	
PARAMETER	RECOVERY	LIMITS	RPD	LIMITS	METHOD
Diesel Range Organics	<b>6</b> 6	(60 - 130)			WI-DRO DRO
	62	(60 - 130)	5.3	(0-25)	WI-DRO DRO

NOTE(S):

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

#### METHOD BLANK REPORT

#### GC Volatiles

Client Lot #...: A7L240112

Work Order #...: CEQPT101

Matrix....: SOLID

MB Lot-Sample #: A8A020000-129

Prep Date....: 12/31/97

Analysis Date..: 01/02/98

Prep Batch #...: 8002129

Dilution Factor: 1

REPORTING

PARAMETER RESULT LIMIT UNITS METHOD
Gasoline Range Organics ND 10 mg/kg WI-GRO GRO

NOTE (S):

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

#### METHOD BLANK REPORT

#### GC Semivolatiles

Client Lot #...: A7L240112

Work Order #...: CEQNM101

Matrix....: SOLID

MB Lot-Sample #: A8A020000-114

Prep Date....: 01/04/98

Prep Batch #...: 8002114

Analysis Date..: 01/09/98 Dilution Factor: 1

REPORTING

PARAMETER RESULT LIMIT
Diesel Range Organics ND 5.0

UNITS METHOL

mg/kg WI-DRO DRO

NOTE(S):

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

#### MATRIX SPIKE SAMPLE EVALUATION REPORT

#### GC Volatiles

Client Lot #...: A7L240112 Work Order #...: CEP5T104-MS Matrix.....: SOLID

MS Lot-Sample #: A7L240112-001 CEP5T105-MSD

Date Sampled...: 12/19/97 00:00 Date Received..: 12/24/97 Prep Date....: 12/31/97 Analysis Date..: 01/02/98

Prep Batch #...: 8002129

	PERCENT	RECOVERY		RPD	
PARAMETER	RECOVERY	LIMITS	RPD	LIMITS	METHOD
Gasoline Range Organics	5.2 a	(50 - 100)		-	WI-GRO GRO
·	141 a,p	(50 - 100)	186	(0-25)	WI-GRO GRO

#### NOTE (S):

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

Results and reporting limits have been adjusted for dry weight.

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.



## **CHAIN-OF-CUSTODY RECORD**

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

December 30, 1997

Mr. Ross Creighton Triad Engineering Inc. 325 E. Chicago Street Received 1/2/98

Suite 400

Milwaukee, WI 53202

Dear Mr. Creighton:

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

Client ID	CompuChem	Analysis	Case	Description of	
Number	ID Number	Code	Number	Work Requested	
STC-LEX	879023	1254	33352. 83563	Ignitability	
		1316		Reactive Cyanide	
		1316		Reactive Sulfide	
:					
					•
					•
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l					

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

lane Ellmog

## ANALYTICAL REPORT OF DATA - CASE # 33352, 83563

SUBMITTED TO:

Mr. Ross Creighton Triad Engineering Inc. 325 E. Chicago Street Suite 400 Milwaukee, WI 53202

## LABORATORY CHRONICLE - IGNITABILITY ANALYSIS

ITEM NO.	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	DATE SAMPLE RECEIVED	DATE ANALYSIS COMPLETED
1.	STC-LEX	879023	12/23/97	12/26/97

## ANALYTICAL REPORT OF DATA - CASE # 33352. 83563

SUBMITTED TO: Mr. Ross Creighton Triad Engineering Inc. 325 E. Chicago Street Suite 400 Milwaukee, WI 53202

## LABORATORY CHRONICLE - REACTIVE CYANIDE ANALYSIS

			DATE	DATE	DATE
<b>ITEM</b>	SAMPLE	COMPUCHEM	SAMPLE	EXTRACTION	ANALYSIS
NO.	IDENTIFIER	NUMBER	RECEIVED	COMPLETED	COMPLETED
1.	STC-LEX	879023	12/23/97	12/26/97	12/26/97

## ANALYTICAL REPORT OF DATA - CASE # 33352. 83563

SUBMITTED TO: Mr. Ross Creighton Triad Engineering Inc. 325 E. Chicago Street Suite 400 Milwaukee, WI 53202

## LABORATORY CHRONICLE - REACTIVE SULFIDE ANALYSIS

			DATE	DATE	DATE	
<b>ITEM</b>	SAMPLE	COMPUCHEM	SAMPLE	<b>EXTRACTION</b>	ANALYSIS	
NO.	IDENTIFIER	NUMBER	RECEIVED	COMPLETED	COMPLETED	
					,	_
1.	STC-LEX	879023	12/23/97	12/26/97	12/26/97	

## **IGNITABILITY ANALYSIS**

#### **SUMMARY REPORT**

ITEM	SAMPLE	COMPUCHEM	CONCENTRATION	REPORTING LIMIT (F)
NO.	IDENTIFIER	NUMBER	(F)	
1.	STC-LEX	879023	NWR	140

BRL = BELOW REPORTING LIMIT NWR = NOT WITHIN RANGE

Reviewed by/ID#: Collein Wilson 2244 Date: 12/30/97

## REACTIVE CYANIDE ANALYSIS

## SUMMARY REPORT

ITEM NO.	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	CONCENTRATION (mg/kg)	REPORTING LIMIT (mg/kg)
1.	STC-LEX	879023	BRL	125

BRL = BELOW REPORTING LIMIT NWR = NOT WITHIN RANGE

Reviewed by/ID#: Collen Wilson 2244 Date: 12/30/97

## REACTIVE SULFIDE ANALYSIS

## **SUMMARY REPORT**

ITEM NO.	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	CONCENTRATION (mg/kg)	REPORTING LIMIT (mg/kg)
1.	STC-LEX	879023	BRL	125

BRL = BELOW REPORTING LIMIT NWR = NOT WITHIN RANGE

Reviewed by/ID#: Collen Wilson, 2044 Date: 12/30/97

#### **IGNITABILITY ANALYSIS**

## QUALITY CONTROL REPORT

CASE: 33352. 83563

MATRIX: SOIL

Analyst:2322

Date Analyzed: 12/26/97

BLANK SPIKE (BS) COMP	UCHEM #: 879026	4
p-XYLENE	BS	
VALUE	CONC.	
(F)	(F)	
81 +/- 2	82.76	

ORIG. SAMPLE COMPUCHEM #: 8		
DUPLICATE (DUP.) COMPUCHEM	<b>1</b> #: 879027	
SAMPLE	DUP.	
CONC.	CONC.	
(F)	(F)	RPD
NWR	NWR	N/A

The reporting limit for Ignitability is 140 F

**BRL** = **BELOW REPORTING LIMIT** 

RPD = RELATIVE PERCENT DIFFERENCE

NWR = NOT WITHIN RANGE

#### REACTIVE CYANIDE ANALYSIS

## QUALITY CONTROL REPORT

CASE: 33352. 83563

MATRIX: SOIL

Analyst:2322

Date Analyzed: 12/26/97

BLANK SPIKE (BS)	COMPUCHEM #:	879026	
SPIKE	BS	BS	•
ADDED	CONC.	%	
(mg/kg)	(mg/kg)	RECOVERY	
40.00	5.995	15,00	

ORIG. SAMPLE COMPUCHEM #: 879023 MATRIX SPIKE (MS) COMPUCHEM #: 879023 DUPLICATE (DUP.) COMPUCHEM #: 879027								
SPIKE ADDED (mg/kg)	ADDED CONC. CONC. CONC. %							
40.00 BRL BRL 6.994 17.50 N/A								

		AMOUNT DETECTED	
COMPUCHEM #	QC TYPE	(mg/kg)	
PBW	METHOD BLANK	BRL	

The reporting limit for Reactive Cyanide is 125 mg/kg

**BRL** = **BELOW REPORTING LIMIT** 

RPD = RELATIVE PERCENT DIFFERENCE

NWR = NOT WITHIN RANGE

## REACTIVE SULFIDE ANALYSIS

## QUALITY CONTROL REPORT

CASE: 33352, 83563

Analyst:2322

MATRIX: SOIL

Date Analyzed: 12/26/97

BLANK SPIKE (BS)	COMPUCHEM #: 8	379026	
SPIKE	BS	BS	
ADDED	CONC.	%	
(mg/kg)	(mg/kg)	RECOVERY	
			•
250.0	240.5	96.00	

ORIG. SAMPLE COMPUCHEM #: 879023									
MATRIX SPIKE (MS) COMPUCHEM #: 879023									
DUPLICATE	DUPLICATE (DUP.) COMPUCHEM #: 879027								
SPIKE	SAMPLE	DUP.	MS	MS					
ADDED	CONC.	CONC.	CONC.	%					
(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	RECOVERY	RPD				
250.0	BRL	BRL	220.4	88.17	N/A				

	7.4 (	AMOUNT	
		DETECTED	
COMPUCHEM #	QC TYPE	(mg/kg)	
PBW	METHOD BLANK	BRL	

The reporting limit for Reactive Sulfide is 125 mg/kg

**BRL** = **BELOW REPORTING LIMIT** 

RPD = RELATIVE PERCENT DIFFERENCE

NWR = NOT WITHIN RANGE

## **IGNITABILITY RUNLOG**

OPERATOR: BRUCE STEWART

DATE: 12/26/97

AMBIENT BAROMETRIC PRESSURE: 154 mm Hy

AMBIENT TEMP=70" F

			•			
	CompuChem Number	Customer ID	CASE	OBSERVED FLASH POINT (C)	OBSERVED FLASH POINT (F)	CORRECTED FLASH POINT (F) 84.56
ICV	Chlorobenzene	N/A	33352 .83563	29°C	84. Z°F	83.8° - " PUR
LCS	p-Xylene (	-879026	33352.83563	28°C	82.4°F	82.76°=
500	879027	STC-LEX		NWR	NWR	NWR
1	879023	\(\frac{1}{2}\)	\\ \	NWR	nwR	ru r
2						
3						
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11						
12			_ </td <td></td> <td></td> <td>·</td>			·
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14			1761			
15			101			
16					·	
17						
18						
19						
20						
21						
22						
23						
24						
25	1					

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 =  $81 \pm 2^{\circ}$  Chlorobenzene certified flashpoint =  $82 \pm 4^{\circ}$ 

REVIEWED BY: Kinley Davis DATE: 12-26-97 11

	OUCHEM ENV. I			<u>T</u>			PAGE	F_ <u>/</u>			
TE	:/2/ 100 CH. 7/ 90	r			TASE NAME	. マ	335 Q. 8 <u>3</u>	رير ع د ح			
EII					DASE NAME			ر مار			
	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	879023 onig	STC-LEX	0.15 ml	10.009	250 ils						
2	879023 onig 879027 our	STC-LEX	0.00 ml	10.029							
3	879030 35	N/A	0.35 W	10				12/	4/87		
3	<i>5</i> 5	STC-CEX	0.40 ml	10.039							
5	вцK	N/A	0.05 ml	10	4	_					
									APPRILITERAL		
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					7/2	19					
					101	3	>				
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4											
	(1)	ICV/BS Solutions	: 40 mg	/kg							

## TOTAL RELEASABLE CYANIDE IN WASTE

Date: 12/26/97

SDG: 33352.83563

Analyst: Bruce Stewart

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	WEIGHT OF WASTE (kg)	TOTAL RELEASABLE HCN mg/kg	% REC
BLK	PBW	0.05	10.00	250	1	0.200	0.01	0.000	
879026	BS	0.35	10.00	250	1	1.199	0.01	5.995	15.0
879023	OR STC-LEX	0.15	10.00	250	1	0.400	0.01	1.998	
879027	DUP STC-LEX	0.10	10.02	250	1	0.200	0.01	0.999	
879023MS	SS STC-LEX	0.40	10.03	250	1	1.399	0.01	6.994	17.5

BS and SS True Value=

0.01

mg/kg

Reviewed by: (')

Date:

te: <u>/2/30/</u>97

# Reactive Sulfide Preparation and Runlog Log

1 WWWW

Operator: BLUCE STEWART

Page \_\_\_\_ of \_\_\_\_

Case Name: 33352.83563

Method: Ch. 7/ 9030A

	CompuChem Number	Customer ID	Titration Volume (ml)	Initial Weight (g)	Final Volume (ml)	Comments
ı	879023 orig	STC - LEX	8.2 ml	10.01	200	loml
 ユ	879027 DUP	STC-LEX	1.8 ml	10.03		loml
3	879026 BS	NIA	4 ml	10.0		loml
4	SS		4.5ml	10.0		10ml
5	BIK	NIA	1m0.8	0.0	$\downarrow$	10m 1
			3/97			
	·	\	85			
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Reagent Manufacturer & Lot#'s NO\_S 7ma-219-17, Iodine 7ma-209-17, Na+thiosulfate
7ma-210-6

250 mg/kg

Date: 1224197

14

## **Total Releasable Sulfide in Waste**

SDG: <u>33352</u>. 83563

				Sodium	Sprubber	Scrubber		Total	
	Sample	Sample	lodine	Thiosulfate Vol. (ml.)	Sulfide Canc.(mg/L)	Solution	Weight of	Releasable	% Recovery
BLK	BLK	10.00	10	8	16.03	50	0.01	80.15	
879030	LCS	10.00	10	4	48.09	50	0.01	240.45	96.18
879023	STC-LEX	10.00	10	8.2	14.43	50	0.01	72.14	
879026 ট	STC-LEX	10.02	10	7.8	17.63	50	0.01	88.17	
879023MS	STC-LEX	10.03	10	4.5	44.08	50	0.01	220.41	88.17

Prep Date: _	12/24/97	nalysis Date _	12/24/97
Prepared by:	Bruce Stewart		
Reviewed by:	100000	Wilson	

Sample Saver 8.					CompuC	hem Er	vironmental (	Corporation	PPS Y or N						
					с	ommer	cial Receiving	Log	PP\$ 1;		700		- N	-	
Order # 33352 Received on: 7: 12/23				3/97	Quick TAT:			VerbaltHardcopy	Lab Instructions:	2 / SV TRIPIP					
Project & AH835/83, Detwered by FEADS  Quote & 17-6776 Freight 8:			₩ INT. TAT:				Hartenpy TAT /Uday	React Scu E	CNI Rea	d PPS Carefull			021		
				Subcentract Lab:	( W as N			105 = Total	pHE Specy						
•	was 50'09	57	CHO Y H H HICH	Cs:	Subconvert 8: DRUKO				REA	835€8	36	`			
8 SDG		N	Remarks	Req	Sample ID		(.4	ContainerNature	A. Code	80	MX	TEM	SULC	HL F	
1	835361		TREPYOCITY	1	STC-LE	. X	879000	1.402 1.80Z		12/19/97	.50	4	וע אל	n N	
1	8256Z	elle	Paris Gler balslys	2			879016	1-402							
4	83563		ignal react	3			879023	1-802							
1	83564		Pebs. VOC	1			779011	1-802							
1	8356Q		GRUIDRO	5			879628	1-402							
Ì	83564		VOC	10	metkanol	Black	819029	1-402		1.				T	
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-		7	Del.		Received By:	<u> h)</u>	COLAMA CO	<u> </u>	Reviewed By:	1					
Analysis Code Code 111.13 147.				)	Price 8 Same		% To	tal .			Discrepancies				
30	7.486 /14:1 { 3630:135 \$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	42	7.4.5.8.15	· · · · · · · · · · · · · · · · · · ·				Order Total:	\$	-			<del></del>		
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1, L, 13							Sales Rep:	Ex.	<del> </del>						
357, 749, 286 10 19, 24							Proj Mgr;	E4.	<del> </del>						
×9 <u>9</u> 35							'	Cust Sve:	<u>₹₩.</u>						

CHRYSLER Chain-of-Custody  CORPORATION  ATTAL: 0.446 SUMME															00404 <b>A</b>					
CORPO	RATIO	NC			4-	TAL	: 1	DIAN	16	51	1 M	DRE								
CompuChem		Projec	t Name:			has		Col	D.			nsultant:		111	20	1	FI	10/	nerine In.	
501 Madison Avenue Site Location:						pla	osha	. W	Sco								hi	scaco street		
Cary, NC 27513 — Site Code:								-									istonsin 53202			
							19700835-836												166-ton.	
Fax Number: (919) 379-4050 Chrysler PM:						0141		EIIV		Phone. 4/4/291 81					40		4	Pax: 14141291-8841		
Turn-around Time Request:		Compound List-Parameter/Method/Bottle Type/Preservative Matrix Cod									Matrix Godes									
24 calendar hrs.										S - S				SW - Surface Water						
48 calendar hrs. Chrysler Level 2							111						•			- Gr	+		ter A-Air	
10 daya	ecify):				8	12,						1			Sc					
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	Date	Time	Grab (G) or Composite (C)	Matrix Code	1	0.									Volatiles pH <2	Metals pH < 2	Cyanide pH	Ber	Remarks	
Field Sample Identification	Collected	Collected	00	13		\	<del> </del>	<del> </del>	<del> </del>	ļ	<b> </b>					2	<del>د</del> (	위	Rainis	
STC-LEX	12/19/9	11430	G	5	6	X			<u> </u>									_		
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Sampler(s)	Bottles Reliqu	ished under A	irbill No.						Samples Relinquished under Airbill No.									Temperature (corrected)C		
ARK JMK	Relinquished	Relinquished by: Date:						Received	Received by:			Date:		Time:			Cuttody Seal Intact?			
The state of the s	Daryi 12				122/92 1145		i i i i i i i i i i i i i i i i i i i							- 1	Yes No					
							B	Daniford but					n				Castody Seal Intact?			
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Cooler ID #					┼		<del> </del>		<del> </del>					<u> </u>		<del>                                     </del>	···	-	Yes No	
Is RFA sampling complete?	Relinquished	by:			Date:		Time:	Received for Labora			otory by: Date:			Date:	le: Time:		- 1	Custody Sent Later1?		
Yes No					ــــــــــــــــــــــــــــــــــــــ		بيا		<u></u>		****					<u> </u>			Yes No	
		Chi	ysier Co.	rporati	on 80	10 Chrys	ter Drive	, CIMS	482-00-5	I, Aubur	n Hüls, l	Michigan	48326-2	757						

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



Parid 1/5/77

05/JAN/98

TRIAD ENGINEERING INC. ATTN: ROSS CREIGHTON 325 E CHICAGO STREET SUITE 400 MILWAUKEE, WI 53202

Subject: Report of Data - Account Number# 500957 Order# 33352

ATTN: ROSS CREIGHTON

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

This report covers 1 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,

CompuChem Environmental

a division of Liberty Analytical

Attachment



05/JAN/98

TRIAD ENGINEERING INC. ATTN: ROSS CREIGHTON 325 E CHICAGO STREET SUITE 400 MILWAUKEE, WI 53202

ACCOUNT #: 500957

CC#

SAMPLE-ID

RECEIPT DATE

879000

STC-LEX

12/23/97

TOTAL NUMBER OF SAMPLES =

COMPUCHEM ENVIRONMENTAL CORP.
SEMI-VOLATILE WATER 8270 MINTHOD
EXTRACTION WORKSHELT

C-0-C 12-29-1

ASSIGNED TO:

Darren/ Darryl/Max

DATE EXTRACTED:

12/29/87

EMP ID NUMBER

TCLP WASTE CHARACTERIZATION

QUEUË #127

48 HR TAT

	EWA ID MOK	DEK		_	•	CLP WASTI	CHARACI	EKIZATION				
					OC.	SAMPLE			FINAL	ADJUSTED PH		
	SAMPLE	PREP	CASE	CLIENT	TYPE	ORIG	BOTTLE	SAMPLE	EXTRACT	B/N	<b>ACID</b>	COMMENTS
	NUMBER	CODE				NO.		VOLUME(ml)	VOLUME			
		-1022	33352.					200	1,0	12.8	1.6	USE 200 ml OF TCLP LEACHATE AND
1	9.11000	-1022	33561	STC-LEX			12/24/37					DILUTE TO 1000 ml WITH EXTRACTED
2	1 4-7-11-11-T	-		TCLPBLKWX	<del>├</del>			<b>500</b>	1:0	12.8	1.6	
_			35353:					30	1.0	12.8	1.6	WATER FOR ALL SAMPLES. ADD 1.0 ml
3	871115	<u> </u>	17401	EWI-ARC	<del>  </del>					T	1	VALIDATION TOLP DAY ACID SPIKE TO SS'S AND KM 12/24
4	311125		1	EW-DEF		******		200	1.0	13.8	16	
•	5/11/30			EVI- GHI				3W	1.0	128	_عا [	-BS'S, ADD 1.0 ml #393 SURROGATE
,	371131	1	<del>                                     </del>	1241 0112	<del>  </del>				1.1	12.8	16	TO ALL SAMPLES. FINAL VOL. = 1.0 ml.
6	577131	<u> </u>		EMI-JKL			<del>                                     </del>	70)	1.0		1	
7	57/11/32			EWI- MACO				2W_	1.0	127	16	
·					1		- N N N	////	10	12.8	119	USE 500 ml VOLUME FOR
8	579112			TELPBLKWY	4		17 7/4	300	10	100	1	LBACHATB BLANK
9												DRACHATO DIAL
10		<b>-</b>										ORIGINAL ENTERED FOR SS's:
11	-	+										
				0.1501.45	1.5		17.265	1000	1.0	1138	1.6	_NA/
12	871114	-		SLCSWE	LC!					120	11,	INITIALS / DATE
13	879113			SBLKWZ	BI		13/2/1	1000	1.0	1   q.g	1.6	Action in the second se

			s-vol
	SURROGAT	NO.	393
		LOT	46768
			****
	TCLP	NO.	
-12/26/65	BAN ACID	AMT.	1.0 mJ
(LIZE I-1	SPIKE	LOT	116539

MANUAL COUNTER

FINAL VOLUME VERIFIED

SUPERVISOR REVIEWED

EXTRACTS RECEIVED BY

SURROGATE & SPIKE ADDED CORRECTLY

INITIALS

926/962

12/29/97 DATE

ISSUED '

#### COMPUCHEM

A division of Liberty Analytical Corporation 501 MADISON AVE.. CARY, NC 27513 (919) 379-4100

**SDG NARRATIVE** 

CASE #33352 SDG #83561 PROTOCOL: SW-846 METHOD: 8270

SAMPLES: STC-LEX

Attached are pertinent analytical data dealing with the analysis of one (1) soil sample associated with Case #33352, SDG #83561. The sample was received intact on December 23, 1997 in properly sealed shipping containers with the corresponding chains-of-custody. The sample was logged into the CompuChem Laboratory Management system and scheduled for the analysis of the semivolatile fraction by Method 8270.

#### **SEMIVOLATILE**

The semivolatile fraction was leached, extracted and analyzed within the required holding time. The sample was leached using the Toxicity Characteristic Leaching Procedure (TCLP). No target analytes were detected with concentrations above the reporting limits in the sample.

#### **QC SUMMARY**

The surrogates met recovery criteria for the semivolatile sample. The Laboratory Control Sample (LCS) met accuracy criteria. The associated blanks, initial calibrations and continuing calibrations met Quality Control criteria.

Release of the data contained in the hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature:

Patricia B. Hopkins

Final Technical Reviewer

30 December 1997

STC-LEX

Project: YGQP9700835/836 Date Sampled: 12/19/97 •

Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83561

Matrix: (soil/water) WATER Lab Sample ID: 879000

Sample wt/vol: 200 (g/mL) ML Lab File ID: GH079000A66.D

Level: (low/med) LOW Date Received: 12/23/97

% Moisture: \_\_\_\_ decanted: (Y/N) \_\_\_ Date Extracted:12/29/97

Concentrated Extract Volume: 1000(uL) Date Analyzed: 12/29/97

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N CONCENTRATION UNITS: UG/L

CAS NO. COMPOUND DL CONC Q

110 CC 1 Providing	FOL	ITT
110-86-1Pyridine	50	ĮU
106-46-71,4-Dichlorobenzene	50	U
95-48-72-Methylphenol	50	U
108-39-43-Methylphenol	50	U
106-44-54-Methylphenol	50	U
67-72-1Hexachloroethane	50	U
98-95-3Nitrobenzene	50	U
87-68-3Hexachlorobutadiene	50	U
88-06-22,4,6-Trichlorophenol	50	U
95-95-42,4,5-Trichlorophenol	250	U
121-14-22,4-Dinitrotoluene	50	U
118-74-1Hexachlorobenzene	50	U
87-86-5Pentachlorophenol	250	U

#### 2C WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: COMPUCHEM ENV. CORP. Contract: 500957

Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83561

		Sl	S2	S3	S4	S5	S6	S7	S8	TOT
	SAMPLE NO.	(NBZ)#	(FBP)#	(TPH)#	(PHL)#	(2FP)#	(TBP)#	#	#	OUT
		=====	=====	======	======	=====				===
01	SBLKWZ	67	65	66	29	51	67			0
02	SLCSWZ	66	65	63	27	41	62			0
03	STC-LEX	60	60	61	20	33	41			ol
04	TCLPBLKWY	70	66	63	30	50	73			0
05										
06										
07										
80										
09										
10			****							
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26	A									
24 25 26 27					***************************************					
28								·		
29									·	[——]
27		<b> </b>								
30										II

				QC LIMITS
S1	(NBZ)	=	Nitrobenzene-d5	(35-114)
S2	(FBP)	=	2-Fluorobiphenyl	(43-116)
S3	(TPH)	=	Terphenyl-d14	(33-141)
S4	(PHL)	=	Phenol-d5	(10-110)
S5	(2FP)	==	2-Fluorophenol	(21-110)
S6	(TBP)	=	2,4,6-Tribromophenol	(10-123)

<sup>#</sup> Column to be used to flag recovery values
\* Values outside of contract required QC limits
D Surrogate diluted out

WATER SEMIVOLATILE LAB CONTROL SAMPLE RECOVERY

SLCSWZ

Lab Name: COMPUCHEM ENV. CORP. Contract: 500957

Lab Code: COMPU Case No.: 33352 SAS No.:

SDG No.: 83561

Lab Sample ID: 879114

LCS Lot No.: 46539

Lab File ID: GH079114A66.D

Date Extracted: 12/29/97

LCS Aliquot: 1000 (uL)

Date Analyzed: 12/29/97

Concentrated Extract Volume: 1000 (uL)

Dilution Factor: 1.0

injection Volume: 1.0 (uL)

pH: \_\_\_\_

4	AMOUNT	AMOUNT	-	
	ADDED	RECOVERED		QC
COMPOUND	(ug/L)	(ug/L)	%REC #	LIMITS
=======================================	=======		=====	=====
Pyridine	20.00	7.33	37	1-200
1,4-Dichlorobenzene	20.00	11.29	56	20-124
2-Methylphenol	20.00	11.52	58	1-200
3-Methylphenol	40.00	9.61	24	1-200
4-Methylphenol	40.00	9.61	24	1-200
Hexachloroethane	20.00	11.13	56	40-113
Nitrobenzene	20.00	13.36	67	35-180
Hexachlorobutadiene	20.00	11.72	59	24-116
2,4,6-Trichlorophenol	20.00	9.89	49	37-144
2,4,5-Trichlorophenol	20.00	10.49	52	37-144
2,4-Dinitrotoluene	20.00	13,12	66	39-139
Hexachlorobenzene	20.00	12.54	63	1-152
Pentachlorophenol	20.00	8.20	41	14-176
		- 1		

LCS Recovery: 0 outside limits out of 13 total.

COMMENTS:	

<sup>#</sup> Column to be used to flag LCS recovery with an asterisk.
\* Values outside of QC limits.

SBLKWZ

Lab Name: COMPUCHEM ENV. CORP.

Contract: 500957

Lab Code: COMPU

Case No.: 33352 SAS No.:

SDG No.: 83561

Lab File ID: GH079113A66.D

Lab Sample ID: 879113

Instrument ID: 5972HP66

Date Extracted: 12/29/97

Matrix: (soil/water) WATER

Date Analyzed: 12/29/97

Level: (low/med) LOW

Time Analyzed: 0957

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

		LAB	LAB	DATE
	GANGE EL MO	1		
	SAMPLE NO.	SAMPLE ID	FILE ID	ANALYZED
				10/00/00
01	SLCSWZ	879114	GH079114A66.D	12/29/97
02	STC-LEX	879000	GH079000A66.D	12/29/97 12/29/97
03	TCLPBLKWY	879112	GH079112A66.D	12/29/97
04				
05				
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29				
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COMMENTS:				
	 	 	***************************************	



Remid 1/0/97

05/JAN/98

TRIAD ENGINEERING INC. ATTN: ROSS CREIGHTON 325 E CHICAGO STREET SUITE 400 MILWAUKEE, WI 53202

Subject: Report of Data - Account Number# 500957 Order# 33352

ATTN: ROSS CREIGHTON

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

This report covers 1 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,

CompuChem Environmental

a division of Liberty Analytical

Attachment



a division of Liberty Analytical Corp.

05/JAN/98

TRIAD ENGINEERING INC. ATTN: ROSS CREIGHTON 325 E CHICAGO STREET SUITE 400 MILWAUKEE, WI 53202

ACCOUNT #: 500957

CC# SAMPLE-ID

RECEIPT DATE

879000

STC-LEX

12/23/97

TOTAL NUMBER OF SAMPLES = 1

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

## INORGANIC CASE SUMMARY NARRATIVE CASE # 33352 SDG # 83561 PROTOCOL #SW-846

The indicated Sample Delivery Group (SDG) consisting of one (1) soil sample was received into the laboratory management system (LIMS) on December 23, 1997 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 analyzed for the eight TCLP leachate metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver) using analytical methods delineated in SW-846 (3rd edition) or EPA accepted CLP related modifications of those methods.

#### SAMPLE IDs:

The following customer IDs are associated with this SDG:

STC-LEX

#### 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. All field samples were prepared and analyzed within the contract specified holding times.

#### MATRIX RELATED QUALITY CONTROL:

The sample matrix spike, 879007 (STC-LEXS) outside control limits for lead. The reported concentrations for these analytes are flagged with an "N" on all associated Form 1 and on Form 5a.

The sample matrix spike duplicate, 879008 (STC-LEXS) was found to be nside control limits for the requested analytes.

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 80% to 120% 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.

The sample matrix duplicate, 879010 (STC-LEXD) was inside 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 four-fold serial dilution of sample, 879000 (STC-LEXL) was performed in accordance with SW-846 requirements for ICP analysis.

The adjusted sample concentrations were inside control limits for all requested analytes.

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.

Mary K. Powell Inorganic Case Auditor

January 5, 1998

Note: This report is paginated for reference and accountability.

## U.S. EPA - CLP

## COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

b Name:	COMPUCHEN	_ENVCORP.		Contract:	SW-846		,
Lab Code:	COMPU_	Case No.:	33352	SAS No.:	-	SDG No.:8	3561_
SOW No.:	ILM03.0						
	_LE <i>I</i> _STO _STO _STO	Sample No. ACHBLK C-LEX C-LEXD C-LEXS C-LEXS		Lab Samp _879112879000 _879010879008879007_			
I							
Were ICP	intereleme	ent correcti	ons appl	ied ?		Yes/No	YES
If y	es - were	d correction	nerated	before		•	YES
	ication of	background	correct	ions ?		Yes/No	NO_
Comments:						·	
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COVER PAGE - IN

### 1 INORGANIC ANALYSES DATA SHEET

$\mathbf{F}\mathbf{D}\mathbf{A}$	SAMPLE	NO
Li FA	CANTELLE	14()

Lab Name: COMP	JCHEM_ENV(	CORP	Contract: SV	N-846	LEACHBLK'
					SDG No.: 83561_
Matrix (soil/wa	ater): WATE	₹		Lab Sample	e ID: 879112
Level (low/med	): LOW_	_		Date Rece	ived: 12/26/97
Solids:	0.0	0			
Con	ncentration	Units (ug	/L or mg/kg dry	y weight):	UG/L_
	CAS No.	Analyte	Concentration	C Q I	м
	7440-38-2 7440-39-3 7440-43-9 7440-47-3 7439-92-1 7439-97-6 7782-49-2 7440-22-4	Chromium_ Lead_ Mercury_	2.2 1.2 0.50 2.2 2.2 2.2 11.8 0.70	B	P
Color Before:	COLORLESS	Clari	ty Before: CLE	AR_ '	Texture:
Color After:	COLORLESS	Clari	ty After: CLE	AR	Artifacts:
Comments:					
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FORM I - IN

## 1 INORGANIC ANALYSES DATA SHEET

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	•	INORGANIC A	ANALISES DATA	Durr I	,
Lab Name: COMP	UCHEM_ENV	CORP	Contract: SI	W-846	STC-LEX
Lab Code: COMP	U_ Ca	se No.: 333	SAS No.	•	SDG No.: 83561_
-Matrix (soil/wa	ater): WATE	R		Lab Sampl	e ID: 879000
Level (low/med)	): LOW_			Date Rece	ived: 12/23/97
₹ Solids:	0.0	0			
Cor	ncentration	Units (ug,	/L or mg/kg dry	y weight):	UG/L_
	7440-38-2 7440-39-3 7440-43-9 7440-47-3 7439-92-1	Arsenic	Concentration  3.7 2080 12.7 2.7 2390 0.10 13.5 0.70	B	M P_ P_ P_ P_ P_ P_ CV P_ P
					A-reservation and

Color	Before:	COLORLESS	Clarity	Before:	CLEAR_	Texture:	
Color	After:	COLORLESS	Clarity	After:	CLEAR_	Artifacts:	***
Comme	nts:						
Du	plicate_(S	STC-LEXD)					

FORM I - IN

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CompuChem		Proie	ct Name:			has	100	20	10			onsultant:		11	10	<b>J</b>	5	40	Merine Inco
501 Madison Avenue		1	Location:			000	OSha	1		• • • •	1	Address:		325	146		A		icaco street
Cary, NC 27513		l	ite Code:	***************************************	/		10014	, ~	1300	nsin	{	Mootess.			://				
Phone Number: 1-800-833-5097		į.	Number:	-	7.0	007	000	26-	836					m	ككور				istonin 53202
Fax Number: (919) 379-4050		1	sler PM:		<u>v</u>	DIA			000e			ultant PM: Phone		201	88	4	ح	عر	Hx: 1414)291-8841
Turn-around Time Request:	- Data Packa									-74-4		Type/Pr			90	70			Matrix Codes
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- Field Sample Identification	Date Collected	Time Collected	Grab (G) or Composite (C)	Metrix Code	Total # of Containers	d									Volatiles pH <2	Metals pH < 2	Cyandde pH	Other	Remarks
STC-LEX	12/19/9	1430	G	5	6	X													
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Sumpler(s)	Bottlee Reliqui	sked under Al	rbill No.		<b>,</b>				Samples !	Rollnquish	ed under A	Urbili No.							Temperature (corrected)C
HKK JM/	Relinquished b	7: ( )			Date:		Time:		Received	by:				Date:		Time	<b>*</b> :		Custody Seel Letect?
Derky 12			/22/9	12 /	145	1										Yes No			
	Rollequished b				Date		1	<del></del>	n			<del></del>		<b> </b>		<b>4</b> 1			<u> </u>
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Cooler II) #					-		<del> </del>		<del> </del>	<del></del>	·····			<del> </del>					Yes No
is RFA sampling complete?	Relinquished b	<b>7</b> :			Dete:		Time:		Received	for Labora	Hery by:			Dete:		Time	<b>b</b> :		Custody Soul Intert?
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Quanterra Incorporated 4101 Shuffel Drive, NW North Canton, Ohio 44720

330 497-9396 Telephone 330 497-0772 Fax

## ANALYTICAL REPORT

PROJECT NO. RFA 835/836

Lot #: A8A020109

Cathy Dover

Compuchem Environmental

QUANTERRA INCORPORATED

Jeffrey C. Smith Project Manager

January 20, 1998

## **CASE NARRATIVE**

The following report contains the analytical results for one solid sample submitted to Quanterra-North Canton by Compuchem Environmental from project number RFA 835/836. The sample was received January 2, 1998, according to documented sample acceptance procedures.

Quanterra-North Canton utilizes only USEPA approved methods and instrumentation in all analytical work. The samples presented in this report were analyzed for the parameters listed on the method reference page in accordance with the methods indicated. Preliminary results were provided by facsimile transmission to Cathy Dover on January 19, 1998.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

## SUPPLEMENTAL QC INFORMATION

#### SAMPLE RECEIVING

The sample was received at the laboratory at a temperature of 5.3° C.

## **ANALYTICAL METHODS SUMMARY**

## A8A020109

PARAMETE	R ANALYTICAL METHOD
Specific	For Chlorine in Coal  Gravity  SM18 2710 F  sidue as Percent Solids  ASTM D 2361-91  MCAWW 160.3 MOD
Referenc	es:
ASTM	Annual Book Of ASTM Standards.
MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SM18	"Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.

## **SAMPLE SUMMARY**

#### A8A020109

MO	#	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
CEÇ	QQ1	001	STC-LEX	12/19/97	00:00
NO2	er (s	s) :		•	

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

#### COMPUCHEM ENVIRONMENTAL

Client Sample ID: STC-LEX

## General Chemistry

Lot-Sample #...: A8A020109-001 Work Order #...: CEQQ1 Matrix.....: SOLID

Date Sampled...: 12/19/97 00:00 Date Received..: 01/02/98

**\* Moisture....:** 13

PARAMETER Percent Solids	RESULT 87.4 Dilution	RL 0.10 Factor: 1	UNITS	METHOD MCAWW 160.3 MOD	PREPARATION- ANALYSIS DATE 01/05-01/06/98	PREP BATCH # 8005117
Specific Gravity	1.2 Dilution	Factor: 1	No Units	SM18 2710 F	01/15/98	8015150
Total Halogens	ND Dilution	0.10 Factor: 1	ક	ASTM D 2361-91	01/09-01/12/98	8009181

#### NOTE (S):

RL Reporting Limit

QUALITY CONTROL SECTION

#### LABORATORY CONTROL SAMPLE EVALUATION REPORT

#### General Chemistry

Client Lot #...: A8A020109

90

Matrix....: SOLID

PERCENT

RECOVERY

PREPARATION-

PREP

PARAMETER

RECOVERY LIMITS METHOD

ANALYSIS DATE

BATCH #

Total Halogens

Work Order #: CEV0V102 LCS Lot-Sample#: A8A090000-181

ASTM D 2361-91

01/09-01/12/98

8009181

(75 - 125) Dilution Factor: 1

NOTE (S):

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

#### METHOD BLANK REPORT

#### General Chemistry

Client Lot #...: A8A020109

Matrix....: SOLID

	REPORTING	3			PREPARATION-	PREP
RESULT	LIMIT	<u> U</u>	NITS	METHOD	ANALYSIS DATE	BATCH #
W	ork Order	#:	CEQX2101	MB Lot-Sample #:	A8A050000-117	
ND	0.10	*	•	MCAWW 160.3 MOD	01/05-01/06/98	8005117
Dilut	ion Factor: 1					
W	ork Order	#:	CEV0V101	MB Lot-Sample #:	A8A090000-181	•
ND .	0.10	ક		ASTM D 2361-91	01/09-01/12/98	8009181
Dilut	ion Factor: 1					
	ND Dilut	RESULT LIMIT  Work Order  ND 0.10  Dilution Factor: 1  Work Order	Work Order #:  ND 0.10 % Dilution Factor: 1  Work Order #:  ND 0.10 %	RESULT         LIMIT         UNITS           Work Order #: CEQX2101           ND         0.10 %           Dilution Factor: 1           Work Order #: CEV0V101           ND         0.10 %	RESULT         LIMIT         UNITS         METHOD           Work Order #: CEQX2101         MB Lot-Sample #: MCAWW 160.3 MOD           Dilution Factor: 1         Work Order #: CEV0V101         MB Lot-Sample #: ASTM D 2361-91	RESULT         LIMIT         UNITS         METHOD         ANALYSIS DATE           Work Order #: CEQX2101         MB Lot-Sample #: A8A050000-117           ND         0.10 %         MCAWW 160.3 MOD         01/05-01/06/98           Dilution Factor: 1         Work Order #: CEV0V101         MB Lot-Sample #: A8A090000-181           ND         0.10 %         ASTM D 2361-91         01/09-01/12/98

NOTE (S):

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

#### General Chemistry

Client Lot #...: A8A020109 Work Order #...: CEKK5-SMP Matrix.....: SOLID

CEKK5-DUP

Date Sampled...: 12/13/97 10:50 Date Received..: 12/16/97

**% Moisture....:** 4.7

DUPLICATE RPD PREPARATION-PREP PARAM RESULT RESULT LIMIT UNITS RPD METHOD ANALYSIS DATE BATCH # Total Halogens SD Lot-Sample #: A7L170124-004 ND ND 0 (0-20) ASTM D 2361-91 01/09-01/12/98 8009181

Dilution Factor: 1

## General Chemistry

Client Lot #...: A8A020109 Work Order #...: CEQLG-SMP

EQLG-SMP Matrix SOLID

CEQLG-DUP

Date Sampled...: 12/29/97 10:00 Date Received..: 12/31/97

**\* Moisture....:** 12

	DUPLICATE			RPD		PREPARATION-	PREP
PARAM RESULT	RESULT	UNITS	RPD	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Percent Solids					SD Lot-Sample #:	A7L310132-018	
87.6	88.8	왐	1.4	(0-20)	MCAWW 160.3 MOD	01/05-01/06/98	8005117
	- 4 4 4						

Dilution Factor: 1

#### NOTE (S) :

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

#### General Chemistry

Client Lot #...: A8A020109 Work Order #...: CEQQ1-SMP Matrix.....: SOLID

CEQQ1-DUP

Date Sampled...: 12/19/97 00:00 Date Received..: 01/02/98

**\* Moisture....:** 13

	DUPLICATE			RPD		PREPARATION-	PREP
PARAM RESULT	RESULT	UNITS	RPD	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Percent Solids					SD Lot-Sample #:	A8A020109-001	
87.4	89.8	ક	2.7	(0-20)	MCAWW 160.3 MOD	01/05-01/06/98	8005117

Dilution Factor: 1

#### NOTE (S):

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

#### General Chemistry

Client Lot #...: A8A020109 Work Order #...: CEQQ4-SMP

CEQQ4 - DUP

Matrix....: SOLID

Date Sampled...: 12/29/97 00:00 Date Received..: 01/02/98

**\* Moisture....:** 20

PARAM RESULT Specific Gravity	DUPLICATE RESULT	UNITS	RPD.	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE	PREP BATCH #
1.8	1.8 Dilut	No Units	0.57	(0-20)	SM18 2710 F	01/15/98	8015150
Percent Solids 80.5	79.1 Dilut	왕 ion Factor: 1	1.7	(0-20)	SD Lot-Sample #: MCAWW 160.3 MOD	A8A020111-001 01/05-01/06/98	8005122

NOTE (S)

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



## **CHAIN-OF-CUSTODY RECORD**

No. 00843.

4600 Silicon Drive Durham, NC 27703	Ship to:	i i	Project Name:	35/836	Field Point-of-Contact:	
1-800-833-5097	Quart	ena (	Sampler Name:	, 1	Telephone No.:	
			Sampler Signature:	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Sampling for project comproject-specific (PS) or E	
			Campion Oignatoro.		Tojost specific (1 6) of E	MIGH (B) GO
BOX #1 1. Surface Water 6. Trip Blank 2. Ground Water 7. Oil 3. Leachate 8. Waste 4. Rinsate 9. Other 5. Soil / Sediment / Sludge	Box #2: A. HCI 8 HNO <sub>3</sub> C. NaHSO <sub>4</sub> D. Na <sub>2</sub> S <sub>2</sub> C <sub>3</sub>	E. Ice Only O Other N Not Preserved	Box #3: F. Filtered U. Unfiltered	w.	. CLP 3/90 R, Radioto . SW-846 T, TCLP . CWA 600-series O. Other	gical Box #5: H High M Medium L Low
	Box #1 Box #2 Box #3	Box #4 Box #5	Organic Analysis	Inorganics Other		
Sample ID ( Organics 9 characters max Inorganics 6 characters See Note 2)	Maths Preservative Filtered:Untinered	Method  Expect Conc. No of Bottles	Use for Lab OC (MS or DUP)  VOA-GC / MS  SV-GC / MS  Pest / PCB-GC  Herb-GC  VOA-GC	Metals Metcury Cyandes Radiologicals TOC/TOX	Phenots Other	emarks / Comments
STC-184 17/19 :	1 0	5 /		N	These	s addelenal vol.
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					Quarter	saddelional vol
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					Wise.	cert, required.
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1 :						
Cilent's Special instructions:						
Lab: Received in Good Condition? Y or N Describe Problems, If Any:						
#1 Relinquished By: (Sig) A Can't Ellmine			Date:	#3 Relinquished By: (Sig)		Date: Sample storage time requested?
Company Name: Computation	Die: 300 Company N		Time:	Company Name:		Time: (in days, see Note 3)
#1 Received By: (Sig.) 27 LL 1 11:10	Date: 1-1 (Fr. #2 Received Time: 1930 Company N		Date:	#3 Received By: (Slg.) Company Name:		Date: DESTROY or RETURN data after five years of archival? Time: (Circle choice; see Note 4)



a division of Liberty Analytical Corp.

Received 1/5/98

02/JAN/98

TRIAD ENGINEERING INC. ATTN: ROSS CREIGHTON 325 E CHICAGO STREET SUITE 400 MILWAUKEE, WI 53202

Subject: Report of Data - Account Number# 500957 Order# 33352

ATTN: ROSS CREIGHTON

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,

CompuChem Environmental a division of Liberty Analytical

Attachment



a division of Liberty Analytical Corp.

02/JAN/98

TRIAD ENGINEERING INC. ATTN: ROSS CREIGHTON 325 E CHICAGO STREET SUITE 400 MILWAUKEE, WI 53202

ACCOUNT #: 500957

CC#

SAMPLE-ID

RECEIPT DATE

879011

STC-LEX

12/23/97

879029

METHANBLNK

12/23/97

TOTAL NUMBER OF SAMPLES =

2

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

#### **SDG NARRATIVE**

CASE: 33352 SDG: 83564

#### SAMPLE IDENTIFICATION: STC-LEX

The one (1) soil sample listed above was received intact, properly refrigerated, with proper chain-of-custody (COC) documentation on December 23, 1997. The sample was prepared and analyzed following SW846 Method 8081 protocol for the PCB fraction.

#### **PCBs**

Extraction and analysis holding time requirements were met for this sample. The PCB target analyte Aroclor 1260 was confirmed by dual column analysis at a concentration above the reporting limit in STC-LEX.

All of the surrogates met recovery and retention time criteria in the analysis of this sample. The associated method blank met all quality control criteria. No PCB target analytes were detected in the method blank. 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 1-2-98

Technical Reviewer January 2, 1998

# FORM 1 PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

STC-LEX

Lab Name: COMPUCHEM Contract: 500957

Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83564

Matrix: (soil/water) SOIL Lab Sample ID: 879011

Sample wt/vol: 30.4 (q/mL) G Lab File ID:

% Moisture: 14 decanted: (Y/N) N Date Received: 12/23/97

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:12/29/97

Concentrated Extract Volume: 10000(uL) Date Analyzed: 12/30/97

Injection Volume: 2.0(uL) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

12674-11-2Aroclor-1016	38	U
11104-28-2Aroclor-1221	77	U
11141-16-5Aroclor-1232	38	U
53469-21-9Aroclor-1242	38	U
12672-29-6Aroclor-1248	38	U
11097-69-1Aroclor-1254	38	U
11096-82-5Aroclor-1260	41	

#### FORM 3 SOIL PESTICIDE METHOD SPIKE RECOVERY

Lab Name: COMPUCHEM

Contract: 500957

Lab Code: COMPU Case No.: 33352

SAS No.: SDG No.: 83564

Matrix Spike - Sample No.: PLCSWT

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	දී REC #	QC. LIMITS REC.
Aroclor-1254	302.1	348.7	115	50-150

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

\* Values outside of QC limits

COMMENTS:	

PBLKWT
--------

Lab Name: COMPUCHEM

Contract: 500957

Lab Code: COMPU Case No.: 33352 SAS No.:

SDG No.: 83564

Lab Sample ID: 897047

Lab File ID:

Matrix (soil/water) SOIL

Extraction: (SepF/Cont/Sonc) SONC

Sulfur Cleanup (Y/N) N

Date Extracted. 12/29/97

Date Analyzed (1): 12/30/97

Date Analyzed (2):

Time Analyzed (1): 1456

Time Analyzed (2):

Instrument ID (1): VARIAN20

Instrument ID (2):

GC Column (1): RTX-1701 ID: 0.53 (mm) GC Column (2):

ID:

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

		LAB	DATE	DATE
	SAMPLE NO.	SAMPLE ID	ANALYZED 1	ANALYZED 2
		========		=======
01	PLCSWT	879048	12/29/97	12/29/97
02	STC-LEX	879011	12/30/97	12/30/97
03				
04				
05 06			<del></del>	
07			<u></u>	
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COMMENTS:	

page 1 of 1

## FORM 1 PESTICIDE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PBLKWT Contract: 500957 Lab Name: COMPUCHEM Lab Code: COMPU Case No.: 33352 SAS No.: SDG No.: 83564 Matrix: (soil/water) SOIL Lab Sample ID: 897047 Sample wt/vol: 31.1 (q/mL) G Lab File ID: % Moisture: \_\_\_\_ decanted: (Y/N)\_\_\_ Date Received: Extraction: (SepF/Cont/Sonc) SONC Date Extracted:12/29/97 Concentrated Extract Volume: 10000(uL) Date Analyzed: 12/30/97 Injection Volume: 2.0(uL) Dilution Factor: 1.0 GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO. COMPOUND Q 12674-11-2----Aroclor-1016 32 U 11104-28-2-----Aroclor-1221 65 U 11141-16-5-----Aroclor-1232 32 U 53469-21-9-----Aroclor-1242 32 U 32 U 12672-29-6-----Aroclor-1248 11097-69-1-----Aroclor-1254 32 U 11096-82-5-----Aroclor-1260 32 U

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

December 31, 1997

Mr. Ross Creighton Triad Engineering Inc. 325 E. Chicago Street Suite 400 Milwaukee, WI 53202

Dear Mr. Creighton:

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

Newed 1/6/77 182

Client ID Number	CompuChem ID Number	Analysis Code	Case Number	Description of Work Requested	
STC-LEX	879016	3030 1317	33352. 83562	Paint Filter Corrosivity by pH Total Solids	
				•	

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 # 33352. 83562

**SUBMITTED TO:** 

Mr. Ross Creighton Triad Engineering Inc. 325 E. Chicago Street Suite 400 Milwaukee, WI 53202

## LABORATORY CHRONICLE - PAINT FILTER ANALYSIS

•			DATE	DATE
ITEM	SAMPLE	COMPUCHEM	SAMPLE	ANALYSIS
NO.	IDENTIFIER	NUMBER	RECEIVED	COMPLETED
			10000	
1.	STC-LEX	879016	12/23/97	12/26/97

#### ANALYTICAL REPORT OF DATA - CASE # 33352. 83562

SUBMITTED TO:

Mr. Ross Creighton Triad Engineering Inc. 325 E. Chicago Street Suite 400 Milwaukee, WI 53202

## LABORATORY CHRONICLE - CORROSIVITY BY PH ANALYSIS

			DATE	DATE
ITEM	SAMPLE	<b>COMPUCHEM</b>	SAMPLE	ANALYSIS
NO.	<b>IDENTIFIER</b>	NUMBER	RECEIVED	COMPLETED
1.	STC-LEX	879016	12/23/97	12/31/97

#### ANALYTICAL REPORT OF DATA - CASE # 33352. 83562

SUBMITTED TO: Mr. Ross Creighton Triad Engineering Inc. 325 E. Chicago Street Suite 400 Milwaukee, WI 53202

## LABORATORY CHRONICLE - TOTAL SOLIDS ANALYSIS

			DATE	DATE
ITEM	SAMPLE	COMPUCHEM	SAMPLE	ANALYSIS
NO.	IDENTIFIER	NUMBER	RECEIVED	COMPLETED
-				
1.	STC-LEX	879016	12/23/97	12/31/97

#### PAINT FILTER ANALYSIS

## SUMMARY REPORT

ITEM NO.	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	RESULT	REPORTING LIMIT
1.	STC-LEX	879016	No	Yes / No

BRL = BELOW REPORTING LIMIT	,
NWR = NOT WITHIN RANGE	
Reviewed by/ID#: 300 000	1 Date: 232 W

#### CORROSIVITY BY PH ANALYSIS

## SUMMARY REPORT

ITEM NO.	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	CONCENTRATION (units)	REPORTING LIMIT (units)
1.	STC-LEX	879016	7.99	0.00

BRL = BELOW REPORTING LIMIT NWR = NOT WITHIN RANGE

Reviewed by/ID#: 5-Boulow / 2326 Date: 12/31/97

## TOTAL SOLIDS ANALYSIS

## SUMMARY REPORT

ITEM NO.	SAMPLE IDENTIFIER	COMPUCHEM NUMBER	RESULT	REPORTING LIMIT
1.	STC-LEX	879016	86.6	0.00

BRL = BELOW REPORTING LIMIT NWR = NOT WITHIN RANGE

#### CORROSIVITY BY PH ANALYSIS

# QUALITY CONTROL REPORT

CASE: 33352. 83562

Analyst:2285

MATRIX: SOIL

Date Analyzed: 12/31/97

BLANK SPIKE (BS)	COMPUCHEM #: 1	LCS	
SPIKE	BS	BS	
ADDED	CONC.	%	
(units)	(units)	RECOVERY	·
9.070	8.875	98.00	

ORIG. SAMPLE COMPUCE DUPICATE (DUP.) COMPU		
SAMPLE	DUP.	
CONC.	CONC.	
(units)	(units)	RPD
7.987	8.002	0.000

The reporting limit for Corrosivity by pH is 0 units

**BRL** = **BELOW REPORTING LIMIT** 

RPD = RELATIVE PERCENT DIFFERENCE

NWR = NOT WITHIN RANGE

# COMPUCHEM ENVIRONMENTAL CORP. PAINT FILTER FREE LIQUIDS TEST

EXT.	. NAME:	<u>Carl</u>	4.50.00	-219	QUEUE #1	14
ЕМР	. ID #:	1727	-		DATE STARTED:	12/26/87
	SAMPLE NUMBER	CLIENT ID#	BOTTLE #	FREE LIQUIDS (Yes/No)		COMMENTS
1	879016	STC-LEX	of	NO.		7 - 37 - 37 - 37 - 37 - 37 - 37 - 37 -
2			of			
3			of of			
5			of			
6			of			
7			of			
8	**************************************		of			
9			of			
10			of			MANAGEMENT OF THE PROPERTY OF
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12			of			
13			of			
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18			of			
19			of			P 470-74-41 Shifting
20	, ,		of			

FILTRATION COMPLETED:	_CHerry
SUPERVISOR REVIEWED:	-CH

# CompuChem a division of Liberty Analytical Corp. Logbook 1 GG 3

# pH Determination Run Log

Fisher Scientific Model #50

Operator: Kim Davio

Page 1 of 1

Date: 12-31-97

			3335°	51.83782							
#	CompuChem	Customer ID	Reagent Reference #	pН	Temperature						
	Number			147 (1.)	1-17 (°C)						
NA	4.0	1000 N 9 1	7M2-217-2	1008.4	20.6						
NA	7.0	133191	10-219-10	7.002	20.8						
NA	10.0		974 7m2-219-15	10.001	21.2						
	LCS ERA 99718	T= 9.07	7M2-222-5	8.875	21.7						
2	879016 OR	STC-LEX	200	7.987	99.4						
3	87901960up,	<u> </u>	12-31-97	8.002	22.3						
4	879291 OR	PROTOCOLB	127	8,582	21.8						
5	879295 Dup	<u> </u>		8.589	22.0						
	Unu Std 7.00'	C NOVINO 12-3147	7m2-219-16	6.998	21.5						
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Reviewed By

Date: 23197

#### TOTAL SOLIDS ANALYSIS

# QUALITY CONTROL REPORT

CASE: 33352. 83562

MATRIX: SOIL

Analyst:2285

Date Analyzed: 12/31/97

ORIG. SAMPLE COMPUCH DUPICATE (DUP.) COMPU		
SAMPLE CONC.	DUP. CONC.	RPD
86.60	85.81	1,000

The reporting limit for Total Solids is 0 %

BRL = BELOW REPORTING LIMIT

RPD = RELATIVE PERCENT DIFFERENCE

NWR = NOT WITHIN RANGE

# COMPUCHEM ENVIRONMENTAL CORP.

# UNDECANTED DRY WEIGHT WORKSHEET

**QUEUE #113** 

25

-143 / -190 (in red #'s)

DATE ASSIGNED:			12-31-97	ASSIGNED TO:	Kim Davio	
		DATE COMPLETED:	12-31-97	EMP. ID #:	<del>aa85</del>	-
		SAMPLE NUMBER	WEIGHT OF CONTAINER (0.00 g)	WEIGHT OF CONT. & WET SAMPLE(0.00 g)	WEIGHT OF CONT. & DRY SAMPLE(0.00 g)	
60	1	879016 OR	76.9122	107.3411	103.2632	3510
.81	2	879016 Dup	76.4633	107.0766	102.7313	26.2680
52	3	879891 OR'	73.5317	103.8494	98.8527	25,32,15
	4	879291 Dup	72.5013	102.5250	97.3032	-24.801
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01 Madison Avenue		1	Location:			colo	osh	. 4	1500	nsin	4	Address		325		<u>-</u>	4		scaco street
Cary, NC 27513		1	ite Code:	-		25-21	V	·	مب در ر	7171.1	1	71001033			ilw	r_#f ,			15consis 53202
hone Number: 1-800-833-5097		1	Number:		7.0	197	008	35-	836	<del>*</del>	Come	ultant PM			220				ighton,
ax Number: (919) 379-4050		1	ysler PM:		<u> </u>	DIA			more		Com		414		88		<u></u>		Fix: 1414)291-8841
urn-around Time Request:	Data Packi	age Delivers	bles: (ch	rcie)					Paramet	r/Metho	d/Bottle				1	70			Matrix Codes
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calendar hrs.	Chrysler Le						(1)	1		l	1				GW	- Cı	roun	dwa	iter A - Air
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	Date	Time	Grab (G) or Composite (C)	Matrix Code	Total # of Containers	PROTOCOL	$\sim$		1	İ					Volatiles pH <2	Metals pH < 2	Cyanide pH >	¥	
Field Sample Identification	Collected	Callected	క్రౌ	Z	Ę										3	Me	ඊ	Other	Remarks
STC-LEX	12/19/9	11430		5	6	X			T										
	7711	1110	<del>                                     </del>	+ -	10		+	<del> </del>		<b></b>	<del> </del>		<del> </del>	<del> </del>	╂╾┼				
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mpler(s)	Bottles Reliqu	ished under Al	Irbill No.	L	<u> </u>		<u> </u>	.L	Samples I	l	ed under A	Airbill No.							Temperature (corrected) Z C
npler(s) ARK, 5MR	Bottles Reliqui		Irbill No.	L	Date:	<u></u>	Time:				ed under A	Airbill No.		Date:		Time	:		I
npler(s) ARK, 5MR			Irbill No.	<u> </u>	Date:	122/9	Time:	146	Samples I		ed under A	Airbill No.		Date:		Time	:		Custody Seal Intact?
npler(s) ARK, 5MR	Rolinquished b		Irbili No.		12	122/9	7/	145	Received	by:	ed under A	Airbill No.							Custody Seal Intact? Yes No
ARK, JMK			Irbill No.		1	122/9		145		by:	ed wader A	Airbill No.		Date:		Time			Custody Seal Intact? Yes No Custody Seal Intact?
ARK, 5MK	Relinquished b	by: by:	Irbill No.	<u> </u>	Date:	/22/9	Time:	145	Received	by: by:						Time	:		Custody Seal Intact? Yes No Custody Seal Intact? Yes No
oler (1) #	Rolinquished b	by: by:	Irbitt No.		12	122/9	7/	145	Received	by: by:	ed under A					Time	r:		Custody Seal Intact? Yes No Custody Seal Intact?

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

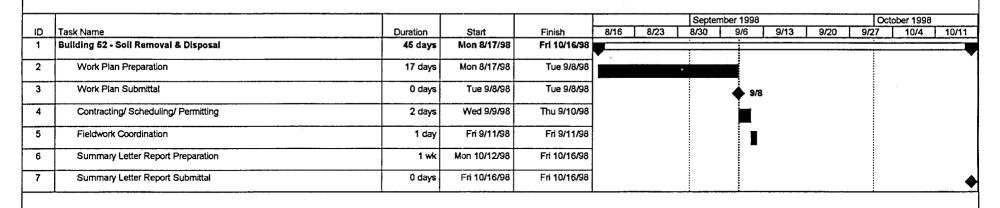


# APPENDIX B

Schedule

#### SOILPILE & DRUMMED SOIL WORK SCHEDULE

# CHRYSLER CORPORATION CHRYSLER KENOSHA MAIN PLANT



Task Summary Rolled Up Progress Project Summary

Date: Wed 9/9/98 Progress Rolled Up Task Split

Milestone Rolled Up Milestone External Tasks