SAMPLE PROPOSAL
FIT REGION V

US EPA RECORDS CENTER REGION 5
487487

1. Date Form Completed 3/8/88

2. Account # FIL0599SA TDD # F05-8802-099

EPA I.D. # ILD00670935

3. Site Name, City, State SCA Services Barton Landfill, Roxana, IL.

4. Team Leader Gary Cobb Sampler Katherine Neswick

5. Number and Type of Samples:

Soil/Sediment 25 Surface Water 6 Ground Water 11

Residential/Municipal Wells 5 Other

Number of Blanks 3 Number of Duplicates 3

6. RAS Parameters Requested:

A/B/N ✓ Pest/PCB ✓ Volatiles ✓ Metals ✓ Cyanide ✓

SAS Parameters Requested:

7. Expected Sampling Date(s): 4/12 - 4/14

Expected Shipping Date(s): 4/12 - 4/14 Colorado Houston (was SPECS)

8. Lab Used For Analysis: Organic SOILS RMAL water Keytx Res ENSECO CAL 7 samples

Inorganic SOILS & H2O RMAL (ENSECO Rodeg Int) Res Chentech

SAS

9. Case Number 9346 SAS Number 3758 ORG, 3554 INORG

10. Airbill Numbers: 4/13

Organic Lab Keytx 4994339604 # Coolers 1 # Samples 6 waters

Inorganic Lab RMAL 2922029143 # Coolers 2 # Samples 6 waters 4 sed

CRL/SAS Lab # Coolers # Samples

4/14 RMAL 5768191015 1 4 soils

CAL 5768191026 1 5 res

Chem 5768191030 1 5 res

Keystone Environmental
3911 Fondren
Suite 100
Houston TX 77063
713 266-6800
Attn MARY CRUZ

complete

To request information on the status of your property contact the gentleman listed BELOW

You will need to give him the ID# listed below so he can reference your property. If we have taken samples from your property, wait about 2 months before you contact him because the lab analyses take a while to process.

Robert Hartian
Freedom of Information Officer
Office of Public Affairs (SPA-14)
U.S. EPA
230 S. Dearborn
Chicago, IL 60604
(312) 886-6686

ID# ILD000670935

PLERS: (Signature) Katherine Nesvorch

Name of Facility SCA Barton Landfill

Samples Offered (X) Accepted ( ) Declined

Facility Location Roxana, Il

NO.	DATE	TIME	COMP.	GRAB	SPLIT SAMPLES	TAG NUMBERS	STATION DESCRIPTION	NO. OF CONTAINERS	REMARKS
S1	4/13/88			✓	✓	5-077688,89,90,91	S1	4	
S2	"			✓	✓	92,93,94,95	S2	4	
S3	"			✓	✓	96,97,98,99	S3	4	
S4	"			✓	✓	5-077700,01,02,03	S4	4	
S5	"			✓	✓	04,05,06,07	S5	4	
S6	"			✓	✓	08,09,10,11	S6	4	
S7	"			✓	✓	12,13,14,15	S7	4	
S8	"			✓	✓	16,17,18,19	S8	4	
S9	"			✓	✓	20,21,22,23	S9	4	
S10	"			✓	✓	24,25,26,27	S10	4	

Delivered by: (Signature) Katherine Nesvorch

Time 1149

Received by: (Signature) Chris Stepanek

Title

Date

Time

Telephone

To request information on the status of your property contact the gentleman listed BELOW. You will need to give him the ID# listed below so he can reference your property. If we have taken samples from your property, wait about 2 months before you contact him because the lab analyses take a while to process.

Robert Hartian
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230 S. Dearborn
Chicago, IL 60604
(312) 886-6686

ID# ILD000670935

PLERS: (Signature) Katherine Nesvick

Name of Facility SCA Barton Landfill

Samples Offered (X) Accepted ( ) Declined

Facility Location Romeoville, Il

NO.	DATE	TIME	COMP.	GRAB	SPLIT SAMPLES	TAG NUMBERS	STATION DESCRIPTION	NO. OF CONTAINERS	REMARKS
WS1	11/18/88			X	✓	5D77637-42	WS1	6	
WS2				X	✓	" 49-54	WS2	6	
WS3				X	✓	" 59-63 5174180	WS3	6	
WS4				X	✓	" 64-69	WS4	6	
KN WS5				X	✓	" 70-75	WS5	6	
KN WS6				X	✓	76-81	WS6	6	

Delivered by: (Signature) Katherine Nesvick 11:48 Time

Received by: (Signature) Christopher [illegible] Telephone

Title Date Time

Low Soils, waters & drinking H2O

Site Name SCA Services / Barton TDD F5-8802-099 IL0599 Case Number 9346/37586/35546

OTR	ITR	CRL	NEIC TAG NUMBER	ORG CHAIN OF CUSTODY	INO CHAIN OF CUSTODY	SAS NUMBER
EW139	MEW950			13105	13103	
EW140	MEW951			13105	13103	
EW141	MEW952			13105	13103	
EW142	MEW953			13105	13103	
EW145	MEW956			13105	13103	
EW146	MEW957			13295	13297	
EW147	MEW958			13295	13297	
EW148	MEW959			13295	13297	
EW149	MEW960			13296	13297	
EW150	MEW961			13296	13297	
EW153	MEW964			13296	13297	
EW154	MEW965			13101	13297	
EW155	MEW966			13101	13297	
EW156	MEW967			13101	13297	
EW157	MEW968			13101	13297	

B, KG/df
-30-81

SMP-002

Near Middle North Line, Section 14, T 4 N, R 9 W, 3rd P.M.

Illinois Department of Transportation

Bridge Foundation Boring Log

PROJECT _____ **BRIDGE** FA Route 582 **Date** 9-24-84

ROUTE FA 582 over Cahokia Diversion Channel **Bored By** J. King

SEC. 5 BR **STA.** 687+40 **Checked By** R. Nebelsick

COUNTY Madison

Boring No. 1 - Pier 1
Station 686+28
Offset 24' Rt. ℄

Surface Water El. _____
Groundwater El. at Completion _____
After _____ **Hours** _____

Description	Elevation	N	Qu t/s.f.	w (%)
Ground Surface 425.1	0			
BROWN AND GRAY SILT				
DAMP, MEDIUM		4	S 0.6	21
	-5			
418.1±				
DAMP, MEDIUM		2	S 0.5	24
DAMP, STIFF		8	B 1.3	24
	-10			
413.8 GW				
DAMP, MEDIUM		4	B 0.7	26
BROWN AND GRAY SILTY CLAY				
WET, MEDIUM		2	B 0.5	30
	-15			
WET, SOFT		2	B 0.4	30
WET, SOFT		1	B 0.4	25
405.6±				
	-20			
BROWN AND GRAY FINE GRAINED SAND				
WET, LOOSE		2	NC	-
403.1±				

Description	Elevation	N	Qu t/s.f.	w (%)
SANDY GRAY SILTY CLAY				
WET, SOFT		2	B 0.4	26
400.6±				
	-25			
GRAY FINE GRAINED SAND				
WET, LOOSE		4	NC	-
WET, LOOSE		4	NC	-
395.6±				
	-30			
WET, SOFT		3	B 0.4	31
WET, SOFT		3	B 0.3	32
	-35			
WET, MEDIUM		3	B 0.6	39
GRAY CLAY				
WET, MEDIUM		4	B 0.6	38
	-40			
WET, MEDIUM		2	B 0.7	68
WET, MEDIUM		2	B 0.6	65
	-45			

N-Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. hammer falling 30".

Qu-Unconfined Compressive Strength - t/sf

w - Water Content - percentage of oven dry weight-%.

Type failure:
B - Bulge Failure
S - Shear Failure
E - Estimated Value
P - Penetrometer

BD 137 (Rev. 4-78)

BRIDGE FOUNDATION BORING LOG

FA 582
Section 5 BR
Madison County
Boring No. 1 - Pier 1
Station 686+28

DATE 9-24-84
BORED BY J.King
CHECKED BY R.Nebelsick

Elevation		N	Qu t/s.f.	w (%)
-45				
378.1±	WET, MEDIUM	2	S 0.7	56
	WET, LOOSE	4	NC	-
-50				
GRAY FINE GRAINED SAND	WET, MEDIUM	25	NC	-
	WET, DENSE	53	NC	-
-55				
	WET, MEDIUM	24	NC	-
365.6±	WET, LOOSE	3	NC	-
-60				
BR.& GR.MED.TO COARSE GRAINED SAND (SOME GRAVEL)	WET, MEDIUM	11	NC	-
360.6±	WET, DENSE	30	NC	-
-65				
	WET, MEDIUM	26	NC	-
	WET, MEDIUM	21	NC	-
-70				
	WET, MEDIUM	17	NC	-
	WET, MEDIUM	24	NC	-
-75				
BROWN AND GRAY COARSE GRAINED SAND AND GRAVEL	WET, MEDIUM	22	NC	-
	WET, DENSE	35	NC	-
-80				
	WET, MEDIUM	21	NC	-
	WET, MEDIUM	20	NC	-
-85				
	WET, MEDIUM	21	NC	-
	WET, DENSE	33	NC	-
-90				
333.8	WET, MEDIUM	27	NC	-
END OF BORING				
-95				
-100				
-105				

ETC ENVIRONMENTAL TESTING and CERTIFICATION

DATA MANAGEMENT SUMMARY REPORT
(DM-1L) - All Parameters Present, Samples Linked by Order

Chain of Custody Data Required for ETC Data Management Summary Report

See Below ETC Sample No.	GEO ENGINEERING INC Company	GEOGSXBART Facility	See Below Sample Point	Date

Parameters	Units	301 850603 H8182	G-1020LDB 850603 H8177	G-107 850603 H8175	G-108 850603 H8176	G-109 850603 H8183	G1010LDB 850603 H8184	GEI-B-2 850603 H8181	GEI-B-3 850603 H8179
Zinc	ug/l	70	20	40	20	< 8	944	91	10
Cyanide, Total	ug/l	73	< 25	< 25	< 25	< 25	< 25	< 25	< 25
Phenolics, Total	ug/l	140	240	3000	420	99	490	< 50	77
Miscellaneous Parameters									
Chemical Oxygen Demand (COD)	mg/l	83	37	1800	19	6	1200	36	27

Footnotes: BMDL=Below Method Detection Limit ND=Parameter not detected '-'=Parameter not tested

ETC ENVIRONMENTAL TESTING and CERTIFICATION

DATA MANAGEMENT SUMMARY REPORT
(DM-1L) - All Parameters Present, Samples Linked by Order

Chain of Custody Data Required for ETC Data Management Summary Report

See Below	GEO ENGINEERING INC	GEOGSXBART	See Below	
ETC Sample No.	*Company*	*Facility*	*Sample Point*	*Date*

Sample Points, Sampling Dates, and ETC Sample No.'s

Parameters	*Units*	H8182	850603 H8177	850603 H8175	850603 H8176	850603 H8183	850603 H8184	850603 H8181	850603 H8179
'P Volatile Compounds									
Benzene	ug/l	4.4	4.4	4.9	4.4	4.4	15.0	4.4	4.4
Chlorobenzene	ug/l	6.0	6.0	6.0	6.0	6.0	29.2	6.0	6.0
Dichlorodifluoromethane	ug/l	10.0	10.0	58.0	10.0	10.0	10.0	10.0	10.0
1,1-Dichloroethane	ug/l	4.7	4.7	106.4	4.7	4.7	4.7	4.7	4.7
1,2-Dichloropropane	ug/l	6.0	6.0	28.3	6.0	6.0	6.0	6.0	6.0
Ethylbenzene	ug/l	7.2	7.2	7.2	7.2	7.2	21.0	7.2	7.2
Methylene chloride	ug/l	2.8	2.8	28.8	2.8	2.8	2.8	2.8	2.8
Tetrachloroethylene	ug/l	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.2
Toluene	ug/l	6.0	6.0	388.1	6.0	6.0	185.6	6.0	6.0
1,2-Trans-dichloroethylene	ug/l	1.6	1.6	9.8	1.6	1.6	1.6	1.6	1.6
Trichloroethylene	ug/l	1.9	1.9	16.2	1.9	1.9	1.9	1.9	1.9
Vinyl chloride	ug/l	10.0	10.0	13.4	10.0	10.0	10.0	10.0	10.0
P Acid Compounds									
2,4-Dimethylphenol	ug/l	2.7	2.7	2.7	2.7	2.7	11	2.7	2.7
Phenol	ug/l	1.5	1.5	155.8	1.5	1.5	332	1.5	1.5
P Base/Neutral Compounds									
bis(2-Chloroethyl) ether	ug/l	5.7	5.7	5.7	5.7	5.7	19.5	5.7	5.7
bis(2-Ethylhexyl)phthalate	ug/l	10.0	10.0	10.0	22.0	10.0	10.0	10.0	10.0
1,4-Dichlorobenzene	ug/l	4.4	4.4	4.4	4.4	4.4	12.0	4.4	4.4
Diethyl phthalate	ug/l	10.0	10.0	10.0	10.0	10.0	36.2	10.0	10.0
Naphthalene	ug/l	1.6	1.6	1.6	1.6	1.6	12.9	1.6	1.6
'P Metals									
Arsenic	ug/l	10	23	72	10	10	10	10	10
Chromium	ug/l	10	10	20	10	10	20	160	10
Copper	ug/l	20	10	10	10	10	10	40	10
Nickel	ug/l	20	20	90	20	20	50	20	20
Selenium	ug/l	5	5	5	5	5	5	5	5
Silver	ug/l	7	7	10	7	7	7	7	7

Footnotes: BMDL=Below Method Detection Limit ND=Parameter not detected '-'=Parameter not tested

TABLE 1

BARTON LANDFILL LABORATORY ANALYSES

FEBRUARY 1985 - MARCH 1987

SUMMARY

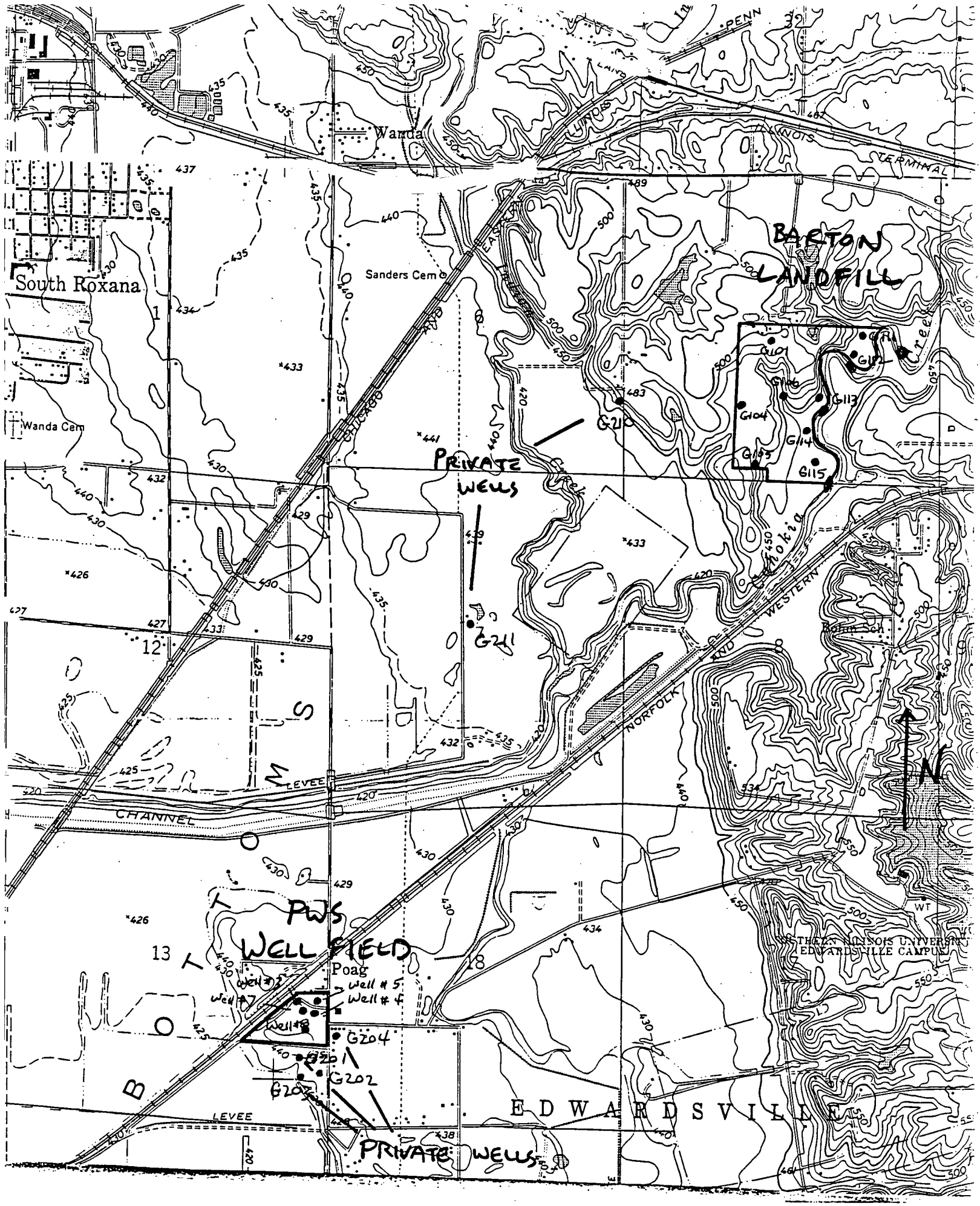
SAMPLE DATES	MONITORING LOCATIONS	RESULTS & COMMENTS
2/28/85	Wells G101, G102, G103, G104, G105	Sampled for indicator parameters only: Alkalinity, Total Organic Carbon (TOC), Chloride (Cl), Sulfate, Boron & Residue. No significant differences found - LaClede Gas Lab.
5/28/85	Wells G101, G102, G103, G104, G105	Sampled for indicator parameters identified above - No significant differences found - LaClede Gas Lab.
8/12/85	Wells G101, G102 G103, G104, G105	Sampled for indicator parameters identified above - No significant differences found - LaClede Gas Lab.
11/21/85	Wells G101, G102 G103, G104, G105	Sampled for indicator parameters identified above - No significant differences found - LaClede Gas Lab.
2/25/86	Wells G101, G102 G103, G104, G105	Sampled for indicator parameters identified above - All TOC values were lowered by almost an order of magnitude, however, the values were not significantly different from each other. The TOC values now look more realistic. The differences were probably due to a change in Lab - Environmental Analysis, Inc. (EAI) Lab.
4/28/86	3 Leachate Samples 3 Cahokia Creek Samples	All sites were tested primarily for metals - Nothing significant was found, only traces of metals were found in the leachate samples - "Sample results indicate that landfill is not comtaminating creek for those parameters analyzed" - Madison County Lab.
4/30/86	Wells G101, G102, G103 G104, G105, G106	Sampled for Agency inorganic list + indicator parameters totalling 31 analyses for each well - No significant differences found - EAI Lab.

Barton Landfill
Laboratory Analyses

SAMPLE DATES	MONITORING LOCATIONS	RESULTS & COMMENTS
9/17/86	Cahokia Creek, Wells G106, G112, G113, G114	IEPA contract lab (Envirodyne) & EAI Lab split samples for volatile & semi-volatile organics, PCB's, and Pesticides. Wells G106 & G112 contained small amounts of methylene chloride, acetone, dichloroethene, dioxane, and silane. The laboratory blank was also contaminated with the same constituents. Well G113 had higher levels of acetone (300 ppb), methyl ethyl ketone (MEK)(460 ppb), and toulene (83 ppb). Well G114 had 250 ppb of MEK, 120 ppb of methylene chloride and 110 ppb of acetone. No volatile or semi-volatile organics were detected in the Creek either upstream or downstream of the landfill. No PCB's or Pesticides were found in either the wells or creek - Envirodyne Lab. Well G106 showed a small amount of MEK. Information for Wells G112, G113, G114 is not available. No organics detected in the Cahokia Creek upstream or downstream samples. No PCB's or Pesticides detected in any samples - EAI Lab.
9/30/86	Storm sewer sampled at old Edwardsville Waste-water Treatment Plant (WWTP).	IEPA Water Pollution Control and EAI split samples. No significant metals or organics found - IEPA Lab & EAI Lab.
10/15/86	Cahokia Creek samples at old Edwardsville WWTP lagoon outflow.	No semi-volatile or volatile organics, no PCB's or no Pesticides were detected in the lagoon outflow or creek samples. No significant metals were found - E/ Lab.
10/22/86	Leachate sample	Analyzed for Agency inorganic list, including metals. High iron, sodium, COD, and some metals detected - IEPA Lab.
11/12/86	Wells G101, G102, G103, G106	Wells analyzed for Agency inorganic list, including metals and indicator parameters. No significant inorganics were found - EAI Lab.
3/16/87	Cahokia Creek, 2 private well samples	Volatile organics were analyzed and not detected in the creek near the Edwardsville PWS Well field, about 2 miles downstream of the landfill. Volatile & semi-volatile organics and inorganic metals were analyzed for 2 private wells downgradient of the landfill towards the Edwardsville PWS well field. No organics, PCB's or Pesticides were detected in the private wells. Elevated levels of sodium and nitrates were discovered in the wells - IEPA Lab.

Barton Landfill
Laboratory Analyses

SAMPLE DATES	MONITORING LOCATIONS	RESULTS & COMMENTS
5/1/86	Leachate, Wells G112, G115, Cahokia Creek	Split samples with IEPA and EAI for both organic and inorganic parameters. Leachate showed no identifiable organics, high in Manganese & Sodium; Downstream creek showed no identifiable organics; Well G112 showed a trace of methylene chloride (13 ppb) - IEPA Lab. Leachate contained organic contamination of 1500 ppb methylene chloride, 2400 ppb acetone, and smaller amounts of xylene, toulene, etc. Wells G112 & G115 showed traces of TCE and methylene chloride. Creek downstream detected traces of methylene chloride, toulene & TCE - EAI Lab. Neither lab detected any PCB's or Pesticides.
5/30/86	Cahokia Creek, Wells G111 G112, G113, G114, G115	Creek analyzed for inorganic & organic parameters. No organics detected both upstream and downstream. Wells were analyzed for Agency inorganic list & TOC. Well G113 showed high levels of TOC (order of magnitude) compared to th other wells. Wells G113 & G115 showed high levels of Manganese & Iron - EAI Lab.
6/17/86	4 Cahokia Creek samples	Upstream, midstream and downstream locations were analyzed for inorganic metals - No significant differences were apparent from upstream to downstream of the landfill - EAI Lab & Madison County Lab split samples.
8/19-21/86	Cahokia Creek, Wells G101, G102, G103, G104 G105, G106, G111, G112 G113, G114, G115	Annual sampling list both of organic & inorganic parameters. Wells G111, G112 G113 showed high levels of iron & manganese. Well G113 detected a higher TOC value than any of the other wells. Inorganic parameters in the other wells & creek were not significant. Toulene of 130 ppb was detected in Well G113 and Methylene chloride of 32 ppb was detected in Well G115. No other organic parameters were detected in the wells - EAI Lab.



BARTON LANDFILL
PRIVATE WELLS
PWS WELL FIELD
PRIVATE WELLS
South Roxana
Wanda
Wanda Cem
Sanders Cem
Poag
EDWARDSVILLE
CHANNEL
LEVEE
NORFOLK AND WESTERN
ILLINOIS TERMINAL
Cahokia Creek
G101
G102
G103
G104
G105
G106
G113
G114
G115
G210
G211
G201
G202
G203
G204
Well #3
Well #4
Well #5
Well #7
Well #8
N

Figure 1

MEMORANDUM

DATE: October 7, 1988

TO: William Messenger, U.S. EPA

FROM: E&E

SUBJECT: Drinking Water Sample Results

Sample RW1

Site Name SCA Services Barton LandFill

PAN # FIL0599SA

TDD # F05-8802-099

EPA ID # ILD000670935

Please find attached the data summary sheets.

Name George Willaredt

Address Rt. 6

City Edwardsville

State Illinois

Zip Code

Phone Number 618-656-6052

Action Level

No Contamination _____
No hits above any health-related standards.

Low Level Contamination ✓ Selenium
Hits just above health-related standards.

Significant Contamination ✓ Sodium
Hits are above health-related standards.

0099:3

check arsenic

recycled paper

ecology and environment

10-17-88

Table 1

DATA OF RESIDENTIAL WELL SAMPLE ANALYSIS AND APPLICABLE FEDERAL DRINKING WATER STANDARDS AND HEALTH ADVISORIES

SAMPLE: / CONTAMINANT / VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
BENZENE		5	NR					1.5	
BROMODICHLOROMETHANE								1.5	
BROMOFORM								1.5	
BROMOMETHANE								10	
CARBON TETRACHLORIDE		5	NR					1.5	
CHLOROBENZENE			300					1.5	
CHLOROETHANE								1.5	
2-CHLOROETHYL VINYL ETHER								1.5	
CHLOROFORM								1.5	
CHLOROMETHANE								10	
DIBROMOCHLOROMETHANE								1.5	
1,1-DICHLOROETHANE								1.5	
1,2-DICHLOROETHANE		5	NR					1.5	
1,1-DICHLOROETHENE		7	7					1.5	
trans-1,2-DICHLOROETHENE			70					1.5	
1,2-DICHLOROPROPANE			NA					1.5	
cis-1,3-DICHLOPROPROPENE								2	
trans-1,3-DICHLOROPROPENE								1	
ETHYL BENZENE			680					1.5	
METHYLENE CHLORIDE			NR					1	
1,1,2,2-TETRACHLOROETHANE								1.5	
TETRACHLOROETHENE			NR					1.5	
TOLUENE			2420					1.5	
1,1,1-TRICHLOROETHANE		200	200					1.5	
1,1,2-TRICHLOROETHANE								1.5	
TRICHLOROETHENE		5	NR					1.5	
VINYL CHLORIDE		2	NR					10	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
VOLATILE ORGANIC COMPOUNDS									
ACROLEIN								100	
ACETONE								75	
ACRYLONITRILE								50	
CARBON DISULFIDE								3	
2-BUTANONE			170					(50)	
VINYL ACETATE								15	
4-METHYL-2-PENTANONE								(3)	
2-HEXANONE								(50)	
STYRENE			140					1	
XYLENE, TOTAL			440					2	
SEMI-VOLATILE ORGANIC COMPOUNDS									
ANILINE								1.5	
BIS(2-CHLOROETHYL)ETHER								1.5	
PHENOL	3							2	Possible artifact
2-CHLOROPHENOL								2	
1,3-DICHLOROBENZENE			620					2	
1,4-DICHLOROBENZENE		75	75					2	
1,2-DICHLOROBENZENE			620					2.5	
BENZYL ALCOHOL								2	
BIS(2-CHLOROISOPROPYL) ETHER								2.5	
2-METHYLPHENOL								1	
HEXACHLOROETHANE								2	
N-NITROSODIPROPYLAMINE								1.5	
NITROBENZENE								2.5	
4-METHYLPHENOL								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
ISOPHORONE								2.5	
2-NITROPHENOL								2	
2,4-DIMETHYLPHENOL								2	
BIS(2-CHLOROETHOXY) METHANE								2.5	
2,4-DICHLOROPHENOL								2	
1,2,4-TRICHLOROBENZENE								2	
NAPHTHALENE								2	
4-CHLOROANILINE								2	
HEXACHLOROBUTADIENE								2.5	
BENZOIC ACID								(30)	
2-METHYLNAPTHALENE								2	
4-CHLORO-3-METHYLPHENOL								1.5	
HEXACHLOROCYCLOPENTADIENE								2	
2,4,6-TRICHLOROPHENOL								1.5	
2,4,5-TRICHLOROPHENOL		10	52					1.5	
2-CHLORONAPTHALENE								1.5	
ACENAPTHYLENE								1.5	
DIMETHYL PHTHALATE								1.5	
2,6-DINITROTOLUENE								1	
ACENAPHTHENE								1.5	
3-NITROANILINE								2.5	
DIBENZOFURAN								1	
2,4-DINITROPHENOL								(15)	
2,4-DINITROTOLUENE								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
FLUORENE								1	
4-NITROPHENOL								1.5	
4-CHLOROPHENYL PHENYL ETHER								1	
DIETHYL PHTHALATE								1	
4,6-DINITRO-2-METHYLPHENOL								(15)	
1,2-DIPHENYLHYDRAZINE								1	
N-NITROSODIPHENYLAMINE									
DIPHENYLAMINE								1.5	
4-NITROANILINE								3	
4-BROMOPHENYL PHENYL ETHER								1.5	
HEXACHLOROBENZENE			NA					1.5	
PENTACHLOROPHENOL			220					2	
PHENANTHRENE								1	
ANTHRACENE								2.5	
DI-n-BUTYL PHTHALATE								2	
FLUORANTHENE								1.5	
PYRENE								1.5	
BUTYL BENZYL PHTHALATE								3.5	
CHRYSENE									
BENZO(a)ANTHRACENE								1.5	
BIS(2-ETHYLHEXYL) PHTHALATE								1	
DI-n-OCTYL PHTHALATE								1.5	
BENZO(b)FLUORANTHENE									
BENZO(k)FLUORANTHENE								1.5	
BENZO(a)PYRENE								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
SEMI-VOLATILE ORGANIC COMPOUNDS									
INDENO(1,2,3-cd)PYRENE								3.5	
DIBENZO(a,h)ANTHRACENE								2.5	
BENZO(g,h,i)PERYLENE								4	
2-NITROANILINE								1	
PESTICIDES AND PCBS									
ALDRIN								0.005	
alpha BHC								(0.010)	
beta BHC								(0.005)	
delta BHC								(0.005)	
gama BHC(LINDANE)		4	2					0.005	
CHLORDANE			NR					(0.020)	
4,4'-DDD								(0.020)	
4,4'-DDE								(0.005)	
4,4'-DDT								0.020	
DIELDRIN								0.010	
ENDOSULFAN I								0.010	
ENDOSULFAN II								0.010	
ENDOSULFAN SULFATE								(0.10)	
ENDRIN		0.2	0.32					0.010	
ENDRIN ALDEHYDE								(0.030)	
ENDRIN KETONE								(0.030)	
HEPTACHLOR			NR					0.030	
HEPTACHLOR EPOXIDE			NR					0.005	
4,4'-METHOXYCHLOR		5	340					0.020	
TOXAPHENE		100	NA					(0.25)	
PCB-1242			NA					(0.10)	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
PESTICIDES AND PCBS									
PCB-1248			NA					(0.10)	
PCB-1254			NA		–			(0.10)	
PCB-1260			NA					(0.10)	
INORGANIC ANALYTES									
ALUMINUM								80	
~~ANTIMONY~~								2	
ARSENIC	6.15	50	50R					2	
BARIUM		1000	1500					6	
BERYLLIUM								1	
BORON								80	
CADMIUM		10	5					10	
CADMIUM		10	5					0.2	
CALCIUM								0.5	
CHROMIUM		50	120					8	
COBALT								6	
COPPER	160	1000						6	
IRON								80	
LEAD	10 5*	50						2	
LEAD		50						70	
LITHIUM								10	
MAGNESIUM								0.1	
MANGANESE								5	
MERCURY		2	11					0.1	
MOLYBDENUM								15	
NICKEL			150					15	
POTASSIUM								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
INORGANIC ANALYTES									
SELENIUM	11 S	10						2	
SILVER		50						6	
SODIUM	157000 N			20,000				1	
STRONTIUM								10	
SULFIDE								1	
SULFATE		250,000						0.05	
THALLIUM								2	
TITANIUM								25	
TIN								40	
VANADIUM								5	
YTTRIUM								5	
ZINC	[18]							40	
CYANIDE			154					8	
SPECIAL ORGANIC ANALYSIS									
ANILINE								50	
ACROLEIN								100	
ACRYLONITRILE								10	

A SURVEY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED. HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
s	s	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not recommended to be calculated, since chemical has proven to be a human carcinogen.
( ) Estimated value.

D. Analytical Method Qualifiers for Inorganic

"P" for ICP

"A" for Flame AA

"F" for Furnance AA

"CV" for Manual Cold Vapor AA

"AV" for Automated Cold Vapor AA

"AS" for Semi-automated Spectrophotometric

"C" for Manual Spectrophotometric

"T" for Titrimetric

"NR" if the analyte is not required to be analyzed.

M E M O R A N D U M

DATE: October 7, 1988

TO: William Messenger, U.S. EPA

FROM:

SUBJECT: Drinking Water Sample Results

Sample RW2

Site Name SCA Services Barton Landfill

PAN # FIL0599SA

TDD # F05-8802-099

EPA ID # ILD000670935

Please find attached the data summary sheets.

Name Colleen West

Address Rt. 6 Box 133A

City Edwardsville

State Illinois

Zip Code

Phone Number 618-656-1940

Action Level

No Contamination _____
No hits above any health-related standards.

Low Level Contamination ✓ sodium
Hits just above health-related standards.

Significant Contamination _____
Hits are above health-related standards.

check arsenic, lead

0099:3

10-12-88

Table 1

DATA OF RESIDENTIAL WELL SAMPLE ANALYSIS AND APPLICABLE FEDERAL DRINKING WATER STANDARDS AND HEALTH ADVISORIES

SAMPLE: / CONTAMINANT / VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
BENZENE		5	NR					1.5	
BROMODICHLOROMETHANE								1.5	
BROMOFORM								1.5	
BROMOMETHANE								10	
CARBON TETRACHLORIDE		5	NR					1.5	
CHLOROBENZENE			300					1.5	
CHLOROETHANE								1.5	
2-CHLOROETHYL VINYL ETHER								1.5	
CHLOROFORM								1.5	
CHLOROMETHANE								10	
DIBROMOCHLOROMETHANE								1.5	
1,1-DICHLOROETHANE								1.5	
1,2-DICHLOROETHANE		5	NR					1.5	
1,1-DICHLOROETHENE		7	7					1.5	
trans-1,2-DICHLOROETHENE			70					1.5	
1,2-DICHLOROPROPANE			NA					1.5	
cis-1,3-DICHLOPROPROPENE								2	
trans-1,3-DICHLOROPROPENE								1	
ETHYL BENZENE			680					1.5	
METHYLENE CHLORIDE			NR					1	
1,1,2,2-TETRACHLOROETHANE								1.5	
TETRACHLOROETHENE			NR					1.5	
TOLUENE			2420					1.5	
1,1,1-TRICHLOROETHANE		200	200					1.5	
1,1,2-TRICHLOROETHANE								1.5	
TRICHLOROETHENE		5	NR					1.5	
VINYL CHLORIDE		2	NR					10	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
VOLATILE ORGANIC COMPOUNDS									
ACROLEIN								100	
ACETONE								75	
ACRYLONITRILE								50	
CARBON DISULFIDE								3	
2-BUTANONE			170					(50)	
VINYL ACETATE								15	
4-METHYL-2-PENTANONE								(3)	
2-HEXANONE								(50)	
STYRENE			140					1	
XYLENE, TOTAL			440					2	
SEMI-VOLATILE ORGANIC COMPOUNDS									
ANILINE								1.5	
BIS(2-CHLOROETHYL)ETHER								1.5	
PHENOL								2	
2-CHLOROPHENOL								2	
1,3-DICHLOROBENZENE			620					2	
1,4-DICHLOROBENZENE		75	75					2	
1,2-DICHLOROBENZENE			620					2.5	
BENZYL ALCOHOL								2	
BIS(2-CHLOROISOPROPYL) ETHER								2.5	
2-METHYLPHENOL								1	
HEXACHLOROETHANE								2	
N-NITROSODIPROPYLAMINE								1.5	
NITROBENZENE								2.5	
4-METHYLPHENOL								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
ISOPHORONE								2.5	
2-NITROPHENOL								2	
2,4-DIMETHYLPHENOL								2	
BIS(2-CHLOROETHOXY) METHANE								2.5	
2,4-DICHLOROPHENOL								2	
1,2,4-TRICHLOROBENZENE								2	
NAPHTHALENE								2	
4-CHLOROANILINE								2	
HEXACHLOROBUTADIENE								2.5	
BENZOIC ACID								(30)	
2-METHYLNAPTHALENE								2	
4-CHLORO-3-METHYLPHENOL								1.5	
HEXACHLOROCYCLOPENTADIENE								2	
2,4,6-TRICHLOROPHENOL								1.5	
2,4,5-TRICHLOROPHENOL		10	52					1.5	
2-CHLORONAPTHALENE								1.5	
ACENAPTHYLENE								1.5	
DIMETHYL PHTHALATE								1.5	
2,6-DINITROTOLUENE								1	
ACENAPHTHENE								1.5	
3-NITROANILINE								2.5	
DIBENZOFURAN								1	
2,4-DINITROPHENOL								(15)	
2,4-DINITROTOLUENE								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
FLUORENE								1	
4-NITROPHENOL								1.5	
4-CHLOROPHENYL PHENYL ETHER								1	
DIETHYL PHTHALATE								1	
4,6-DINITRO-2-METHYLPHENOL								(15)	
1,2-DIPHENYLHYDRAZINE								1	
N-NITROSODIPHENYLAMINE									
DIPHENYLAMINE								1.5	
4-NITROANILINE								3	
4-BROMOPHENYL PHENYL ETHER								1.5	
HEXACHLOROBENZENE			NR					1.5	
PENTACHLOROPHENOL			220					2	
PHENANTHRENE								1	
ANTHRACENE								2.5	
DI-n-BUTYL PHTHALATE								2	
FLUORANTHENE								1.5	
PYRENE								1.5	
BUTYL BENZYL PHTHALATE								3.5	
CHRYSENE									
BENZO(a)ANTHRACENE								1.5	
BIS(2-ETHYLHEXYL) PHTHALATE								1	
DI-n-OCTYL PHTHALATE								1.5	
BENZO(b)FLUORANTHENE									
BENZO(k)FLUORANTHENE								1.5	
BENZO(a)PYRENE								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
SEMI-VOLATILE ORGANIC COMPOUNDS									
INDENO(1,2,3-cd)PYRENE								3.5	
DIBENZO(a,h)ANTHRACENE								2.5	
BENZO(g,h,i)PERYLENE								4	
2-NITROANILINE								1	
PESTICIDES AND PCBS									
ALDRIN								0.005	
alpha BHC								(0.010)	
beta BHC								(0.005)	
delta BHC								(0.005)	
gama BHC(LINDANE)		4	2					0.005	
CHLORDANE			NR					(0.020)	
4,4'-DDD								(0.020)	
4,4'-DDE								(0.005)	
4,4'-DDT								0.020	
DIELDRIN								0.010	
ENDOSULFAN I								0.010	
ENDOSULFAN II								0.010	
ENDOSULFAN SULFATE								(0.10)	
ENDRIN		0.2	0.32					0.010	
ENDRIN ALDEHYDE								(0.030)	
ENDRIN KETONE								(0.030)	
HEPTACHLOR			NR					0.030	
HEPTACHLOR EPOXIDE			NR					0.005	
4,4'-METHOXYCHLOR		5	340					0.020	
TOXAPHENE		100	NA					(0.25)	
PCB-1242			NA					(0.10)	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
PESTICIDES AND PCBS									
PCB-1248			NA					(0.10)	
PCB-1254			NA					(0.10)	
PCB-1260			NA					(0.10)	
INORGANIC ANALYTES									
ALUMINUM								80	
ANTIMONY								2	
ARSENIC	8.6 S	50	50R					2	
BARIUM	68	1000	1500					6	
BERYLLIUM								1	
BORON								80	
CADMIUM		10	5					10	
CADMIUM		10	5					0.2	
CALCIUM	60,100							0.5	
CHROMIUM		50	120					8	
COBALT								6	
COPPER	53	1000						6	
IRON	210							80	
LEAD	19 S*	50						2	
LEAD		50						70	
LITHIUM								10	
MAGNESIUM	19500							0.1	
MANGANESE	175							5	
MERCURY		2	11					0.1	
MOLYBDENUM								15	
NICKEL			150					15	
POTASSIUM								2	

Table 1 (cont.)

CONTAMINANT INORGANIC ANALYTES	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
SELENIUM	3.55	10						2	
SILVER		50						6	
SODIUM	15200 N			20,000				1	
STRONTIUM								10	
SULFIDE								1	
SULFATE		250,000						0.05	
THALLIUM								2	
TITANIUM								25	
TIN								40	
VANADIUM								5	
YTTRIUM								5	
ZINC	264							40	
CYANIDE			154					8	
SPECIAL ORGANIC ANALYSIS									
ANILINE								50	
ACROLEIN								100	
ACRYLONITRILE								10	

A SURVEY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED. HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
s	s	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not recommended to be calculated, since chemical has proven to be a human carcinogen.
( ) Estimated value.

D. Analytical Method Qualifiers for Inorganic

"P" for ICP

"A" for Flame AA

"F" for Furnance AA

"CV" for Manual Cold Vapor AA

"AV" for Automated Cold Vapor AA

"AS" for Semi-automated Spectrophotometric

"C" for Manual Spectrophotometric

"T" for Titrimetric

"NR" if the analyte is not required to be analyzed.

MEMORANDUM

DATE: October 7, 1988

TO: William Messenger, U.S. EPA

FROM:

SUBJECT: Drinking Water Sample Results

Sample RW3

Site Name SCA Services Barton Landfill

PAN # FIL 0599SA

TDD # F05-8802-099

EPA ID # ILD000670935

Please find attached the data summary sheets.

Name Susan Ketterlen

Address Rt. 6 Box153

City Edwardsville

State Illinois

Zip Code

Phone Number no phone

Action Level

No Contamination ✓
No hits above any health-related standards.

Low Level Contamination ____
Hits just above health-related standards.

Significant Contamination ____
Hits are above health-related standards.

Check, arsenic, lead, and selenium

0099:3

recycled paper

ecology and environment

10-12-88

Table 1

DATA OF RESIDENTIAL WELL SAMPLE ANALYSIS AND APPLICABLE FEDERAL DRINKING WATER STANDARDS AND HEALTH ADVISORIES

SAMPLE: / CONTAMINANT / VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb): LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	COMMENTS
BENZENE		5	NR					1.5	
BROMODICHLOROMETHANE								1.5	
BROMOFORM								1.5	
BROMOMETHANE								10	
CARBON TETRACHLORIDE		5	NR					1.5	
CHLOROBENZENE			300					1.5	
CHLOROETHANE								1.5	
2-CHLOROETHYL VINYL ETHER								1.5	
CHLOROFORM								1.5	
CHLOROMETHANE								10	
DIBROMOCHLOROMETHANE								1.5	
1,1-DICHLOROETHANE								1.5	
1,2-DICHLOROETHANE		5	NR					1.5	
1,1-DICHLOROETHENE		7	7					1.5	
trans-1,2-DICHLOROETHENE			70					1.5	
1,2-DICHLOROPROPANE			NA					1.5	
cis-1,3-DICHLOPROPROPENE								2	
trans-1,3-DICHLOROPROPENE								1	
ETHYL BENZENE			680					1.5	
METHYLENE CHLORIDE			NR					1	
1,1,2,2-TETRACHLOROETHANE								1.5	
TETRACHLOROETHENE			NR					1.5	
TOLUENE	1		2420					1.5	Possible contaminant
1,1,1-TRICHLOROETHANE		200	200					1.5	
1,1,2-TRICHLOROETHANE								1.5	
TRICHLOROETHENE		5	NR					1.5	
VINYL CHLORIDE		2	NR					10	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
VOLATILE ORGANIC COMPOUNDS									
ACROLEIN								100	
ACETONE								75	
ACRYLONITRILE								50	
CARBON DISULFIDE								3	
2-BUTANONE			170					(50)	
VINYL ACETATE								15	
4-METHYL-2-PENTANONE								(3)	
2-HEXANONE								(50)	
STYRENE			140					1	
XYLENE, TOTAL			440					2	
SEMI-VOLATILE ORGANIC COMPOUNDS									
ANILINE								1.5	
BIS(2-CHLOROETHYL)ETHER								1.5	
PHENOL	3							2	Possible artifact
2-CHLOROPHENOL								2	
1,3-DICHLOROBENZENE			620					2	
1,4-DICHLOROBENZENE		75	75					2	
1,2-DICHLOROBENZENE			620					2.5	
BENZYL ALCOHOL								2	
BIS(2-CHLOROISOPROPYL) ETHER								2.5	
2-METHYLPHENOL								1	
HEXACHLOROETHANE								2	
N-NITROSODIPROPYLAMINE								1.5	
NITROBENZENE								2.5	
4-METHYLPHENOL								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
ISOPHORONE								2.5	
2-NITROPHENOL								2	
2,4-DIMETHYLPHENOL								2	
BIS(2-CHLOROETHOXY) METHANE								2.5	
2,4-DICHLOROPHENOL								2	
1,2,4-TRICHLOROBENZENE								2	
NAPHTHALENE								2	
4-CHLOROANILINE								2	
HEXACHLOROBUTADIENE								2.5	
BENZOIC ACID								(30)	
2-METHYLNAPTHALENE								2	
4-CHLORO-3-METHYLPHENOL								1.5	
HEXACHLOROCYCLOPENTADIENE								2	
2,4,6-TRICHLOROPHENOL								1.5	
2,4,5-TRICHLOROPHENOL		10	52					1.5	
2-CHLORONAPTHALENE								1.5	
ACENAPTHYLENE								1.5	
DIMETHYL PHTHALATE								1.5	
2,6-DINITROTOLUENE								1	
ACENAPHTHENE								1.5	
3-NITROANILINE								2.5	
DIBENZOFURAN								1	
2,4-DINITROPHENOL								(15)	
2,4-DINITROTOLUENE								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
FLUORENE								1	
4-NITROPHENOL								1.5	
4-CHLOROPHENYL PHENYL ETHER								1	
DIETHYL PHTHALATE								1	
4,6-DINITRO-2-METHYLPHENOL								(15)	
1,2-DIPHENYLHYDRAZINE								1	
N-NITROSODIPHENYLAMINE									
DIPHENYLAMINE								1.5	
4-NITROANILINE								3	
4-BROMOPHENYL PHENYL ETHER								1.5	
HEXACHLOROBENZENE			NA					1.5	
PENTACHLOROPHENOL			220					2	
PHENANTHRENE								1	
ANTHRACENE								2.5	
DI-n-BUTYL PHTHALATE								2	
FLUORANTHENE								1.5	
PYRENE								1.5	
BUTYL BENZYL PHTHALATE								3.5	
CHRYSENE									
BENZO(a)ANTHRACENE								1.5	
BIS(2-ETHYLHEXYL) PHTHALATE								1	
DI-n-OCTYL PHTHALATE								1.5	
BENZO(b)FLUORANTHENE									
BENZO(k)FLUORANTHENE								1.5	
BENZO(a)PYRENE								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
SEMI-VOLATILE ORGANIC COMPOUNDS									
INDENO(1,2,3-cd)PYRENE								3.5	
DIBENZO(a,h)ANTHRACENE								2.5	
BENZO(g,h,i)PERYLENE								4	
2-NITROANILINE								1	
PESTICIDES AND PCBS									
ALDRIN								0.005	
alpha BHC								(0.010)	
beta BHC								(0.005)	
delta BHC								(0.005)	
gama BHC(LINDANE)		4	2					0.005	
CHLORDANE			NR					(0.020)	
4,4'-DDD								(0.020)	
4,4'-DDE								(0.005)	
4,4'-DDT								0.020	
DIELDRIN								0.010	
ENDOSULFAN I								0.010	
ENDOSULFAN II								0.010	
ENDOSULFAN SULFATE								(0.10)	
ENDRIN		0.2	0.32					0.010	
ENDRIN ALDEHYDE								(0.030)	
ENDRIN KETONE								(0.030)	
HEPTACHLOR			NR					0.030	
HEPTACHLOR EPOXIDE			NR					0.005	
4,4'-METHOXYCHLOR		5	340					0.020	
TOXAPHENE		100	NA					(0.25)	
PCB-1242			NA					(0.10)	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
PESTICIDES AND PCBS									
PCB-1248			NA					(0.10)	
PCB-1254			NA		-			(0.10)	
PCB-1260			NA					(0.10)	
INORGANIC ANALYTES									
ALUMINUM								80	
ANTIMONY								2	
ARSENIC	6.0 S	50	50R					2	
BARIUM	[21]	1000	1500					6	
BERYLLIUM								1	
BORON								80	
CADMIUM		10	5					10	
CADMIUM		10	5					0.2	
CALCIUM	27000							0.5	
CHROMIUM		50	120					8	
COBALT								6	
COPPER	30	1000						6	
IRON								80	
LEAD	9.6 S*	50						2	
LEAD		50						70	
LITHIUM								10	
MAGNESIUM	6790							0.1	
MANGANESE								5	
MERCURY		2	11					0.1	
MOLYBDENUM								15	
NICKEL			150					15	
POTASSIUM	[500]							2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
INORGANIC ANALYTES									
SELENIUM	2.0 S	10						2	
SILVER		50						6	
SODIUM	2180 N			20,000				1	
STRONTIUM								10	
SULFIDE								1	
SULFATE		250,000						0.05	
THALLIUM								2	
TITANIUM								25	
TIN								40	
VANADIUM								5	
YTTRIUM								5	
ZINC	29							40	
CYANIDE			154					8	
SPECIAL ORGANIC ANALYSIS									
ANILINE								50	
ACROLEIN								100	
ACRYLONITRILE								10	

A SURVEY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED. HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not recommended to be calculated, since chemical has proven to be a human carcinogen.
( ) Estimated value.

D. Analytical Method Qualifiers for Inorganic

"P" for ICP

"A" for Flame AA

"F" for Furnance AA

"CV" for Manual Cold Vapor AA

"AV" for Automated Cold Vapor AA

"AS" for Semi-automated Spectrophotometric

"C" for Manual Spectrophotometric

"T" for Titrimetric

"NR" if the analyte is not required to be analyzed.

Table 4-~~S~~1

RESULTS OF CHEMICAL ANALYSIS OF

FIT-COLLECTED ~~S~~ ~~Soil~~ SAMPLES

Sediment

Sample Collection Information and Parameters	Sample Number											
	~~S~~1	~~S~~2	~~S~~3	~~S~~4	~~S~~5	~~S~~6	~~S~~7	~~S~~8	~~S~~9	~~S~~10	~~S~~11	~~S~~12
Date	4/13/88	4/13/88	4/13/88	4/13/88								
Time	1750	1720	1700	1625								
Organic Traffic Report Number	EW 154	EW 155	EW 156	EW 157								
Inorganic Traffic Report Number	MEW 965	MEW 966	MEW 967	MEW 968								
Temperature												
Specific Conductivity												
pH												
Compound Detected (values in ug/Kg (ppb))												
Volatile Organics												
chloromethane												
bromomethane												
vinyl chloride												
chloroethane												
methylene chloride	9 B	10 B	9 B	8 B								
acetone	8 BJ	16 B	4 BJ	6 BJ								
carbon disulfide												
1,1-dichloroethene												
1,1-dichloroethane												
1,2-dichloroethene (total)												
chloroform												
1,2-dichloroethane												
2-butanone (MEK)	6 J	5 J										
1,1,1-trichloroethane												
carbon tetrachloride												
vinyl acetate												
bromodichloromethane												
1,2-dichloropropane												
cis-1,3-dichloropropene												
trichloroethene												
dibromochloromethane												
1,1,2-trichloroethane												
benzene												
trans-1,3-dichloropropene												
bromoform												
4-methyl-2-pentanone												
2-hexanone												
tetrachloroethene												
toluene												
1,1,2,2-tetrachloroethane												
chlorobenzene												

Table [illegible] Cont.

Sample Collection Information and Parameters	Sample Number											
	S1	S2	S3	S4	5	6	7	8	9	10	11	12
Volatile Organics, Cont.												
ethylbenzene												
styrene												
xylenes (total)												
Semivolatile Organics												
phenol												
bis(2-chloroethyl)ether												
2-chlorophenol												
1,3-dichlorobenzene												
1,4-dichlorobenzene												
benzylalcohol												
1,2-dichlorobenzene												
2-methylphenol												
bis(2-chloroisopropyl)ether												
4-methylphenol												
n-nitroso-di-n-dipropylamine												
hexachloroethane												
nitrobenzene												
isophorone												
2-nitrophenol												
2,4-dimethylphenol												
benzoic acid												
bis(2-chloroethoxy)methane												
2,4-dichlorophenol												
1,2,4-trichlorobenzene												
naphthalene												
4-chloroaniline												
hexachlorobutadiene												
4-chloro-3-methylphenol												
2-methylnaphthalene												
hexachlorocyclopentadiene												
2,4,6-trichlorophenol												
2,4,5-trichlorophenol												
2-chloronaphthalene												
2-nitroaniline												
dimethylphthalate												
acenaphthylene												
2,6-dinitrotoluene												
3-nitroaniline												
acenaphthene												
2,4-dinitrophenol												
4-nitrophenol		190 J										
~~dibenzofuran~~												
~~2,4-dinitrotoluene~~												
~~diethylphthalate~~												
~~4-chlorophenyl-phenylether~~												
~~fluorene~~												

Table 4- Cont.

Sample Collection Information and Parameters	Sample Number											
	>S1	>S2	>S3	>S4	> 5	> 6	> 7	> 8	> 9	> 10	> 11	> 12
Semivolatile Organics, Cont.												
4-nitroaniline												
4,6-dinitro-2-methylphenol												
n-nitrosodiphenylamine												
4-bromophenyl-phenylether												
hexachlorobenzene												
pentachlorophenol		200J										
phenanthrene												
anthracene												
di-n-butylphthalate												
fluoranthene												
pyrene												
butylbenzylphthalate												
3,3'-dichlorobenzidine												
benzo[a]anthracene												
chrysene												
bis(2-ethylhexyl)phthalate	150BJ	220BJ	94BJ	87BJ								
di-n-octylphthalate												
benzo[b]fluoranthene		120J										
benzo[k]fluoranthene		130J										
benzo[a]pyrene												
indeno[1,2,3-cd]pyrene												
dibenzo[a,h]anthracene												
benzo[g,h,i]perylene												
Pesticides/PCBs												
alpha BHC												
beta BHC	22											
delta BHC												
gamma BHC (Lindane)												
Heptachlor												
Aldrin												
Heptachlor epoxide												
Endosulfan I												
Dieldrin												
4,4'-DDE												
Endrin												
Endosulfan II												
4,4'-DDD												
Endosulfan sulfate												
4,4'-DDT												
Methoxychlor (mariate)												
Endrin ketone												
alpha Chlordane												
gamma Chlordane												
Toxaphene												
Aroclor 1016												
Aroclor 1221												

Table 4- Cont.

Sample Collection Information and Parameters	Sample Number											
	SS1	SS2	SS3	SS4	5	6	7	8	9	10	11	12
Pesticides/PCBs Cont.												
~~Aroclor 1232~~												
~~Aroclor 1242~~												
~~Aroclor 1248~~												
~~Aroclor 1254~~												
~~Aroclor 1260~~												
Analyte Detected (values in mg/Kg (ppm))												
aluminum	660	2650	648	745								
~~antimony~~												
arsenic	0.77 B	3.3 S	1.2 B	1.0 B								
barium	20.1 B	58.1	19.0 B	18.2 B								
~~beryllium~~												
~~cadmium~~												
calcium	2990	6010	3450	3860								
chromium	3.5	7.4	4.0	3.4								
cobalt	3.2 B	5.1 B	6.5 B	2.8 B								
copper	3.2 B	8.6	2.4 B	2.1 B								
iron	4060 *	7660 *	3700 *	4040 *								
lead	2.6	9.8	3.3	3.2								
magnesium	1400	2670	1700	1950								
manganese	260	502	358	265								
~~mercury~~												
nickel	5.4 B	10.0 B	3.7 B	3.8 B								
potassium	82.4 B	326 B	66.8 B	76.3 B								
~~selenium~~												
~~silver~~												
~~sodium~~												
~~thallium~~												
vanadium	5.9 B	11.5 B	5.4 B	5.5 B								
zinc	12.0	30.7	10.9	11.3								
cyanide		20.1		12.9								

-- Not detected.

COMPOUND FOOTNOTES	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectrometry.
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

ANALYTE FOOTNOTES		DEFINITION	INTERPRETATION
OLD	NEW		
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.
NA		Value not available due to insufficient data.	
NR		Value not recommended to be calculated, since chemical has proven to be a human carcinogen.	
( )		Estimated value.	

Source: Ecology and Environment, Inc. 1988.

Table 4-2

RESULTS OF CHEMICAL ANALYSIS OF

FIT-COLLECTED ____ SAMPLES

Surface Water

Sample Collection Information and Parameters	Sample Number											
	WS 1	2 W5-1 DUP.	3 WS2	4 WS3	5 WS4	6 BLANK	7	8	9	10	11	12
Date	4/13/88	4/13/88	4/13/88	4/13/88	4/13/88	4/13/88						
Time	1750	1750	1720	1700	1625							
Organic Traffic Report Number	EW 146	EW 147	EW 148	EW 149	EW 150	EW 153						
Inorganic Traffic Report Number	MEW957	MEW958	MEW959	MEW 960	MEW961	MEW964						
Temperature												
Specific Conductivity												
pH												
Compound Detected (values in ug/ L (ppb))												
Volatile Organics												
~~chloromethane~~												
~~bromomethane~~												
~~vinyl chloride~~												
~~chloroethane~~												
~~methylene chloride~~												
~~acetone~~												
~~carbon disulfide~~												
~~1,1-dichloroethene~~												
~~1,1-dichloroethane~~												
~~1,2-dichloroethene (total)~~												
chloroform						3J						
~~1,2-dichloroethane~~												
~~2-butanone (MEK)~~												
~~1,1,1-trichloroethane~~												
~~carbon tetrachloride~~												
~~vinyl acetate~~												
~~bromodichloromethane~~												
~~1,2-dichloropropane~~												
~~cis-1,3-dichloropropene~~												
~~trichloroethene~~												
~~dibromochloromethane~~												
~~1,1,2-trichloroethane~~												
~~benzene~~												
~~trans-1,3-dichloropropene~~												
~~bromoform~~												
~~4-methyl-2-pentanone~~												
~~2-hexanone~~												
~~tetrachloroethene~~												
~~toluene~~												
~~1,1,2,2-tetrachloroethane~~												
~~chlorobenzene~~												

Table [illegible] Cont.

Sample Collection Information and Parameters	Sample Number											
	WS 1	WS1-DUP	WS2	WS3	WS4	6	7	8	9	10	11	12
Volatile Organics, Cont.												
ethylbenzene												
styrene												
xylenes (total)												
Semivolatile Organics												
phenol												
bis(2-chloroethyl)ether												
2-chlorophenol												
1,3-dichlorobenzene												
1,4-dichlorobenzene												
benzylalcohol												
1,2-dichlorobenzene												
2-methylphenol												
bis(2-chloroisopropyl)ether												
4-methylphenol												
n-nitroso-di-n-dipropylamine												
hexachloroethane												
nitrobenzene												
isophorone												
2-nitrophenol												
2,4-dimethylphenol												
benzoic acid												
bis(2-chloroethoxy)methane												
2,4-dichlorophenol												
1,2,4-trichlorobenzene												
naphthalene												
4-chloroaniline												
hexachlorobutadiene												
4-chloro-3-methylphenol												
2-methylnaphthalene												
hexachlorocyclopentadiene												
2,4,6-trichlorophenol												
2,4,5-trichlorophenol												
2-chloronaphthalene												
2-nitroaniline												
dimethylphthalate												
acenaphthylene												
2,6-dinitrotoluene												
3-nitroaniline												
acenaphthene												
2,4-dinitrophenol												
4-nitrophenol												
dibenzofuran												
2,4-dinitrotoluene												
diethylphthalate												
4-chlorophenyl-phenylether												
fluorene												

Table 4- Cont.

Sample Collection Information and Parameters	Sample Number											
	WS 1	WS 1-DUP	WS 2	WS 3	WS 4	≥ 6	≥ 7	≥ 8	≥ 9	≥ 10	≥ 11	≥ 12
Semivolatile Organics, Cont.												
4-nitroaniline												
4,6-dinitro-2-methylphenol												
n-nitrosodiphenylamine												
4-bromophenyl-phenylether												
hexachlorobenzene												
pentachlorophenol												
phenanthrene												
anthracene												
di-n-butylphthalate			2 J									
fluoranthene												
pyrene												
butylbenzylphthalate												
3,3'-dichlorobenzidine												
benzo(a)anthracene												
chrysene												
bis(2-ethylhexyl)phthalate		93		89 B								
di-n-octylphthalate												
benzo(b)fluoranthene												
benzo(k)fluoranthene												
benzo(a)pyrene												
indeno(1,2,3-cd)pyrene												
dibenzo(a,h)anthracene												
benzo(g,h,i)perylene												
Pesticides/PCBs												
alpha BHC												
beta BHC												
delta BHC												
gamma BHC (Lindane)												
Heptachlor												
Aldrin												
Heptachlor epoxide												
Endosulfan I												
Dieldrin												
4,4'-DDE												
Endrin												
Endosulfan II												
4,4'-DDD												
Endosulfan sulfate												
4,4'-DDT												
Methoxychlor (Marlate)												
Endrin ketone												
alpha Chlordane												
gamma Chlordane												
Toxaphene												
Aroclor 1016												
Aroclor 1221												

Table 4. [illegible]

Sample Collection Information and Parameters	Sample Number											
	WS	WS1-DUP	WS2	WS3	WS4	BLANK	2_7	2_8	2_9	2_10	2_11	12
Pesticides/PCBs Cont.												
~~Aroclor 1232~~												
~~Aroclor 1242~~												
~~Aroclor 1248~~												
~~Aroclor 1254~~												
~~Aroclor 1260~~												
Analyte Detected (values in ug/L [ppm])												
aluminum	214	192 B	160 B	172 B	183 B							
~~antimony~~												
~~arsenic~~												
barium	70.3 B	71.1 B	70.2 B	72.4 B	71.7 B							
~~beryllium~~												
cadmium		5.0										
calcium	79300	80000	79200	80800	81800	173 B						
~~chromium~~												
~~cobalt~~												
copper						65.2						
iron	51 B	52 B	47 6	555	49 B							
lead					2.1 BW							
magnesium	35200	35400	35100	35800	36100	93.8 B						
manganese	113	120	102	110	114							
~~mercury~~												
~~nickel~~												
potassium	2640 B	2690 B	2660 B	2710 B	2690 B							
selenium	1.1 BWN											
~~silver~~												
sodium	26000	25900	25200	26300	26600							
~~thallium~~												
~~vanadium~~												
zinc	9.6 B	12.7 B	11.3 B	13.6 B	27.7	7.0 B						
~~cyanide~~												

-- Not detected.

COMPOUND FOOTNOTES	DEFINITION	INTERPRETATION
	Indicates compound was analyzed for but not detected.	Compound was not detected.
	Indicates an estimated value.	Compound value may be semi-quantitative.
U	Quantitation limit is estimated due to Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectrometry.
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

ANALYTE FOOTNOTES		DEFINITION	INTERPRETATION
OLD	NEW		
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
N	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	W	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.
NA		Value not available due to insufficient data.	
NR		Value not recommended to be calculated, since chemical has proven to be a human carcinogen.	
( )		Estimated value.	

Source: Ecology and Environment, Inc. 1988.

Table 4-3
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED ~~X~~ SAMPLES
Residential Well

Sample Collection Information and Parameters	Sample Number											
	~~X~~ 1	~~X~~ 2 R1 DUP	~~X~~ 3 R2	~~X~~ 4 R3	~~X~~ 5 BLANK	~~X~~ 6	~~X~~ 7	~~X~~ 8	~~X~~ 9	~~X~~ 10	~~X~~ 11	~~X~~ 12
Date	4/14/88	4/14/88	4/14/88	4/14/88	4/14/88							
Time	1315	1315	1350	1420	1100							
Organic Traffic Report Number	EW 140	EW	EW 141	EW 142	EW 145							
Inorganic Traffic Report Number	MEW 951	MEW	MEW 952	MEW 953	MEW 956							
Temperature												
Specific Conductivity												
pH												
Compound Detected (values in ug/L [ppb])												
Volatile Organics												
chloromethane												
bromomethane												
vinyl chloride												
chloroethane												
methylene chloride												
acetone												
carbon disulfide												
1,1-dichloroethene												
1,1-dichloroethane												
1,2-dichloroethene (total)												
chloroform					3							
1,2-dichloroethane												
2-butanone (MEK)					1							
1,1,1-trichloroethane												
carbon tetrachloride												
vinyl acetate												
bromodichloromethane												
1,2-dichloropropane												
cis-1,3-dichloropropene												
trichloroethene												
dibromochloromethane												
1,1,2-trichloroethane												
benzene												
trans-1,3-dichloropropene												
bromoform												
4-methyl-2-pentanone												
2-hexanone												
tetrachloroethene												
toluene				1	2							
1,1,2,2-tetrachloroethane												
chlorobenzene												

Sample Collection Information and Parameters	R1	R1-DUP.	R2	R3	Blank	6	7	8	9	10	11	12
Volatile Organics, Cont.												
ethylbenzene												
styrene												
xylenes (total)												
Semivolatile Organics												
phenol	3			3	6							
bis(2-chloroethyl)ether												
2-chlorophenol												
1,3-dichlorobenzene												
1,4-dichlorobenzene												
benzylalcohol												
1,2-dichlorobenzene												
2-methylphenol												
bis(2-chloroisopropyl)ether												
4-methylphenol												
n-nitroso-di-n-dipropylamine												
hexachloroethane												
nitrobenzene												
isophorone												
2-nitrophenol												
2,4-dimethylphenol												
benzoic acid												
bis(2-chloroethoxy)methane												
2,4-dichlorophenol												
1,2,4-trichlorobenzene												
naphthalene												
4-chloroaniline												
hexachlorobutadiene												
4-chloro-3-methylphenol												
2-methylnaphthalene												
hexachlorocyclopentadiene												
2,4,6-trichlorophenol												
2,4,5-trichlorophenol												
2-chloronaphthalene												
2-nitroaniline												
dimethylphthalate												
acenaphthylene												
2,6-dinitrotoluene												
3-nitroaniline												
acenaphthene												
2,4-dinitrophenol												
4-nitrophenol												
dibenzofuran												
2,4-dinitrotoluene												
diethylphthalate												
4-chlorophenyl-phenylether												
fluorene												

Table 4- Cont.

Sample Collection Information and Parameters	Sample Number											
	R 1	R1 DUP.	R2	R3	BLANK	6	7	8	9	10	11	12
Semivolatile Organics, Cont.												
4-nitroaniline												
4,6-dinitro-2-methylphenol												
n-nitrosodiphenylamine												
4-bromophenyl-phenylether												
hexachlorobenzene												
pentachlorophenol												
phenanthrene												
anthracene												
di-n-butylphthalate												
fluoranthene												
pyrene												
butylbenzylphthalate												
3,3'-dichlorobenzidine												
benzo[a]anthracene												
chrysene												
bis(2-ethylhexyl)phthalate												
di-n-octylphthalate												
benzo[b]fluoranthene												
benzo[k]fluoranthene												
benzo[a]pyrene												
indeno[1,2,3-cd]pyrene												
dibenzo[a,h]anthracene												
benzo[g,h,i]perylene												
Pesticides/PCBs												
alpha BHC												
beta BHC												
delta BHC												
gamma BHC (Lindane)												
Heptachlor												
Aldrin												
Heptachlor epoxide												
Endosulfan I												
Dieldrin												
4,4'-DDE												
Endrin												
Endosulfan II												
4,4'-DDD												
Endosulfan sulfate												
4,4'-DDT												
Methoxychlor (Marlate)												
Endrin ketone												
alpha Chlordane												
gamma Chlordane												
Toxaphene												
Aroclor 1016												
Aroclor 1221												

Table 4-1 Cont.

Sample Collection Information and Parameters	Sample Number											
	R-1	R1-DUP.	R2	R3	BLANK	2-6	2-7	2-8	2-9	2-10	2-11	2-12
Pesticides/PCBs Cont.												
Aroclor 1232												
Aroclor 1242												
Aroclor 1248												
Aroclor 1254												
Aroclor 1260												
Analyte Detected (values in ug/L [ppm])												
aluminum												
antimony												
arsenic	6.1 S	5.1 S	8.6 S	6.0 S								
barium			68	[21]								
beryllium												
cadmium												
calcium			60100	27000								
chromium												
cobalt												
copper	160	151	53	30	83							
iron			210									
lead	10 S*	13 S*	14 S*	9.6 S*	9.3 S*							
magnesium			19500	6790								
manganese			175									
mercury												
nickel												
potassium				[500]								
selenium	11 S	8.2 S	3.5 S	2.0 S	2.0 S							
silver												
sodium	157000 N	169000 N	15200 N	2480 N								
thallium												
vanadium					[8.8]							
zinc	[18]	[19]	264	24								
cyanide												

-- Not detected.

[illegible]	Indicates compound was analyzed for but not detected.	Compound was not detected.
[illegible]	Indicates an estimated value.	Compound value may be semi-quantitative.
U	Quantitation limit is estimated due to Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectrometry.
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

ANALYTE FOOTNOTES		DEFINITION	INTERPRETATION
OLD	NEW		
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
N	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (85-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.
NA		Value not available due to insufficient data.	
NR		Value not recommended to be calculated, since chemical has proven to be a human carcinogen.	
( )		Estimated value.	

Source: Ecology and Environment, Inc. 1988.

RECORD CODE L P C S M 0 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 01/15/87 (36 M D Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER L 1 9 0 9 0 0 0 0 1 (9–18)

REGION S CO. MADISON

ROXANNA/BARTON

FACILITY NAME

INITIAL

MONITOR POINT NUMBER G 1 1 1 (19–22)
(see Instructions)

DATE COLLECTED 11/12/86 (23 M D Y 28)

IEPA LAB (x or Blank) (29)
(see Instructions)

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED 01/12/87 (42 M D Y 47)

SAMPLING PURPOSE CODE (48)
(see Instructions)

TIME CARD PROGRAM CODE (49 — 52) & UNIT CODE (53)

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) 10 (55 H)

UNABLE TO COLLECT SAMPLE (59)
(see Instructions)

MONITOR POINT SAMPLED BY A (60) OTHER (SPECIFY)
(see Instructions)

SAMPLE FIELD FILTERED · INORGANICS (X) X (61) ORGANICS (X)

SAMPLE APPEARANCE CLEAR, COLORLESS, ODORLESS (63–102)

COLLECTOR COMMENTS (103–142)

SPECIAL INSTRUCTIONS TO LAB

COLLECTED BY [signature] (143) INITIALS CLS (145) DIVISION OR COMPANY Environmental Analysis

TRANSPORTED BY [signature] DIVISION OR COMPANY Environmental Analysis

LAB USE ONLY

LAB SAMPLE NO. 720034 LAB NAME Environmental Analysis, Inc. LAB ID NO. 002 (146–149)

DATE RECEIVED 11/12/86 AND ADDRESS 3278 N. Lindbergh

TIME RECEIVED 1740 Florissant, MO 63033

SAMPLE TEMP OKAY Y (Y/N) SAMPLE PROPERLY PRESERVED Y (Y/N) DATE COMPLETED 12/4/86 FORWARD 1/7/87

LAB COMMENTS (150–199)

[signature]
SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORT LEVEL
X	DEPTH TO WATER (ft. below LS)	72019 (30–34)				17.50 (35–39)	2
X	ELEVATION OF GW SURFACE (ft. ref MSL)	71993				425.10	2
	TOTAL WELL DEPTH (ft. below LS)	72008					
	ALKALINITY TOTAL (mg/l as CaCO3) · Field	00431					
	REDOX POTENTIAL (millivolt) · Field	00090					
X	pH (units) · Field	00400				6.45	2
X	SPEC CONDUCTANCE (umhos) · Field	00094				1144.	1
X	TEMP OF WATER SAMPLE (°F) Field	00011				63	1
X	WELL DEPTH ELE FT RE MSL	72020				412.87	2
X	DEPTH TO WATER FR MP FT	72109				18.87	2

RECEIVED 12 1987 IEPA-DLPC

This Agency is authorized to require this information under Illinois Revised Statutes 1979, Chapter 111 1/2 Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $25,000 for each day the failure continues, a fine up to $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 1 (9–18)

MONITOR POINT NUMBER G 1 1 1 (19–22)

REGION S CO. MADISON

DATE COLLECTED 1 1 1 2 8 6 (23 M D Y 28)

ROXANNA/BARTON

FACILITY NAME

INITIAL

IEPA LAB (x or Blank) (29)

LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORTING LEVEL	
T ALK CACO3 MG/L LAB	00410				507.	1	L
NH3+NH4- N DISS MG/L	00608				0.258	3	K
NO2 & NO3 N DISS MG/L	00631				2.19	2	K
PHOS-DISS MG/L P	00666				0.29	2	K
T ORG C AS C MG/L	00680				8.80	2	K
CYANIDE CN, TOTAL MG/L	00720				0.004	3	K
CALCIUM CA, DISS MG/L	00915				92.2	1	K
MGNSIUM MG, DISS MG/L	00925				104.	1	L
SODIUM NA, DISS MG/L	00930				17.1	1	K
PTSSIUM K, DISS MG/L	00935				1.05	2	K
CHLORIDE CL, DISS MG/L	00941				2.62	2	K
SULFATE SO4, DISS MG/L	00946				65.0	1	K
FLUORIDE F, DISS MG/L	00950				0.15	2	L
ARSENIC AS, DISS UG/L	01000				11.	1	L
BARIUM BA, DISS UG/L	01005				156.	1	L
BORON B, DISS UG/L	01020				184.	1	L
CADMIUM CD, DISS UG/L	01025			<	5.	1	L
CHROMIUM CR, DISS UG/L	01030			<	5.	1	L
IRON FE, DISS UG/L	01046				16300.	3	L
LEAD PB, DISS UG/L	01049				10.	1	L
MANGANESE MN, DISS UG/L	01056				1910.	2	L
NICKEL NI, DISS UG/L	01065			<	50.	2	L
SILVER AG, DISS UG/L	01075				17.	1	L
ZINC ZN, DISS UG/L	01090				68.	1	L
SELENIUM SE, DISS UG/L	01145			<	5.	1	L
PHENOLS TOTAL UG/L	32730			<	5.	1	L
RESIDUE ON EVAP 180° MG/L	70300				696.	1	L
MERCURY HG, DISS UG/L	71890			<	0.2	1	K

RECEIVED JAN 12 1987 IEPA-DLPC

RECORD CODE L P C S M 0 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 01/15/87 (36 M D Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 1 (9–18)

REGION S CO. MADISON

ROXANNA/BARTON

FACILITY NAME

INITIAL

MONITOR POINT NUMBER G 1 1 2 (19–22) (see Instructions)

DATE COLLECTED 11/12/86 (23 M D Y 28)

IEPA LAB (x or Blank) (see Instructions) (29)

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED 01/12/87 (42 M D Y 47)

SAMPLING PURPOSE CODE (see Instructions) (48)

TIME CARD PROGRAM CODE (49–52) & UNIT CODE (53)

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) 10:05 (55 H M)

UNABLE TO COLLECT SAMPLE (see Instructions) (59)

MONITOR POINT SAMPLED BY (see Instructions) A (60) OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) X (61) ORGANICS (X) (62)

SAMPLE APPEARANCE (63) PALE GREEN COLOR, MOD. TURBIDITY, SLT. SULFIDE (102)

COLLECTOR COMMENTS (103) DE ODOR (142)

SPECIAL INSTRUCTIONS TO LAB

COLLECTED BY	INITIALS	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
Chris L Segafredo	CLS (143–145)	Environmental Analysis	Chris L Segafredo	Environmental Analysis

LAB USE ONLY

LAB SAMPLE NO. 720101 LAB NAME Environmental Analysis, Inc. LAB ID NO. 0022 (146–149)

DATE RECEIVED 11/12/86 AND ADDRESS 3278 N. Lindbergh

TIME RECEIVED 1740 Florissant, MO 63033

SAMPLE TEMP OKAY Y (Y/N) SAMPLE PROPERLY PRESERVED Y (Y/N) DATE COMPLETED 12/4/86 FORWARD 1/7/87

LAB COMMENTS (150)

Chris L Segafredo (199)

SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORTING LEVEL	
X	DEPTH TO WATER (ft. below LS)	72019 (30–34)	(35)	(36)	(37)	12.52 (38–47)	2 (48)	R (49)
X	ELEVATION OF GW SURFACE (ft. ref MSL)	71993				421.36	2	R
	TOTAL WELL DEPTH (ft. below LS)	72008						
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	00431						
	REDOX POTENTIAL (millivolt) - Field	00090						
X	pH (units) - Field	00400				7.05	2	R
X	SPEC CONDUCTANCE (umhos) - Field	00094				772	1	L
X	TEMP OF WATER SAMPLE (°F) - Field	00011				62	1	L
X	WELL DEPTH ELE FT RE MSL	72020				415.2	1	R
X	DEPTH TO WATER FR MP FT	72109				14.03	2	R

RECEIVED JAN 12 1987 IEPA-DLPC

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111.1.2, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil

IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 1 (9–18)

MONITOR POINT NUMBER G 1 1 2 (19–22)

REGION S CO. MADISON

DATE COLLECTED 11 12 86 (23 M D Y 28)

ROXANNA BARTON (FACILITY NAME)

INITIAL

IEPA LAB (x or Blank) (29)

LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORTING LEVEL	
T ALK CACO3 MG/L LAB	00410				400.	1	L
NH3+NH4- N DISS MG/L	00608				1.06	2	R
NO2 & NO3 N DISS MG/L	00631				2.03	2	R
PHOS-DISS MG/L P	00666				0.13	2	R
T ORG C AS C MG/L	00680				10.5	1	R
CYANIDE CN, TOTAL MG/L	00720				0.003	3	R
CALCIUM CA, DISS MG/L	00915				74.3	1	R
MGNSIUM MG, DISS MG/L	00925				46.5	1	R
SODIUM NA, DISS MG/L	00930				13.8	1	R
PTSSIUM K, DISS MG/L	00935				1.98	2	R
CHLORIDE CL, DISS MG/L	00941			<	0.05	2	R
SULFATE SO4, DISS MG/L	00946			<	1.00	2	R
FLUORIDE F, DISS MG/L	00950				0.22	2	R
ARSENIC AS, DISS UG/L	01000				9.	1	L
BARIUM BA, DISS UG/L	01005				152	1	L
BORON B, DISS UG/L	01020				418.	1	L
CADMIUM CD, DISS UG/L	01025			<	5.	1	L
CHROMIUM CR, DISS UG/L	01030			<	5.	1	L
IRON FE, DISS UG/L	01046				2870.	2	L
LEAD PB, DISS UG/L	01049				6.	1	L
MANGANESE MN, DISS UG/L	01056				468.	1	L
NICKEL NI, DISS UG/L	01065			<	50.	2	L
SILVER AG, DISS UG/L	01075			<	5.	1	L
ZINC ZN, DISS UG/L	01090				21.	1	L
SELENIUM SE, DISS UG/L	01145			<	5.	1	L
PHENOLS TOTAL UG/L	32730				14.	1	L
RESIDUE ON EVAP 180° C MG/L	70300				434.	1	L
MERCURY HG, DISS UG/L	71890				0.3	1	R

RECEIVED JAN 12 1987 IEPA-DLPC

RECORD CODE L P C S M 0 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 01/15/87 (36 M D Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 1 (9–18)

REGION S CO. MADISON

ROXANNA/BARTON

FACILITY NAME

INITIAL

MONITOR POINT NUMBER G 1 1 3 (19–22) (see Instructions)

DATE COLLECTED 11/12/86 (23 M D Y 28)

IEPA LAB (x or Blank) (see Instructions) (29)

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED 01/12/87 (42 M D Y 47)

SAMPLING PURPOSE CODE (see Instructions) (48)

TIME CARD PROGRAM CODE (49–52) & UNIT CODE (53)

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) 11:10 (55 H M 58)

UNABLE TO COLLECT SAMPLE (see Instructions) (59)

MONITOR POINT SAMPLED BY (see Instructions) A (60) OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) X (61) ORGANICS (X) (62)

SAMPLE APPEARANCE (63) COLORLESS, SLT. TURBID ITY, SLT. SULFIDE ODOR (102)

COLLECTOR COMMENTS (103) (142)

SPECIAL INSTRUCTIONS TO LAB

Chris L Hagafredo — COLLECTED BY; CLS (143–145) INITIALS; Environmental Analysis — DIVISION OR COMPANY; Chris L Hagafredo — TRANSPORTED BY; Environmental Analysis — DIVISION OR COMPANY

LAB USE ONLY

LAB SAMPLE NO. 720102 LAB NAME Environmental Analysis, Inc. LAB ID NO. 0022 (146–149)

DATE RECEIVED 11/12/86 AND ADDRESS 3278 N. Lindbergh

TIME RECEIVED 1740 Florissant, MO 63033

SAMPLE TEMP OKAY Y (Y/N) SAMPLE PROPERLY PRESERVED Y (Y/N) DATE COMPLETED 12/4/86 FORWARD 1/7/87

LAB COMMENTS (150) (199)

Chris L Hagafredo

SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORTING LEVEL	
X	DEPTH TO WATER (ft. below LS)	72019 (30–34)	(35)	(36)	(37)	19.43 (38–47)	2 (48)	R (49)
X	ELEVATION OF GW SURFACE (ft. ref MSL)	71993				421.83	2	R
	TOTAL WELL DEPTH (ft. below LS)	72008						
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	00431						
	REDOX POTENTIAL (millivolt) - Field	00090						
X	pH (units) - Field	00400				7.05	2	R
X	SPEC CONDUCTANCE (umhos) - Field	00094				860.	1	L
X	TEMP OF WATER SAMPLE (°F) - Field	00011				62.	1	L
X	WELL DEPTH ELE FT RE MSL	72020				387.96	2	R
X	DEPTH TO WATER FR MP FT	72109				23.02	2	R

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... 1979 Chapter 111 1/2 Section 1004 and 1021 Disclosure of this information is required. Failure to do so may result in a civil ...

IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 1 (9–18)

MONITOR POINT NUMBER G 1 1 3 (19–22)

REGION S CO. MADISON

DATE COLLECTED 11 12 86 (23 M D Y 28)

FACILITY NAME ROYANKA/BARTON

INITIAL

IEPA LAB (x or Blank) (29)

LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORTING LEVEL	
T ALK CACO3 MG/L LAB	00410				479.	1	L
NH3+NH4- N DISS MG/L	00608				0.929	3	R
NO2 & NO3 N DISS MG/L	00631				0.96	2	R
PHOS-DISS MG/L P	00666				0.09	2	R
T ORG C AS C MG/L	00680				27.0	1	R
CYANIDE CN, TOTAL MG/L	00720				0.001	3	R
CALCIUM CA, DISS MG/L	00915				73.7	1	R
MGNSIUM MG, DISS MG/L	00925				49.9	1	R
SODIUM NA, DISS MG/L	00930				558	1	R
PTSSIUM K, DISS MG/L	00935				2.51	2	R
CHLORIDE CL, DISS MG/L	00941			<	0.05	2	R
SULFATE SO4, DISS MG/L	00946				2.00	2	R
FLUORIDE F, DISS MG/L	00950				0.23	2	R
ARSENIC AS, DISS UG/L	01000				5.	1	L
BARIUM BA, DISS UG/L	01005				186.	1	L
BORON B, DISS UG/L	01020				107.	1	L
CADMIUM CD, DISS UG/L	01025			<	5.	1	L
CHROMIUM CR, DISS UG/L	01030				11.	1	L
IRON FE, DISS UG/L	01046				610.	2	L
LEAD PB, DISS UG/L	01049				15.	1	L
MANGANESE MN, DISS UG/L	01056				308	1	L
NICKEL NI, DISS UG/L	01065			<	50.	2	L
SILVER AG, DISS UG/L	01075				5.	1	L
ZINC ZN, DISS UG/L	01090				27.	1	L
SELENIUM SE, DISS UG/L	01145			<	5.	1	L
PHENOLS TOTAL UG/L	32730				13.	1	L
RESIDUE ON EVAP 180° C MG/L	70300				523	1	L
MERCURY HG, DISS UG/L	71890			<	0.2	1	R

RECEIVED JAN 12 1987 IEPA-DLPC

RECORD CODE L | P | C | S | M | 0 | 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 01/15/87 (36 M D Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 1 (9–18)

MONITOR POINT NUMBER G 1 1 4 (19–22) (see Instructions)

REGION S CO. MADISON

DATE COLLECTED 11/12/86 (23 M D Y 28)

ROXANNA/BARTON

FACILITY NAME

INITIAL

IEPA LAB (x or Blank) 29 (see Instructions)

FOR IEPA USE ONLY — COMPLAINT NO.

DATE RECEIVED 01/12/87 (42 M D Y 47)

SAMPLING PURPOSE CODE 48 (see Instructions)

TIME CARD PROGRAM CODE 49 — 52 & UNIT CODE 53

BACKGROUND SAMPLE (X) 54

TIME COLLECTED (24 HR CLOCK) 11:30 (55 H M)

UNABLE TO COLLECT SAMPLE 59 (see Instructions)

MONITOR POINT SAMPLED BY 4 (60) (see Instructions) OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) X (61) ORGANICS (X)

SAMPLE APPEARANCE (63) CLEAR, COLORLESS, ODOR LESS (102)

COLLECTOR COMMENTS (103) (142)

SPECIAL INSTRUCTIONS TO LAB

COLLECTED BY	INITIALS (143–145)	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
Chris Hagerfield	CLS	Environmental Analysis	Chris Hagerfield	Environmental Analysis

LAB USE ONLY

LAB SAMPLE NO. 720103 LAB NAME Environmental Analysis, Inc LAB ID NO. 0022 (146–149)

DATE RECEIVED 11/12/86 AND ADDRESS 3278 N. Lindbergh

TIME RECEIVED 1740 Florissant, MO 63033

SAMPLE TEMP OKAY Y (Y/N) SAMPLE PROPERLY PRESERVED Y (Y/N) DATE COMPLETED 12/4/86 FORWARD 1/7/87

LAB COMMENTS (150) (199)

Chris Hagerfield

SUPERVISOR SIGNATURE

RECORD CODE L | P | C | S | M | 0 | 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORTING LEVEL
X	DEPTH TO WATER (ft. below LS)	72019 (50–54)	55	56	57	10.59 (58–47)	2
X	ELEVATION OF GW SURFACE (ft. ref MSL)	71993				428.58	2
	TOTAL WELL DEPTH (ft. below LS)	72008					
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	00431					
	REDOX POTENTIAL (millivolt) - Field	00090					
X	pH (units) - Field	00400				7.20	2
X	SPEC CONDUCTANCE (umhos) - Field	00094				826.	1
X	TEMP OF WATER SAMPLE (°F) - Field	00011				63.	1
X	WELL DEPTH ELE FT RE MSL	72020				385.38	2
X	DEPTH TO WATER FR MP FT	72109				13.31	2

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IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 1 (9–18)

MONITOR POINT NUMBER 6 1 1 4 (19–22)

REGION S CO. MADISON

DATE COLLECTED 11 M 11 D 86 Y (23–28)

ROXANNA/BARTON INITIAL

FACILITY NAME

IEPA LAB (x or Blank) (29)

LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORTING LEVEL	
T ALK CACO3 MG/L LAB	00410				486.	1	L
NH3+NH4- N DISS MG/L	00608				1.19	2	R
NO2 & NO3 N DISS MG/L	00631				0.90	2	R
PHOS-DISS MG/L P	00666				0.09	2	R
T ORG C AS C MG/L	00680				664	2	R
CYANIDE CN, TOTAL MG/L	00720				0.022	3	R
CALCIUM CA, DISS MG/L	00915				86.1	1	R
MGNSIUM MG, DISS MG/L	00925				55.4	1	R
SODIUM NA, DISS MG/L	00930				19.4	1	R
PTSSIUM K, DISS MG/L	00935				3.22	2	R
CHLORIDE CL, DISS MG/L	00941			<	0.05	2	R
SULFATE SO4, DISS MG/L	00946				1.00	2	R
FLUORIDE F, DISS MG/L	00950				0.20	2	R
ARSENIC AS, DISS UG/L	01000			<	5.	1	L
BARIUM BA, DISS UG/L	01005				173.	1	L
BORON B, DISS UG/L	01020				53.	1	L
CADMIUM CD, DISS UG/L	01025			<	5.	1	L
CHROMIUM CR, DISS UG/L	01030			<	5.	1	L
IRON FE, DISS UG/L	01046			<	50.	2	L
LEAD PB, DISS UG/L	01049				5.	1	L
MANGANESE MN, DISS UG/L	01056				101.	1	L
NICKEL NI, DISS UG/L	01065			<	50	2	L
SILVER AG, DISS UG/L	01075				8.	1	L
ZINC ZN, DISS UG/L	01090				37.	1	L
SELENIUM SE, DISS UG/L	01145			<	5.	1	L
PHENOLS TOTAL UG/L	32730			<	5.	1	L
RESIDUE ON EVAP 180° C MG/L	70300				493.	1	L
MERCURY HG, DISS UG/L	71890			<	0.2	1	R

RECEIVED JAN 12 1987

RECORD CODE L P C S M 0 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 01/15/87 (36 M D Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 1 (9–18)

MONITOR POINT NUMBER G 1 1 5 (19–22) (see Instructions)

REGION S CO. MADISON

DATE COLLECTED 11/11/86 (23 M D Y 28)

ROXANNA/BARTON

FACILITY NAME

INITIAL

IEPA LAB (x or Blank) (see Instructions) 29

FOR IEPA USE ONLY COMPLAINT NO.

DATE RECEIVED 01/12/87 (42 M D Y 47)

SAMPLING PURPOSE CODE (see Instructions) 48

TIME CARD PROGRAM CODE 49 — 52 & UNIT CODE 53

BACKGROUND SAMPLE (X) 54

TIME COLLECTED (24 HR CLOCK) 55 H

UNABLE TO COLLECT SAMPLE (see Instructions) C 59

MONITOR POINT SAMPLED BY (see Instructions) 60 OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) 61 ORGANICS (X)

SAMPLE APPEARANCE 63 — 102

COLLECTOR COMMENTS 103 — 142

SPECIAL INSTRUCTIONS TO LAB

Chris Hegafield — COLLECTED BY; CLS (143–145) INITIALS; Environmental Analysis — DIVISION OR COMPANY; Chris Hegafield — TRANSPORTED BY; Environmental Analysis — DIVISION OR COMPANY

LAB USE ONLY

LAB SAMPLE NO. LAB NAME LAB ID NO. 146

DATE RECEIVED AND ADDRESS

TIME RECEIVED

SAMPLE TEMP OKAY (Y/N) SAMPLE PROPERLY PRESERVED (Y/N) DATE COMPLETED FORWARD

LAB COMMENTS 150 — 199

SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	
* X	DEPTH TO WATER (ft. below LS)	72019 (30–34)	35	36	37	38 — 47	48
X	ELEVATION OF GW SURFACE (ft. ref MSL)	71993					
	TOTAL WELL DEPTH (ft. below LS)	72008					
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	00431					
	REDOX POTENTIAL (millivolt) - Field	00090					
X	pH (units) - Field	00400					
X	SPEC CONDUCTANCE (umhos) - Field	00094					
X	TEMP OF WATER SAMPLE (°F) - Field	00011					
X	WELL DEPTH ELE FT RE MSL	72020					
X	DEPTH TO WATER FR MP FT	72109					

RECEIVED JAN 12 1987 IEPA-DLPC

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*Only Keypunch Lines with Data in Column 36 or Columns 38 47

IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 1 (9–18)

MONITOR POINT NUMBER G 1 1 5 (19–22)

REGION S CO. MADISON

DATE COLLECTED 1/1/86 (23 M D Y 28)

ROXANNA/BARTON
FACILITY NAME

INITIAL

IEPA LAB (x or Blank) (29)

LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORTING LEVEL	
T ALK CACO3 MG/L LAB	00410 (30–34)	(35)	(36)	(37)	(38–37)	(46)	(45)
NH3+NH4- N DISS MG/L	00608						
NO2 & NO3 N DISS MG/L	00631						
PHOS-DISS MG/L P	00666						
T ORG C AS C MG/L	00680						
CYANIDE CN, TOTAL MG/L	00720						
CALCIUM CA, DISS MG/L	00915						
MGNSIUM MG, DISS MG/L	00925						
SODIUM NA, DISS MG/L	00930						
PTSSIUM K, DISS MG/L	00935						
CHLORIDE CL, DISS MG/L	00941						
SULFATE SO4, DISS MG/L	00946						
FLUORIDE F, DISS MG/L	00950						
ARSENIC AS, DISS UG/L	01000						
BARIUM BA, DISS UG/L	01005						
BORON B, DISS UG/L	01020						
CADMIUM CD, DISS UG/L	01025						
CHROMIUM CR, DISS UG/L	01030						
IRON FE, DISS UG/L	01046						
LEAD PB, DISS UG/L	01049						
MANGANESE MN, DISS UG/L	01056						
NICKEL NI, DISS UG/L	01065						
SILVER AG, DISS UG/L	01075						
ZINC ZN, DISS UG/L	01090						
SELENIUM SE, DISS UG/L	01145						
PHENOLS TOTAL UG/L	32730						
RESIDUE ON EVAP 180° MG/L	70300						
MERCURY HG, DISS UG/L	71890						

RECEIVED JAN 12 1987 IEPA-DLPC

RECORD CODE L P C S M 0 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 01/15/87 (36 M D Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 1 (9–18)

REGION S CO. MADISON ROUTINE QUARTERLY

ROXANNA/BARTON

FACILITY NAME

MONITOR POINT NUMBER S 1 0 1 (19–22) (see Instructions)

DATE COLLECTED 11/11/86 (23 M D Y 28)

IEPA LAB (x or Blank) (see Instructions) (29)

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED 01/12/87 (42 M D Y 47)

SAMPLING PURPOSE CODE (see Instructions) (48)

TIME CARD PROGRAM CODE (49–52) & UNIT CODE (53)

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) 14:45 (55 H M)

UNABLE TO COLLECT SAMPLE (see Instructions) (59)

MONITOR POINT SAMPLED BY (see Instructions) O (60) OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) (61) ORGANICS (X)

SAMPLE APPEARANCE (63) CLEAR + COLORLESS + ODORLESS (102)

COLLECTOR COMMENTS (103) (142)

SPECIAL INSTRUCTIONS TO LAB

COLLECTED BY	INITIALS (143–145)	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
[signature]	CLS	Environmental Analysis	[signature]	Environmental Analysis

LAB USE ONLY

LAB SAMPLE NO. 7/9912 LAB NAME Environmental Analysis, Inc LAB ID NO. 0022 (146–149)

DATE RECEIVED 11/11/86 AND ADDRESS 3278 N Lindbergh

TIME RECEIVED 1800 Florissant, MO 63033

SAMPLE TEMP OKAY Y (Y/N) SAMPLE PROPERLY PRESERVED Y (Y/N) DATE COMPLETED 12/2/86 FORWARD 1/7/87

LAB COMMENTS (150) (199)

[signature]

SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORT LEVEL
	DEPTH TO WATER (ft. below LS)	72019 (30–34)	(35)	(36)	(37)	(38–47)	(48)
	ELEVATION OF GW SURFACE (ft. ref MSL)	71993					
	TOTAL WELL DEPTH (ft. below LS)	72008					
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	00431					
	REDOX POTENTIAL (millivolt) - Field	00090					
X	pH (units) - Field	00400				8.02	2
X	SPEC CONDUCTANCE (umhos) - Field	00094				733.	1
X	TEMP OF WATER SAMPLE (°F) - Field	00011				47.	1

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... Statutes 1979 Chapter 111 1 2 Section 1004 and 1021 Disclosure of this information is required. Failure to do so may result in a ... Management Center

IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 1 (9–18)

MONITOR POINT NUMBER S 1 0 1 (19–22)

REGION S CO. MADISON

ROUTINE QUARTERLY

DATE COLLECTED 11/11/8[illegible] (23 M D Y)

ROXANNA/BARTON

FACILITY NAME

IEPA LAB (x or Blank) (29)

LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORT LEVEL
T ALK CACO3 MG/L LAB	00410				213.	1
T ORG C AS C MG/L	00680				6.99	2
CHLORIDE CL, TOT MG/L	00940				0.24	2
SULFATE SO4, TOT MG/L	00945				146.	1
RESDU ON EVAP 180° C MG/L	70300				420.	1

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RECORD CODE | P | C | S | M | 0 | 1 | (1–7) TRANS CODE | A | (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 01/15/87 (36 M D Y 41)

FEDERAL ID NUMBER _____

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 1 (9–18)

MONITOR POINT NUMBER S 3 0 1 (19–22) (see Instructions)

REGION S CO. MADISON

DATE COLLECTED 11/11/86 (23 M D Y 28)

ROUTINE QUARTERLY

ROXANNA/BARTON
FACILITY NAME

IEPA LAB (x or Blank) (see Instructions) 29

FOR IEPA USE ONLY

COMPLAINT NO. _____

DATE RECEIVED 01/12/87 (42 M D Y 47)

SAMPLING PURPOSE CODE 48 (see Instructions)

TIME CARD PROGRAM CODE 49 — — 52 & UNIT CODE 53

BACKGROUND SAMPLE (X) 54

TIME COLLECTED (24 HR CLOCK) 55 H :

UNABLE TO COLLECT SAMPLE (see Instructions) 59

MONITOR POINT SAMPLED BY 60 O OTHER (SPECIFY)

SAMPLE FIELD FILTERED · INORGANICS (X) 61 ORGANICS (X)

SAMPLE APPEARANCE 63 CLEAR, COLORLESS, ODORLESS 102

COLLECTOR COMMENTS 103 _____ 142

SPECIAL INSTRUCTIONS TO LAB _____

COLLECTED BY	INITIALS (143–145)	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
Chris Stoffel	CLS	Environmental Analysis	Chris Stoffel	Environmental Analysis

LAB USE ONLY

LAB SAMPLE NO. 719913 LAB NAME Environmental Analysis, Inc. LAB ID NO. 0022 (146–149)

DATE RECEIVED 11/11/86 AND ADDRESS 3278 N. Lindbergh

TIME RECEIVED 1800 Florissant, MO 63033

SAMPLE TEMP OKAY Y (Y/N) SAMPLE PROPERLY PRESERVED Y (Y/N) DATE COMPLETED 12/2/86 FORWARD 1/7/87

LAB COMMENTS 150 _____ 199

Chris Stoffel
SUPERVISOR SIGNATURE

RECORD CODE | L | P | C | S | M | 0 | 2 | (1–7) TRANS CODE | A | (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORT. LEVEL	
	DEPTH TO WATER (ft. below LS)	72019 (30–34)	35	36	37	38 — 37	38	
	ELEVATION OF GW SURFACE (ft. ref MSL)	71993						
	TOTAL WELL DEPTH (ft. below LS)	72008						
	ALKALINITY TOTAL (mg/l as CaCO3) · Field	00431						
	REDOX POTENTIAL (millivolt) · Field	00090						
X	pH (units) · Field	00400				8.07	2	
X	SPEC CONDUCTANCE (umhos) · Field	00094				714.	1	
X	TEMP OF WATER SAMPLE (°F) · Field	00011				47.	1	

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This Agency is authorized to require this information under Illinois Revised Statutes 1979 Chapter 111 1/2 Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty of $25 (Water Pollution) or the failure continues a fine of $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

IEPA/DLPO

CHEMICAL ANALYSIS FORM

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 1 (9–18)

MONITOR POINT NUMBER S 3 0 (19)

REGION S CO. MADISON

ROUTINE QUARTERLY

DATE COLLECTED 1 1 1 1 6 (23 M D)

ROXANNA/BARTON

FACILITY NAME

IEPA LAB (x or Blank) (29)

LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REP LIMIT
T ALK CACO3 MG/L LAB	00410 (30–34)	(35)	(36)	(37)	212. (38–37)	1
T ORG C AS C MG/L	00680				7.29	2
CHLORIDE CL, TOT MG/L	00940				0.43	2
SULFATE SO4, TOT MG/L	00945				141.	1
RESDU ON EVAP 180° C MG/L	70300				700.	1

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JAN 12 1987

GSX

GSX Corporation
Continental Region
1838 North Broadway
St. Louis, Missouri 63102
(314) 241-3721

January 8, 1987

Mr. Harry Chappal, P.E.
Manager, Compliance Monitoring
Land Pollution Control
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

Re: GSX Barton Landfill Site #1190900002
I.E.P.A. Permit #1982-43-OP

Dear Mr. Chappal:

This letter is to inform the Agency that during slurry trench construction and pad construction three (3) monitoring wells have been rendered inoperable. Before being rendered inoperable they were backfilled and grouted, and, their location along the slurry trench center line were noted.

The following is a list of wells, station location and original depth.

I.E.P.A. DESIGNATION	STATION	ORIGINAL DEPTH
G111	40 + 50	25'
G105	47 + 50	35'
G104	61 + 50	45'

The original well locations were outside the slurry trench center line and the new wells will be similarly located outside the slurry trench. New wells will be the same 2" PVC construction as the originals.

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Detail as builts of each well will be submitted to the Agency upon completion.

The three (3) wells should be constructed and included in the regularly scheduled sampling event which is the end of January.

Please notify me as to what parameters the Agency wishes the wells to be tested.

As always, if you have any questions regarding the above, feel free to contact me.

Very truly yours,

Charles E. Emde
Vice President
GSX of Illinois

CEE/l

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PB

D054387

AGENCY USE ONL

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECORD CODE (1–7): L P C S M 0 1 — TRANS CODE (8): A

REPORT DUE DATE (36 M / D / Y 41) — FEDERAL ID NUMBER

SITE INVENTORY NUMBER (9–18): 1190900002

REGION: S — CO.: Madison

LOCATION: Roxana — RESPONSIBLE PARTY: Barton #2

MONITOR POINT NUMBER (see Instructions) (19–22): G210

DATE COLLECTED (23 M / D / Y 28): 03/16/87

IEPA LAB (see Instructions) (29): X

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED (42 M / D / Y 47)

SAMPLING PURPOSE CODE (see Instructions) (48): 4

TIME CARD PROGRAM CODE (49–52): CP50 & UNIT CODE (53): M

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) (55 H M): 09:2

UNABLE TO COLLECT SAMPLE (see Instructions) (59)

MONITOR POINT SAMPLED BY (see Instructions) (60): R — OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) (61) — ORGANICS (X) (6

SAMPLE APPEARANCE (63): PRIVATE WELL USED FOR DRINKING

COLLECTOR COMMENTS (103–102): WILLAREDT RENTAL HOUSE / GEORGE WILLAREDT RR #6 / EDWARDSVILLE IL 62025 656-6052 (142)

SPECIAL INSTRUCTIONS TO LAB: PRIVATE WELL PROJECT [X] VOLATILES & SEMI VOLATILE

USE SW-846 PROCEDURES: YES ___ NO X

COLLECTED BY	INITIALS (143–145)	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
C. Reeter	CVR	IEPA-DLPC	UPS	

LAB USE ONLY

LAB SAMPLE NO.: D054387 — LAB NAME AND ADDRESS: Springfield — LAB ID NO. (146–149)

DATE RECEIVED: MAR 17 1987

TIME RECEIVED

SAMPLE TEMP OKAY (Y/N) — SAMPLE PROPERLY PRESERVED (Y/N) — DATE COMPLETED — FORWARD: 6-22-87

LAB COMMENTS (150)

SUPERVISOR SIGNATURE (199)

RECORD CODE (1–7): L P C S M 0 2 — TRANS CODE (8): A (Columns 9-29 from above)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE		STORET NUMBER (30–34)	REMARKS (35)	SEE INST (36)	REPLICATE (37)	< OR >	VALUE (38)	REPORTING LEVEL DIGITS TO L OR R (48)	L OR R OF DECIMAL (49)
	DEPTH TO WATER (ft. below LS)	507F	72019							
	ELEVATION OF GW SURFACE (ft. ref MSL)	508F	71993							
X	TOTAL WELL DEPTH (ft. below LS)	509F	72008					20.		
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	505F	00431							
	REDOX POTENTIAL (millivolt) - Field	506F	00090							
X	pH (units) - Field	500F	00400					7.00	2	R
X	SPEC CONDUCTANCE (umhos) - Field	503F	00094					2080.	4	L
X	TEMP OF WATER SAMPLE (°C) - Field	502F	~~00010~~					54.9	1	R
	FB.									

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This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $25,000 for each day the failure continues, a fine up to $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SAMPLE NUMBER : D754387
SAMPLING POINT DESC. : MADISON/ROXANA/BARTON #2 WILLAPEDT G310

SUBMITTING SOURCE # : SITE # : 1190900002
DATE COLLECTED : 870316 TIME COLLECTED : 0925 SAMPLING PROGRAM :

COLLECTED BY : C REETER DELIVERED BY : MAIL
COMMENTS :
FUNDING CODE : LP50 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : SAMPLE PURPOSE CODE : 0 REPORTING INDICATOR :

DATE RECEIVED : 870317 TIME RECEIVED : 1000 RECEIVED BY : D V
LAB OBSERVATIONS : 1 GAL/2 VOC TRIP BL SAM# :
SUPERVISORS INITIALS : JTH NOTE : K = LESS THAN VALUE

P39340	LINDANE	UG/L	.01K
P39410	HEPTACHLOR	UG/L	.01K
P39330	ALDRIN	UG/L	.01K
P39422	HEPTACHLOR EPOXIDE	UG/L	.01K
P39348	ALPHA CHLORDANE	UG/L	.01K
P39810	GAMMA CHLORDANE	UG/L	.01K
P39380	DIELDRIN	UG/L	.01K
P39390	ENDRIN	UG/L	.01K
P39480	METHOXYCHLOR	UG/L	.05K
P39327	O,P'-DDE	UG/L	.01K
P39320	P,P'-DDE	UG/L	.01K
P39315	O,P'-DDD	UG/L	.01K
P39310	P,P'-DDD	UG/L	.01K
P39305	O,P'-DDT	UG/L	.01K
P39300	P,P'-DDT	UG/L	.01K
P39400	TOXAPHENE	UG/L	1.0K
P39516	TOTAL PCBS	UG/L	0.1K
P46313	PHORATE	UG/L	.05K
P39570	DIAZINON	UG/L	.05K
P39357	RONNEL	UG/L	.05K
P39600	METHYL PARATHION	UG/L	.05K
P82088	TERBUFOS (COUNTER)	UG/L	.05K
P81294	FONOFOS (DYFONATE)	UG/L	.05K
P81403	CHLOROPYRIFOS (DURSBAN)	UG/L	.05K
P39530	MALATHION	UG/L	.05K
P39398	ETHION	UG/L	.05K
P81284	TRIFLURALIN (TREFLAN)	UG/L	.01K
P39630	ATRAZINE (AATREX)	UG/L	.05K
P77825	ALACHLOR (LASSO)	UG/L	.02K
P39356	METOLACHLOR (DUAL)	UG/L	0.1K
P81757	CYANAZINE (BLADEX)	UG/L	.05K

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IEPA/DLC

SAMPLE NUMBER : D754387

P39730	2,4-D	UG/L	: 0.1K
P39760	SILVEX	UG/L	: 0.05K
P32106	CHLOROFORM	UG/L	: 1.0K
P32101	DICHLOROBROMOMETHANE	UG/L	: 1.0K
P32105	CHLORODIBROMOMETHANE	UG/L	: 1.0K
P32104	BROMOFORM	UG/L	: 1.0K
P34423	METHYLENE CHLORIDE	UG/L	: 1.0K
P34501	1,1-DICHLOROETHYLENE	UG/L	: 1.0K
P34496	1,1-DICHLOROETHANE	UG/L	: 1.0K
P34546	TRANS-1,2-DICHLOROETHYLENE	UG/L	: 1.0K
P77279	1,2-DICHLOROETHANE	UG/L	: 1.0K
P34506	1,1,1-TRICHLOROETHANE	UG/L	: 1.0K
P32102	CARBON TETRACHLORIDE	UG/L	: 1.0K
P39180	TRICHLOROETHYLENE	UG/L	: 1.0K
P34475	TETRACHLOROETHYLENE	UG/L	: 1.0K
P34301	CHLOROBENZENE	UG/L	: 1.0K
P34716	DICHLOROBENZENE	UG/L	: 1.0K
P78124	BENZENE	UG/L	: 1.0K
P78131	TOLUENE	UG/L	: 1.0K
P78113	ETHYLBENZENE	UG/L	: 1.0K
P81551	XYLENE	UG/L	: 1.0K
P00400	PH,FIELD	UNITS	: 7.00
P00020	TEMPERATURE,AIR	DEG.C	: 54.9
P00094	COND.(EC)FIELD	UM/CM	: 2080
P00061	STREAMFLOW,INST	CFS	:

001 : NO OTHER ORGANIC COMPOUNDS WERE DETECTED IN THE EXTRACTS OF THIS SAMPLE.

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D054389

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

AGENCY USE ONLY

RECORD CODE: L P C S M 0 1 (1–7) TRANS CODE: A (8)

REPORT DUE DATE (36 M / D / Y 41): 119803000 1

FEDERAL ID NUMBER: 2 BLANKS

SITE INVENTORY NUMBER (9–18): 1 1 9 0 9 0 0 0 0 2

MONITOR POINT NUMBER (see Instructions) (19–22):

REGION: S CO.: Madison

DATE COLLECTED (23 M / D / Y 28): 03 / 16 / 87

Roxana / Barton #2

LOCATION / RESPONSIBLE PARTY

IEPA LAB (see Instructions) (29):

FOR IEPA USE ONLY

COMPLAINT NO.:

DATE RECEIVED (42 M / D / Y 47):

SAMPLING PURPOSE CODE (see Instructions) (48): 4

TIME CARD PROGRAM CODE (49–52): L P 5 0 & UNIT CODE (53): M

BACKGROUND SAMPLE (X) (54):

TIME COLLECTED (24 HR CLOCK) (55 H : M 58):

UNABLE TO COLLECT SAMPLE (see Instructions) (59):

MONITOR POINT SAMPLED BY (see Instructions) (60): OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) (61): ORGANICS (X) (62):

SAMPLE APPEARANCE (63): TRIP BLANKS USED FOR BOTH BARTON & HEDGER PRIVATE WELLS (102)

COLLECTOR COMMENTS (103):

SPECIAL INSTRUCTIONS TO LAB (142): PRIVATE WELL PROJECT [X] 2 VOLATILE BLANKS

USE SW-846 PROCEDURES: YES ____ NO ____

COLLECTED BY	INITIALS (143)	INITIALS (145)	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
C. Reeter	CVR		IEPA-DLPC	UPS	

LAB USE ONLY

LAB SAMPLE NO.: D054389

LAB NAME: Springfield

LAB ID NO. (146–149):

DATE RECEIVED: MAR 17 1987

LAB ADDRESS:

TIME RECEIVED:

SAMPLE TEMP OKAY (Y/N):

SAMPLE PROPERLY PRESERVED (Y/N):

DATE COMPLETED:

FORWARD: 6-22-87

LAB COMMENTS (150):

(199)

SUPERVISOR SIGNATURE: J. Hundley

RECORD CODE: L P C S M 0 2 (1–7) TRANS CODE: A (8) (Columns 9-29 from above)

FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE		STORET NUMBER	REMARKS (35)	SEE INSTRUCT (36)	REPLICATE (37)	< OR >	VALUE (38–47)	REPORTING LEVEL: DIGITS TO L OR R (48)	REPORTING LEVEL: L OR R OF DECIMAL (49)
DEPTH TO WATER (ft. below LS)	507F	7 2 0 1 9 (30–34)							
ELEVATION OF GW SURFACE (ft. ref MSL)	508F	7 1 9 9 3							
TOTAL WELL DEPTH (ft. below LS)	509F	7 2 0 0 8							
ALKALINITY TOTAL (mg/l as CaCO3) - Field	505F	0 0 4 3 1							
REDOX POTENTIAL (millivolt) - Field	506F	0 0 0 9 0							
pH (units) - Field	500F	0 0 4 0 0							
SPEC CONDUCTANCE (umhos) - Field	503F	0 0 0 9 4							
TEMP OF WATER SAMPLE (°C) - Field	502F	0 0 0 1 0							
FB									

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This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $25,000 for each day the failure continues, a fine up to $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SAMPLE NUMBER : D754889
SAMPLING POINT DESC. : BLANK W/54887-88

SUBMITTING SOURCE # : SITE # : 1190900002
DATE COLLECTED : 870316 TIME COLLECTED : 1000 SAMPLING PROGRAM :

COLLECTED BY : C REETER DELIVERED BY : MAIL
COMMENTS :
FUNDING CODE : LF50 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : SAMPLE PURPOSE CODE : 0 REPORTING INDICATOR :

DATE RECEIVED : 870317 TIME RECEIVED : 1000 RECEIVED BY : D V
LAB OBSERVATIONS : 2 BLANKS TRIP BL SAM# :
SUPERVISORS INITIALS : JTH NOTE : K = LESS THAN VALUE

P32106	CHLOROFORM	UG/L	: 1.0K
P32101	DICHLOROBROMOMETHANE	UG/L	: 1.0K
P32105	CHLORODIBROMOMETHANE	UG/L	: 1.0K
P32104	BROMOFORM	UG/L	: 1.0K
P34423	METHYLENE CHLORIDE	UG/L	: 1.0K
P34501	1,1-DICHLOROETHYLENE	UG/L	: 1.0K
P34496	1,1-DICHLOROETHANE	UG/L	: 1.0K
P34546	TRANS-1,2-DICHLOROETHYLENE	UG/L	: 1.0K
P77279	1,2-DICHLOROETHANE	UG/L	: 1.0K
P34506	1,1,1-TRICHLOROETHANE	UG/L	: 1.0K
P32102	CARBON TETRACHLORIDE	UG/L	: 1.0K
P39180	TRICHLOROETHYLENE	UG/L	: 1.0K
P34475	TETRACHLOROETHYLENE	UG/L	: 1.0K
P34301	CHLOROBENZENE	UG/L	: 1.0K
P34716	DICHLOROBENZENE	UG/L	: 1.0K
P78124	BENZENE	UG/L	: 1.0K
P78131	TOLUENE	UG/L	: 1.0K
P78113	ETHYLBENZENE	UG/L	: 1.0K
P81551	XYLENE	UG/L	: 1.0K

P00400	PH,FIELD	UNITS	:
P00020	TEMPERATURE,AIR	DEG.C	:
P00094	COND.(EC)FIELD	UM/CM	:
P00061	STREAMFLOW,INST	CFS	:

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SAMPLE NUMBER : D754388
SAMPLING POINT DESC. : MADISON/ROXANA/BARTON #2 WILLAREDT CZ!!

SUBMITTING SOURCE # : SITE # : 1190900002
DATE COLLECTED : 870816 TIME COLLECTED : 1000 SAMPLING PROGRAM :

COLLECTED BY : C REETER DELIVERED BY : MAIL
COMMENTS :
FUNDING CODE : LP50 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : SAMPLE PURPOSE CODE : 0 REPORTING INDICATOR :

DATE RECEIVED : 870317 TIME RECEIVED : 1000 RECEIVED BY : D V
LAB OBSERVATIONS : 1 GAL/2 VOC TRIP BL SAM# :
SUPERVISORS INITIALS : JTH NOTE : K = LESS THAN VALUE

P39340	LINDANE	UG/L :	.01K
P39410	HEPTACHLOR	UG/L :	.01K
P39330	ALDRIN	UG/L :	.01K
P39422	HEPTACHLOR EPOXIDE	UG/L :	.01K
P39348	ALPHA CHLORDANE	UG/L :	.01K
P39310	GAMMA CHLORDANE	UG/L :	.01K
P39380	DIELDRIN	UG/L :	.01K
P39390	ENDRIN	UG/L :	.01K
P39480	METHOXYCHLOR	UG/L :	.05K
P39327	O,P'-DDE	UG/L :	.01K
P39320	P,P'-DDE	UG/L :	.01K
P39315	O,P'-DDD	UG/L :	.01K
P39310	P,P'-DDD	UG/L :	.01K
P39305	O,P'-DDT	UG/L :	.01K
P39300	P,P'-DDT	UG/L :	.01K
P39400	TOXAPHENE	UG/L :	1.0K
P39516	TOTAL PCBS	UG/L :	0.1K
P38871	PHORATE	UG/L :	.05K
P39570	DIAZINON	UG/L :	.05K
P39357	RONNEL	UG/L :	.05K
P39600	METHYL PARATHION	UG/L :	.05K
P82088	TERBUFOS (COUNTER)	UG/L :	.05K
P81294	FONOFOS (DYFONATE)	UG/L :	.05K
P81403	CHLOROPYRIFOS (DURSBAN)	UG/L :	.05K
P39530	MALATHION	UG/L :	.05K
P39398	ETHION	UG/L :	.05K
P81284	TRIFLURALIN (TREFLAN)	UG/L :	.01K
P39630	ATRAZINE (AATREX)	UG/L :	.05K
P77825	ALACHLOR (LASSO)	UG/L :	.02K
P39356	METOLACHLOR (DUAL)	UG/L :	0.1K
P81757	CYANAZINE (BLADEX)	UG/L :	.05K

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JUL 23 1987
IEPA/DLPC

SAMPLE NUMBER : D754388

P39730	2,4-D	UG/L	: 0.1K
P39760	SILVEX	UG/L	: 0.05K
P32106	CHLOROFORM	UG/L	: 1.0K
P32101	DICHLOROBROMOMETHANE	UG/L	: 1.0K
P32105	CHLORODIBROMOMETHANE	UG/L	: 1.0K
P32104	BROMOFORM	UG/L	: 1.0K
P34423	METHYLENE CHLORIDE	UG/L	: 1.0K
P34501	1,1-DICHLOROETHYLENE	UG/L	: 1.0K
P34496	1,1-DICHLOROETHANE	UG/L	: 1.0K
P34546	TRANS-1,2-DICHLOROETHYLENE	UG/L	: 1.0K
P77279	1,2-DICHLOROETHANE	UG/L	: 1.0K
P34506	1,1,1-TRICHLOROETHANE	UG/L	: 1.0K
P32102	CARBON TETRACHLORIDE	UG/L	: 1.0K
P39180	TRICHLOROETHYLENE	UG/L	: 1.0K
P34475	TETRACHLOROETHYLENE	UG/L	: 1.0K
P34301	CHLOROBENZENE	UG/L	: 1.0K
P34716	DICHLOROBENZENE	UG/L	: 1.0K
P78124	BENZENE	UG/L	: 1.0K
P78131	TOLUENE	UG/L	: 1.0K
P78113	ETHYLBENZENE	UG/L	: 1.0K
P81551	XYLENE	UG/L	: 1.0K
P00400	PH,FIELD	UNITS	: 7.54
P00020	TEMPERATURE,AIR	DEG.C	: 51.8
P00094	COND.(EC)FIELD	UM/CM	: 759
P00061	STREAMFLOW,INST	CFS	:

001 : NO OTHER ORGANIC COMPOUNDS WERE DETECTED IN THE EXTRACTS OF THIS SAMPLE.

RECEIVED
JUL 23 1987
IEPA/DLPC

AGENCY USE ONLY

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Page 1 of 1

D054386
3/17/87

RECORD CODE: L P C S M 0 1 (1–7) TRANS CODE: A (8)

REPORT DUE DATE 36 M / D / Y 41 FEDERAL ID NUMBER

SITE INVENTORY NUMBER 9 1 1 9 0 9 0 0 0 0 2 18
REGION S CO. Madison
Roxana / Barton #2
LOCATION RESPONSIBLE PARTY

MONITOR POINT NUMBER (see Instructions) 19 5 3 0 1 22
DATE COLLECTED 23 M 03 / D 16 / Y 28 87
IEPA LAB (see Instructions) X 29

FOR IEPA USE ONLY COMPLAINT NO.

DATE RECEIVED 42 M 05 / D 05 / Y 47 87
SAMPLING PURPOSE CODE (see Instructions) 4 48
TIME CARD PROGRAM CODE 49 CP 43 52 & UNIT CODE 53 A1

BACKGROUND SAMPLE (X) 54
TIME COLLECTED (24 HR CLOCK) 55 H 10 : 20 M 58
UNABLE TO COLLECT SAMPLE (see Instructions) 59
MONITOR POINT SAMPLED BY (see Instructions) 60 Ø OTHER (SPECIFY)
SAMPLE FIELD FILTERED - INORGANICS (X) 61 ORGANICS (X) 62

SAMPLE APPEARANCE 63 CAHOKIA CREEK DOWNSTREAM OF LANDFILL AT WANDA RD. BRIDGE 102

COLLECTOR COMMENTS 103 SURFACE WATER SAMPLE 142

SPECIAL INSTRUCTIONS TO LAB PRIVATE WELL PROJECT ☐ VOLATILES & SEMI VOLATILE
USE SW-846 PROCEDURES: YES ___ NO X SCAN USING 8240 & 8250
insufficient sample for extraction of semi-volatile

COLLECTED BY 143 INITIALS 145 DIVISION OR COMPANY TRANSPORTED BY DIVISION OR COMPANY CML

LAB USE ONLY

LAB SAMPLE NO. D054386 LAB NAME Springfield LAB ID NO. 146 149
DATE RECEIVED MAR 17 1987 AND ADDRESS
TIME RECEIVED
SAMPLE TEMP OKAY (Y/N) SAMPLE PROPERLY PRESERVED (Y/N) DATE COMPLETED FORWARD 5-1-87
LAB COMMENTS 150

J Hurley 199
SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (Columns 9-29 from above)

FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE		STORET NUMBER	REMARKS	REPLICATE	< OR >	VALUE	REPORTING LEVEL DIGITS TO L OR R	REPORTING LEVEL L OR R OF DECIMAL
DEPTH TO WATER (ft. below LS)	507F	72019 (30–34)	35	36	37	38 . 47	48	49
ELEVATION OF GW SURFACE (ft. ref MSL)	508F	71993				.		
TOTAL WELL DEPTH (ft. below LS)	509F	72008				.		
ALKALINITY TOTAL (mg/l as CaCO3) - Field	505F	00431				.		
REDOX POTENTIAL (millivolt) - Field	506F	00090				.		
pH (units) - Field	500F	00400				.		
SPEC CONDUCTANCE (umhos) - Field	503F	00094				.		
TEMP OF WATER SAMPLE (°C) - Field	502F	00010				.		
						.		
						.		

RECEIVED MAY 5 - 1987 IEPA-DLPC

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $25,000 for each day the failure continues, a fine up to $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

IL 532-1218
LPC 160 3/84

002-002

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SAMPLE NUMBER : D754386
SAMPLING POINT DESC. : MADISON/ROXANA/BARTON #2 S301

SUBMITTING SOURCE # : SITE # : 1190900002
DATE COLLECTED : 870316 TIME COLLECTED : 1020 SAMPLING PROGRAM :

COLLECTED BY : C REETER DELIVERED BY : MAIL
COMMENTS : INSUFFICIENT SAMPLE FOR EXTR FOR SEMI-VOLATILES
FUNDING CODE : LP43 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : SAMPLE PURPOSE CODE : 0

DATE RECEIVED : 870317 TIME RECEIVED : 1000 RECEIVED BY : D V
LAB OBSERVATIONS : 2 VOC REPORTING INDICATOR :
SUPERVISORS INITIALS : JTH NOTE : K = LESS THAN VALUE

P34418	CHLOROMETHANE	UG/L	: 5.0K
P34413	BROMOMETHANE	UG/L	: 5.0K
P39175	VINYL CHLORIDE	UG/L	: 5.0K
P34311	CHLOROETHANE	UG/L	: 5.0K
P34423	METHYLENE CHLORIDE	UG/L	: 5.0K
P34488	TRICHLOROFLUOROMETHANE	UG/L	: 5.0K
P34501	1,1-DICHLOROETHYLENE	UG/L	: 5.0K
P34496	1,1-DICHLOROETHANE	UG/L	: 5.0K
P34546	TRANS-1,2-DICHLOROETHYLENE	UG/L	: 5.0K
P32106	CHLOROFORM	UG/L	: 5.0K
P34531	1,2-DICHLOROETHANE	UG/L	: 5.0K
P34506	1,1,1-TRICHLOROETHANE	UG/L	: 5.0K
P32102	CARBON TETRACHLORIDE	UG/L	: 5.0K
P32101	BROMODICHLOROMETHANE	UG/L	: 5.0K
P34541	1,2-DICHLOROPROPANE	UG/L	: 5.0K
P34699	TRANS-1,3-DICHLOROPROPENE	UG/L	: 5.0K
P39180	TRICHLOROETHYLENE	UG/L	: 5.0K
P78124	BENZENE	UG/L	: 5.0K
P32105	DIBROMOCHLOROMETHANE	UG/L	: 5.0K
P34511	1,1,2-TRICHLOROETHANE	UG/L	: 5.0K
P34704	CIS-1,3-DICHLOROPROPENE	UG/L	: 5.0K
P34576	2-CHLOROETHYLVINYL ETHER	UG/L	: 5.0K
P32104	BROMOFORM	UG/L	: 5.0K
P34516	1,1,2,2-TETRACHLOROETHANE	UG/L	: 5.0K
P34475	TETRACHLOROETHYLENE	UG/L	: 5.0K
P78131	TOLUENE	UG/L	: 5.0K
P34301	CHLOROBENZENE	UG/L	: 5.0K
P78113	ETHYLBENZENE	UG/L	: 5.0K
P81551	XYLENE	UG/L	: 5.0K

AGENCY USE ONLY

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECORD CODE: L P C S M 0 1 (1–7) TRANS CODE: A (8)

REPORT DUE DATE 36 M / D / Y 41 FEDERAL ID NUMBER

SITE INVENTORY NUMBER 119 0900002 (9–18)
REGION S CO. Madison
Roxana / Barton #2
LOCATION RESPONSIBLE PARTY

MONITOR POINT NUMBER G210 (19–22) (see Instructions)
DATE COLLECTED 03/16/87 (23 M D Y 28)
IEPA LAB X (29) (see Instructions)

FOR IEPA USE ONLY — COMPLAINT NO.

DATE RECEIVED 42 M / D / Y 47
SAMPLING PURPOSE CODE 4 (48) (see Instructions)
TIME CARD PROGRAM CODE LP 50 (49–52) & UNIT CODE M (53)

BACKGROUND SAMPLE (X) 54
TIME COLLECTED (24 HR CLOCK) 09:25 (55 H M 5)
UNABLE TO COLLECT SAMPLE (see Instructions) 59
MONITOR POINT SAMPLED BY R (see Instructions) 60 OTHER (SPECIFY)
SAMPLE FIELD FILTERED - INORGANICS (X) 61 ORGANICS (X) 62

SAMPLE APPEARANCE 63 PRIVATE WELL USED FOR DRINKING WILLAREDT RENTAL HOUSE 102

COLLECTOR COMMENTS 103 GEORGE WILLAREDT RR #6 EDWARDSVILLE IL 62025 656-6052 142

SPECIAL INSTRUCTIONS TO LAB PRIVATE WELL PROJECT [X] INORGANIC LIST + TOC
USE SW-846 PROCEDURES: YES ___ NO X

C. Reeter — COLLECTED BY
CVR — INITIALS (143–145)
IEPA DLPC — DIVISION OR COMPANY
UPS — TRANSPORTED BY
DIVISION OR COMPANY

LAB USE ONLY

LAB SAMPLE NO. 6704164
LAB NAME ~~ENVIRONMENTAL PROTECTION AGENCY~~ Division of Laboratory Services ~~2125 South First Street Champaign, Illinois 61820~~
LAB ID NO. 000B (146–149)
DATE RECEIVED MAR 17 1987
AND ADDRESS
TIME RECEIVED 11A
SAMPLE TEMP OKAY ✓ (Y/N) SAMPLE PROPERLY PRESERVED ✓ (Y/N) DATE COMPLETED ___ FORWARD MAY 6 198
LAB COMMENTS 150 ___ 199

SUPERVISOR SIGNATURE CHAMPAIGN

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (Columns 9-29 from above)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE		STORET NUMBER	REMARKS SEE INST	REPLICATE	< OR >	VALUE	REPORTING LEVEL DIGITS TO L OR R	REPORTING LEVEL L OR R OF DECIMAL
	DEPTH TO WATER (ft. below LS)	507F	72019 (30–34)	35	36	37	38 ___ 47	48	49
	ELEVATION OF GW SURFACE (ft. ref MSL)	508F	71993						
X	TOTAL WELL DEPTH (ft. below LS)	509F	72008				20.		
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	505F	00431						
	REDOX POTENTIAL (millivolt) - Field	506F	00090						
	pH (units) - Field	500F	00400						
	SPEC CONDUCTANCE (umhos) - Field	503F	00094						
	TEMP OF WATER SAMPLE (°C) - Field	502F	00010						

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $25,000 for each day the failure continues, a fine up to $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

IL 532-1218
LPC 160 3/84

IEPA/DLPC

CHEMICAL ANALYSIS FORM

AGENCY USE ONLY

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER G 2 1 0 (19–22)

REGION S CO. Madison

Roxana / Burton #2

FACILITY NAME

AQUEOUS LIQUIDS NOT FIELD FILTERED

DATE COLLECTED 03 16 87 (23 M D Y 28)

IEPA LAB (x or Blank) X (29)

	LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER	REMARKS		< OR >	VALUE	REPORTING LEVEL DIGITS TO LEFT OR R	REPORTING LEVEL DIGITS TO RIGHT OR DECIMAL
* X	119T COD, MG/L	00335 (30–34)	(35)	(36)	(37)	5. (38–47)	(48)	(49)
X	100T PH, LAB - SU	00403				7.6		
X	103T ALKALINITY AS CACO3 MG/L	00410				389.		
X	111T AMMONIA NITROGEN, TOT MG/L	00610			<	0.1		
X	110T NITRITE + NITRATE, TOT MG/L	00630				44.		
X	116T CYANIDE, TOTAL MG/L AS CN	00720			<	0.005		
X	160T SODIUM, TOTAL MG/L AS NA	00929				~~25~~ 24.5 JA		
X	108T CHLORIDE, TOTAL MG/L AS CL	00940				264.		
X	109T SULFATE, TOTAL MG/L AS SO4	00945				314.		
X	107T FLUORIDE, TOTAL MG/L AS F	00951				0.23		
X	144T ARSENIC, TOTAL UG/L AS AS	01002			<	1.		
X	145T BARIUM, TOTAL UG/L AS BA	01007				123.		
X	106T BORON, TOTAL UG/L AS B	01022			<	~~100.~~ ~~106.~~ JA 150		
X	146T CADMIUM TOTAL UG/L AS CD	01027			<	3.		
X	147T CHROMIUM, TOTAL UG/L AS CR	01034			<	5.		
X	149T COPPER, TOTAL UG/L AS CU	01042			~~X~~ JA	JA 7.8 JA		
X	150T IRON, TOTAL UG/L AS FE	01045			<	~~535~~ 50. JA		
X	151T LEAD, TOTAL UG/L AS PB	01051			<	5.		
X	152T MANGANESE, TOTAL UG/L AS MN	01055				~~118~~ 9. JA		
X	154T NICKEL, TOTAL UG/L AS NI	01067			<	5.		
X	156T SILVER, TOTAL UG/L AS AG	01077			<	3.		
X	157T ZINC, TOTAL UG/L AS ZN	01092			<	180. JA		
X	155T SELENIUM, TOTAL UG/L AS SE	01147				3.		
X	112T PHENOLS, TOTAL UG/L	32730			<	5.		
X	102T RESIDUE ON EVA.-180°C MG/L	70300				1540.		
X	153T MERCURY, TOTAL UG/L AS HG	71900			<	0.05		
X	TOC					2.6		

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SAMPLE NUMBER : B704164
SAMPLING POINT DESC. : ROXANA BARTON #2

SUBMITTING SOURCE # : SITE # : 1190900002G210
DATE COLLECTED : 870316 TIME COLLECTED : 0925 SAMPLING PROGRAM :

COLLECTED BY : C REETER DELIVERED BY : UPS
COMMENTS :
FUNDING CODE : LP50 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : LPWT SAMPLE PURPOSE CODE : O

DATE RECEIVED : 870317 TIME RECEIVED : 1100 RECEIVED BY : PMD
LAB OBSERVATIONS : REPORTING INDICATOR :
SUPERVISORS INITIALS : RPF NOTE : K = LESS THAN VALUE

P00403	PH-LABORATORY	UNITS	: 7.8	P70300	(ROE) TDS @ 180C	MG/L	: 1540
P00410	ALKALINITY,TOTAL	MG/L	: 389	~~P01022~~	~~BORON,TOTAL~~	~~UG/L~~	~~: 100K~~
P00951	FLUORIDE,TOTAL	MG/L	: 0.23	P00940	CHLORIDE,TOTAL	MG/L	: 264
P00945	SULFATE,TOTAL	MG/L	: 314	P00630	NITRATE&NO2-NTOTAL	MG/L	: 44
P00610	AMMONIA-N,TOTAL	MG/L	: 0.1K	P32730	PHENOLS,TOTAL	UG/L	: 5K
P00720	CYANIDE,TOTAL	MG/L	: 0.005K	P00335	COD,TOTAL	MG/L	: 5
P00680	CARBON,T-ORG(TOC)	MG/L	: 2.6	P01002	ARSENIC,TOTAL	UG/L	: 1K
P01051	LEAD,TOT.FURNACE	UG/L	: 5K	P71900	MERCURY,TOTAL	UG/L	: 0.05K
P01147	SELENIUM,TOTAL	UG/L	: 3	P00916	CALCIUM,TOTAL	MG/L	: 252
P00927	MAGNESIUM,TOTAL	MG/L	: 149	P00929	SODIUM,TOTAL	MG/L	: 24
P00937	POTASSIUM,TOTAL	MG/L	: 1.8	P01105	ALUMINUM,TOTAL	UG/L	: 152
P01007	BARIUM,TOTAL	UG/L	: 123	P01022	BORON,TOTAL	UG/L	: 50K
P01012	BERYLLIUM,TOTAL	UG/L	: 0.5K	P01027	CADMIUM,TOTAL	UG/L	: 3K
P01034	CHROMIUM,TOTAL	UG/L	: 5K	P01042	COPPER,TOTAL	UG/L	: 7
P01037	COBALT,TOTAL	UG/L	: 13	P01045	IRON,TOTAL	UG/L	: 50K
P01055	MANGANESE,TOTAL	UG/L	: 9	P01067	NICKEL,TOTAL	UG/L	: 5K
P01077	SILVER,TOTAL	UG/L	: 3K	P01082	STRONTIUM,TOTAL	UG/L	: 407
P01087	VANADIUM,TOTAL	UG/L	: 7	P01092	ZINC,TOTAL	UG/L	: 100K
P00900	HARDNESS CALC.	MG/L	: 1240C				

RECORD CODE | L | P | C | S | M | 0 | 1 | (1–7) TRANS CODE | A | (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 36 M __ / D __ / Y 41

FEDERAL ID NUMBER _____

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER (see Instructions) G 2 0 1 (19–22)

REGION S CO. Madison

DATE COLLECTED 01/08/87 (23 M / D / Y 28)

Roxana / Barton #2

FACILITY NAME

IEPA LAB (x or Blank) (see Instructions) X (29)

FOR IEPA USE ONLY COMPLAINT NO. _____

DATE RECEIVED 42 M __ / D __ / Y 47

SAMPLING PURPOSE CODE (see Instructions) 4 (48)

TIME CARD PROGRAM CODE L P S 0 (49–52) & UNIT CODE M (53)

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) 15:2 (55 H)

UNABLE TO COLLECT SAMPLE (see Instructions) (59)

MONITOR POINT SAMPLED BY (see Instructions) R (60) OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) (61) ORGANICS (X)

SAMPLE APPEARANCE (63) USED FOR DRINKING

COLLECTOR COMMENTS (103) PRIVATE WELL - KEN HEDGER (102)
RT 6 EDWARDSVILLE (618)656-6656 (142)

SPECIAL INSTRUCTIONS TO LAB INORGANIC LIST

COLLECTED BY	INITIALS (143–145)	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
Rector Ballard	CVR	IEPA DLPC	UPS	

LAB USE ONLY

LAB SAMPLE NO. 870467

LAB NAME AND ADDRESS ENVIRONMENTAL PROTECTION AGENCY, Division of Laboratory Services, 2125 South First Street, Champaign, Illinois

LAB ID NO. 0 0 0 B (146–149)

DATE RECEIVED JAN 13 1987

TIME RECEIVED R

SAMPLE TEMP OKAY Y (Y/N) SAMPLE PROPERLY PRESERVED Y (Y/N) DATE COMPLETED _____ FORWARD MAR 12 19

LAB COMMENTS (150) _____ (199)

SUPERVISOR SIGNATURE CHAMPAIGN

RECORD CODE | L | P | C | S | M | 0 | 2 | (1–7) TRANS CODE | A | (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–34)	REMARKS (35)	TYPE (36)	< OR > (37)	VALUE (38–47)	REPORTING LEVEL DIGITS TO L OR R (48)	L OR OF DECIM (49)
*	DEPTH TO WATER (ft. below LS)	7 2 0 1 9						
	ELEVATION OF GW SURFACE (ft. ref MSL)	7 1 9 9 3						
X	TOTAL WELL DEPTH (ft. below LS)	7 2 0 0 8				20.0		
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	0 0 4 3 1						
	REDOX POTENTIAL (millivolt) - Field	0 0 0 9 0						
	pH (units) - Field	0 0 4 0 0						
	SPEC CONDUCTANCE (umhos) - Field	0 0 0 9 4						
	TEMP OF WATER SAMPLE (°F) - Field	0 0 0 1 1						
	RECEIVED							
LB	MAR 16 1987							

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $25,000 for each day the failure continues; a fine up to $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

IEPA/DLPC

CHEMICAL ANALYSIS FORM

AGENCY USE ONLY

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER 6 2 0 1 (19–22)

REGION S CO. Madison

Roxana / Barton #2

FACILITY NAME

AQUEOUS LIQUIDS NOT FIELD FILTERED

DATE COLLECTED 0 1 / 0 8 / 8 7 (23 M / D / Y 28)

IEPA LAB (x or Blank) X (29)

	LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–34)	(35)	(36)	< OR > (37)	VALUE (38–47)	REPORTING LEVEL DIGITS TO L OR R (48)	REPORTING LEVEL LOCATION OF DECIMAL (49)
* X	119T COD, MG/L	00335				5.		
X	100T PH, LAB - SU	00403				7.6		
X	103T ALKALINITY AS CACO3 MG/L	00410				155.		
X	111T AMMONIA NITROGEN, TOT MG/L	00610				0.18		
X	110T NITRITE + NITRATE, TOT MG/L	00630				8.6		
X	116T CYANIDE, TOTAL MG/L AS CN	00720			<	0.005		
X	160T SODIUM, TOTAL MG/L AS NA	00929				16.		
X	108T CHLORIDE, TOTAL MG/L AS CL	00940				13.		
X	109T SULFATE, TOTAL MG/L AS SO4	00945				33.		
X	107T FLUORIDE, TOTAL MG/L AS F	00951			<	0.1		
X	144T ARSENIC, TOTAL UG/L AS AS	01002			<	1.		
X	145T BARIUM, TOTAL UG/L AS BA	01007				69.		
X	106T BORON, TOTAL UG/L AS B	01022			<	100.		
X	146T CADMIUM TOTAL UG/L AS CD	01027			<	3.		
X	147T CHROMIUM, TOTAL UG/L AS CR	01034			<	5.		
X	149T COPPER, TOTAL UG/L AS CU	01042				30.		
X	150T IRON, TOTAL UG/L AS FE	01045			<	50.		
X	151T LEAD, TOTAL UG/L AS PB	01051			<	5.		
X	152T MANGANESE, TOTAL UG/L AS MN	01055			<	5.		
X	154T NICKEL, TOTAL UG/L AS NI	01067			<	5.		
X	156T SILVER, TOTAL UG/L AS AG	01077			<	3.		
X	157T ZINC, TOTAL UG/L AS ZN	01092				253.		
X	155T SELENIUM, TOTAL UG/L AS SE	01147			<	1.		
X	112T PHENOLS, TOTAL UG/L	32730			<	5.		
X	102T RESIDUE ON EVA.-180°C MG/L	70300				328.		
X	153T MERCURY, TOTAL UG/L AS HG	71900			<	0.05		
X	S. Conductivity					460.		

RECEIVED MAR 17 1987

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SAMPLE NUMBER : 5700467
SAMPLING POINT DESC. : ROXANA BARTON #2 K HEDGER WELL

SUBMITTING SOURCE # : SITE # : 1190900002G201
DATE COLLECTED : 870108 TIME COLLECTED : 1520 SAMPLING PROGRAM :

COLLECTED BY : REETER/BALLARD DELIVERED BY : UPS
COMMENTS :
FUNDING CODE : LP50 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : LPWT SAMPLE PURPOSE CODE : 0

DATE RECEIVED : 870113 TIME RECEIVED : 1700 RECEIVED BY : MAD
LAB OBSERVATIONS : REPORTING INDICATOR :
SUPERVISORS INITIALS : RPF NOTE : K = LESS THAN VALUE

P00403	PH-LABORATORY	UNITS	: 7.6
P00095	CONDUCTIVITY	UMHOS/CM	: 460
P70300	(ROE) TDS @ 180C	MG/L	: 328
P00410	ALKALINITY,TOTAL	MG/L	: 155
P01022	BORON,TOTAL	UG/L	: 100K
P00951	FLUORIDE,TOTAL	MG/L	: 0.1K
P00940	CHLORIDE,TOTAL	MG/L	: 13
P00945	SULFATE,TOTAL	MG/L	: 33
P00630	NITRATE&NO2-NTOTAL	MG/L	: 8.6
P00610	AMMONIA-N,TOTAL	MG/L	: 0.1K
P32730	PHENOLS,TOTAL	UG/L	: 5K
P00720	CYANIDE,TOTAL	MG/L	: 0.005K
P00335	COD,TOTAL	MG/L	: 5
P01002	ARSENIC,TOTAL	UG/L	: 1K
P01051	LEAD,TOTAL	UG/L	: 5K
P71900	MERCURY,TOTAL	UG/L	: 0.05K
P01147	SELENIUM,TOTAL	UG/L	: 1K
P00916	CALCIUM,TOTAL	MG/L	: 60
P00927	MAGNESIUM,TOTAL	MG/L	: 17
P00929	SODIUM,TOTAL	MG/L	: 16
P00937	POTASSIUM,TOTAL	MG/L	: 2.7
P01105	ALUMINUM,TOTAL	UG/L	: 50K
P01007	BARIUM,TOTAL	UG/L	: 69
P01022	BORON,TOTAL	UG/L	: 77
P01012	BERYLLIUM,TOTAL	UG/L	: 0.5K
P01027	CADMIUM,TOTAL	UG/L	: 3K
P01034	CHROMIUM,TOTAL	UG/L	: 5K
P01042	COPPER,TOTAL	UG/L	: 30
P01037	COBALT,TOTAL	UG/L	: 5K
P01045	IRON,TOTAL	UG/L	: 50K
P01055	MANGANESE,TOTAL	UG/L	: 5K
P01067	NICKEL,TOTAL	UG/L	: 5K

RECEIVED
MAR 16 1987

SAMPLE NUMBER : 8700467

P01077	SILVER,TOTAL	UG/L	: 3K
P01082	STRONTIUM,TOTAL	UG/L	: 85
P01087	VANADIUM,TOTAL	UG/L	: 5K
P01092	ZINC,TOTAL	UG/L	: 253
P00900	HARDNESS CALC.	MG/L	: 2220
P72008	WELL DEPTH,TOTAL	FT	: 20.0

RECEIVED
MAR 16 1987

RECORD CODE L P C S M 0 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 36 M / D / Y 41

FEDERAL ID NUMBER D052946

SITE INVENTORY NUMBER 9 1 1 9 0 9 0 0 0 0 2 18

MONITOR POINT NUMBER (see Instructions) 19 G 2 0 1 22

REGION S CO. Madison

DATE COLLECTED 23 M 01 / D 08 / Y 28 87

Roxana / Barton #2

FACILITY NAME

IEPA LAB (x or Blank) (see Instructions) X 29

FOR IEPA USE ONLY COMPLAINT NO.

DATE RECEIVED 42 M / D / Y 47

SAMPLING PURPOSE CODE (see Instructions) 4 48

TIME CARD PROGRAM CODE 49 L P 5 0 52 & UNIT CODE 53 M

BACKGROUND SAMPLE (X) 54

TIME COLLECTED (24 HR CLOCK) 55 H 15 2

UNABLE TO COLLECT SAMPLE (see Instructions) 59

MONITOR POINT SAMPLED BY (see Instructions) 60 R OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) 61 ORGANICS (X)

SAMPLE APPEARANCE 63 Used for drinking

COLLECTOR COMMENTS 103 PRIVATE WELL - KEN HEDGER, RT 6, EDWARDSVILLE, IL. 618 656-6656 102 142

SPECIAL INSTRUCTIONS TO LAB PRIVATE WELL LP50 ANALYSIS + ANALYSE SPECIFICALLY FOR TCE

COLLECTED BY	INITIALS	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
Reeter Ballard	CVR 143 145	IEPA-DLPC	UPS	

LAB USE ONLY

LAB SAMPLE NO. D052946 CMC LAB NAME Springfield Lab LAB ID NO. 146 149

DATE RECEIVED JAN 13 1987 AND ADDRESS

TIME RECEIVED

SAMPLE TEMP OKAY (Y/N) SAMPLE PROPERLY PRESERVED (Y/N) DATE COMPLETED FORWARD 2-13-87

LAB COMMENTS 150

J Hurley 199

SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER	REMARKS	REPLICATE	< OR >	VALUE	REPORTING LEVEL DIGITS TO L OR R	L OR DECIM
*	DEPTH TO WATER (ft. below LS)	30 72019 34	35	36	37	38 . 47	48	49
	ELEVATION OF GW SURFACE (ft. ref MSL)	71993				.		
X	TOTAL WELL DEPTH (ft. below LS)	72008				20.		
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	00431				.		
	REDOX POTENTIAL (millivolt) - Field	00090				.		
	pH (units) - Field	00400				.		
	SPEC CONDUCTANCE (umhos) - Field	00094				.		
	TEMP OF WATER SAMPLE (°F) - Field	00011				.		
						.		
						D052946		

FEB 18 1987 IEPA-DLPC

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1 2, Section 1004 and 1021 Disclosure of this information is required. Failure to do so may result in a civil penalty up to $25,000 for each day the failure continues, a fine up to $1,000 00 and imprisonment up to one year This form has been approved by the Forms Management Center.

*Only Keypunch Lines with Data in Column 25 - Column 33-47

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SAMPLE NUMBER : D752945
SAMPLING POINT DESC. : MADISON/ROXANA/BARTON #2 HEDGER G201

SUBMITTING SOURCE # : SITE # : 1190900002
DATE COLLECTED : 870108 TIME COLLECTED : 1520 SAMPLING PROGRAM :

COLLECTED BY : REETER/BALLARD DELIVERED BY : MESS
COMMENTS :
FUNDING CODE : LP50 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : SAMPLE PURPOSE CODE : C

DATE RECEIVED : 870112 TIME RECEIVED : 1000 RECEIVED BY : CMC
LAB OBSERVATIONS : 1 GAL/2 VIALS REPORTING INDICATOR :
SUPERVISORS INITIALS : JTH NOTE : K = LESS THAN VALUE

P39340	LINDANE	UG/L :	.01K
P39410	HEPTACHLOR	UG/L :	.01K
P39330	ALDRIN	UG/L :	.01K
P39422	HEPTACHLOR EPOXIDE	UG/L :	.01K
P39348	ALPHA CHLORDANE	UG/L :	.01K
P39810	GAMMA CHLORDANE	UG/L :	.01K
P39380	DIELDRIN	UG/L :	.01K
P39390	ENDRIN	UG/L :	.01K
P39480	METHOXYCHLOR	UG/L :	.05K
P39327	O,P'-DDE	UG/L :	.01K
P39320	P,P'-DDE	UG/L :	.01K
P39315	O,P'-DDD	UG/L :	.01K
P39310	P,P'-DDD	UG/L :	.01K
P39305	O,P'-DDT	UG/L :	.01K
P39300	P,P'-DDT	UG/L :	.01K
P39400	TOXAPHENE	UG/L :	1.0K
P39516	TOTAL PCBS	UG/L :	0.1K
P38871	PHORATE	UG/L :	.05K
P39570	DIAZINON	UG/L :	.05K
P39357	RONNEL	UG/L :	.05K
P39600	METHYL PARATHION	UG/L :	.05K
P82088	TERBUFOS (COUNTER)	UG/L :	.05K
P81294	FONOFOS (DYFONATE)	UG/L :	.05K
P81403	CHLOROPYRIFOS (DURSBAN)	UG/L :	.05K
P39530	MALATHION	UG/L :	.05K
P39398	ETHION	UG/L :	.05K
P81284	TRIFLURALIN (TREFLAN)	UG/L :	.01K
P39630	ATRAZINE (AATREX)	UG/L :	.05K
P77825	ALACHLOR (LASSO)	UG/L :	.02K
P39356	METOLACHLOR (DUAL)	UG/L :	0.1K
P81757	CYANAZINE (BLADEX)	UG/L :	.05K
P39730	2,4-D	UG/L :	0.1K
P39760	SILVEX	UG/L :	0.05K
P32106	CHLOROFORM	UG/L :	1.0K

FEB 16 1987

SAMPLE NUMBER : D752946

P32101	DICHLOROBROMOMETHANE	UG/L : 1.0K
P32105	CHLORODIBROMOMETHANE	UG/L : 1.0K
P32104	BROMOFORM	UG/L : 1.0K
P34423	METHYLENE CHLORIDE	UG/L : 1.0K
P34501	1,1-DICHLOROETHYLENE	UG/L : 1.0K
P34496	1,1-DICHLOROETHANE	UG/L : 1.0K
P34546	TRANS-1,2-DICHLOROETHYLENE	UG/L : 1.0K
P77279	1,2-DICHLOROETHANE	UG/L : 1.0K
P34506	1,1,1-TRICHLOROETHANE	UG/L : 1.0K
P32102	CARBON TETRACHLORIDE	UG/L : 1.0K
P39180	TRICHLOROETHYLENE	UG/L : 358
P34475	TETRACHLOROETHYLENE	UG/L : 1.0K
P34301	CHLOROBENZENE	UG/L : 1.0K
P34716	DICHLOROBENZENE	UG/L : 1.0K
P78124	BENZENE	UG/L : 1.0K
P78131	TOLUENE	UG/L : 1.0K
P78113	ETHYLBENZENE	UG/L : 1.0K
P81551	XYLENE	UG/L : 1.0K

001 : NO OTHER ORGANIC COMPOUNDS WERE DETECTED IN THE EXTRACTS OF THIS SAMPLE.

FEB 18 1987

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SAMPLE NUMBER : D752947
SAMPLING POINT DESC. : BLANK W/52946

SUBMITTING SOURCE # : SITE # : 1190900002
DATE COLLECTED : 870108 TIME COLLECTED : 1520 SAMPLING PROGRAM :

COLLECTED BY : REETER/BALLARD DELIVERED BY : MESS
COMMENTS :
FUNDING CODE : LP50 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : SAMPLE PURPOSE CODE : 0

DATE RECEIVED : 870113 TIME RECEIVED : 1000 RECEIVED BY : CMC
LAB OBSERVATIONS : 2 BLANKS REPORTING INDICATOR :
SUPERVISORS INITIALS : JTH NOTE : K = LESS THAN VALUE

P32106	CHLOROFORM	UG/L	: 1.0K
P32101	DICHLOROBROMOMETHANE	UG/L	: 1.0K
P32105	CHLORODIBROMOMETHANE	UG/L	: 1.0K
P32104	BROMOFORM	UG/L	: 1.0K
P34423	METHYLENE CHLORIDE	UG/L	: 1.0K
P34501	1,1-DICHLOROETHYLENE	UG/L	: 1.0K
P34496	1,1-DICHLOROETHANE	UG/L	: 1.0K
P34546	TRANS-1,2-DICHLOROETHYLENE	UG/L	: 1.0K
P77279	1,2-DICHLOROETHANE	UG/L	: 1.0K
P34506	1.1,1-TRICHLOROETHANE	UG/L	: 1.0K
P32102	CARBON TETRACHLORIDE	UG/L	: 1.0K
P39180	TRICHLOROETHYLENE	UG/L	: 1.0K
P34475	TETRACHLOROETHYLENE	UG/L	: 1.0K
P34301	CHLOROBENZENE	UG/L	: 1.0K
P34716	DICHLOROBENZENE	UG/L	: 1.0K
P78124	BENZENE	UG/L	: 1.0K
P78131	TOLUENE	UG/L	: 1.0K
P78113	ETHYLBENZENE	UG/L	: 1.0K
P81551	XYLENE	UG/L	: 1.0K

FEB 18 1987

RECORD CODE L P C S M 0 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 01/15/87 (36 M D Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER L 1 9 0 9 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER G 1 0 1 (19–22) (see Instructions)

REGION S CO. MADISON

DATE COLLECTED 11/12/86 (23 M D Y 28)

ROXANNA/BARTON No. 2

FACILITY NAME

INITIAL IEPA LAB (x or Blank) (see Instructions) (29)

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED 01/12/87 (42 M D Y 47)

SAMPLING PURPOSE CODE (see Instructions) (48)

TIME CARD

PROGRAM CODE (49–52) & UNIT CODE (53)

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) 125 (55 H)

UNABLE TO COLLECT SAMPLE (see Instructions) (59)

MONITOR POINT SAMPLED BY (see Instructions) A (60) OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) X (61) ORGANICS (X)

SAMPLE APPEARANCE TAN COLOR, TURBID, ODORLESS (63–102)

COLLECTOR COMMENTS (103–142)

SPECIAL INSTRUCTIONS TO LAB

COLLECTOR INITIALS (143–145) CLS DIVISION OR COMPANY ENVIRONMENTAL

TRANSPORTER DIVISION OR COMPANY

LAB USE ONLY

LAB SAMPLE NO. 720030 LAB NAME E LAB ID NO. 022 (149)

DATE RECEIVED 11/12/86 AND ADDRESS

TIME RECEIVED 1740

SAMPLE TEMP OKAY Y (Y/N) SAMPLE PROPERLY PRESERVED Y (Y/N) DATE COMPLETED FORWARD

LAB COMMENTS (150–199)

SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER	< OR >	VALUE	REPORT LEVEL
* X	DEPTH TO WATER (ft. below LS)	72019		2.	2
X	ELEVATION OF GW SURFACE (ft. ref MSL)	71993		6.6	2
	TOTAL WELL DEPTH (ft. below LS)	72008		39.4	2
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	00431		.	1
	REDOX POTENTIAL (millivolt) - Field	00090		.	
X	pH (units) - Field	00400		6.85	2
	SPEC CONDUCTANCE (umhos) - Field	00094		761.	1
X	TEMP OF WATER SAMPLE (°F) - Field	00011		57.	1
X	WELL DEPTH ELE FT RE MS	72020		56.40	2
X	DEPTH TO WATER FR MP FT	72109		2.	2

RECEIVED

This Agency is authorized to require this information under Illinois Revised Statutes 1979, Chapter 111 1/2 Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $25,000 for each day the failure continues, a fine up to $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

*Only Keypunch Lines with Data in Column 35 or Columns 38-47

EPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER G 1 0 1 (19–22)

REGION S CO. MADISON

DATE COLLECTED 11 12 86 (23 M D Y 28)

ROXANNA/BARTON No. 2 INITIAL

FACILITY NAME

IEPA LAB (x or Blank) (29)

LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–34)	(35)	(36)	< OR > (37)	VALUE (38–47)	REPORTING LEVEL (48)	(49)
T ALK CACO3 MG/L LAB	00410				343.	1	L
NH3+NH4- N DISS MG/L	00608				0.051	3	R
NO2 & NO3 N DISS MG/L	00631				3.95	2	R
PHOS-DISS MG/L P	00666				0.19	2	R
T ORG C AS C MG/L	00680				7.19	2	R
CYANIDE CN, TOTAL MG/L	00720				0.003	3	R
CALCIUM CA, DISS MG/L	00915				62.6	1	R
MGNSIUM MG, DISS MG/L	00925				98.5	1	R
SODIUM NA, DISS MG/L	00930				7.26	2	R
PTSSIUM K, DISS MG/L	00935				0.538	3	R
CHLORIDE CL, DISS MG/L	00941				0.43	2	R
SULFATE SO4, DISS MG/L	00946				860	1	R
FLUORIDE F, DISS MG/L	00950				0.25	2	R
ARSENIC AS, DISS UG/L	01000			<	5.	1	L
BARIUM BA, DISS UG/L	01005				173.	1	L
BORON B, DISS UG/L	01020				14.	1	L
CADMIUM CD, DISS UG/L	01025				5.	1	L
CHROMIUM CR, DISS UG/L	01030				20.	1	L
IRON FE, DISS UG/L	01046				60.	2	L
LEAD PB, DISS UG/L	01049				9.	1	L
MANGANESE MN, DISS UG/L	01056				11.	1	L
NICKEL NI, DISS UG/L	01065			<	50.	2	L
SILVER AG, DISS UG/L	01075			<	5.	1	L
ZINC ZN, DISS UG/L	01090				27.	1	L
SELENIUM SE, DISS UG/L	01145			<	5.	1	L
PHENOLS TOTAL UG/L	32730			<	5.	1	L
RESIDUE ON EVAP 180°	70300				520.	1	L
MERCURY HG, DISS UG/L	71890			<	0.2	1	R

RECEIVED JAN 12 1987 IEPA-DLPC

RECORD CODE L P C S M 0 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 01/15/87 (36 M D Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

REGION S CO. MADISON

ROXANNA/BARTON NO. 2 ROUTINE

FACILITY NAME

MONITOR POINT NUMBER G 1 0 2 (19–22) (see Instructions)

DATE COLLECTED 11/12/86 (23 M D Y 28)

IEPA LAB (x or Blank) (see Instructions) (29)

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED 01/12/87 (42 M D Y 47)

SAMPLING PURPOSE CODE (see Instructions) (48)

TIME CARD PROGRAM CODE (49–52) & UNIT CODE (53)

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) 1234 (55 H M 60)

UNABLE TO COLLECT SAMPLE (see Instructions) (59)

MONITOR POINT SAMPLED BY (see Instructions) A (60) OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) X (61) ORGANICS (X) (62)

SAMPLE APPEARANCE (63) CLEAR, COLORLESS, ODORLESS (102)

COLLECTOR COMMENTS (103) (142)

SPECIAL INSTRUCTIONS TO LAB

Chris L Segafredo — COLLECTED BY; CLS (143–145) INITIALS; Environmental Analysis — DIVISION OR COMPANY; Chris L Segafredo — TRANSPORTED BY; Environmental Analysis — DIVISION OR COMPANY

LAB USE ONLY

LAB SAMPLE NO. 720031 LAB NAME Environmental Analysis, Inc LAB ID NO. 0021 (146–149)

DATE RECEIVED 11/12/86 AND ADDRESS 3278 N. Lindbergh

TIME RECEIVED 1740 Florissant, MO 63033

SAMPLE TEMP OKAY Y (Y/N) SAMPLE PROPERLY PRESERVED Y (Y/N) DATE COMPLETED 12/4/86 FORWARD 1/7/87

LAB COMMENTS (150) (199)

Chris L Segafredo

SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORTING LEVEL	
	DEPTH TO WATER (ft. below LS)	72019 (30–34)	(35)	(36)	(37)	14.84 (38–47)	2 (48)	R (49)
X	ELEVATION OF GW SURFACE (ft. ref MSL)	71993				452.41	2	R
	TOTAL WELL DEPTH (ft. below LS)	72008				50.36	2	R
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	00431						
	REDOX POTENTIAL (millivolt) - Field	00090						
	pH (units) - Field	00400				6.85	2	R
	SPEC CONDUCTANCE (umhos) - Field	00094				830.	1	L
	TEMP OF WATER SAMPLE (°F) - Field	00011				60.	1	L

RECEIVED JAN 12 1987 IEPA-DLPC

... 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a cond

RECORD CODE L P C S M 0 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 01/15/87 (36 M D Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

REGION S CO. MADISON

ROXANNA/BARTON No. 2

FACILITY NAME

INITIAL

MONITOR POINT NUMBER 6 1 0 3 (19–22)
(see Instructions)

DATE COLLECTED 11/12/86 (23 M D Y 28)

IEPA LAB (x or Blank) (29)
(see Instructions)

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED 01/12/87 (42 M D Y 47)

SAMPLING PURPOSE CODE (48)
(see Instructions)

TIME CARD PROGRAM CODE (49–52) & UNIT CODE (53)

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) 120 (55 H M)

UNABLE TO COLLECT SAMPLE (59)
(see Instructions)

MONITOR POINT SAMPLED BY A (60)
(see Instructions)

OTHER (SPECIFY)

SAMPLE FIELD FILTERED · INORGANICS (X) X (61) ORGANICS (X)

SAMPLE APPEARANCE (62) CLEAR + COLORLESS, ODORLESS (102)

COLLECTOR COMMENTS (103) (142)

SPECIAL INSTRUCTIONS TO LAB

COLLECTED BY	INITIALS (143–145)	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
Chris Stegfried	CLS	Environmental Analysis	Chris Stegfried	Environmental Analysis

LAB USE ONLY

LAB SAMPLE NO. 720032

LAB NAME Environmental Analysis, Inc

LAB ID NO. 0022 (146–149)

DATE RECEIVED 11/12/86

AND ADDRESS 3278 N. Lindbergh, Florissant

TIME RECEIVED 1740

SAMPLE TEMP OKAY Y (Y/N)

SAMPLE PROPERLY PRESERVED Y (Y/N)

DATE COMPLETED 12/4/86 FORWARD 1/7/87

LAB COMMENTS (150) (199)

Chris Stegfried
SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORT LEVEL
* X	DEPTH TO WATER (ft. below LS)	72019 (30–34)	(35)	(36)	(37)	8.08 (38–47)	2 (48)
X	ELEVATION OF GW SURFACE (ft. ref MSL)	71993				436.85	2
	TOTAL WELL DEPTH (ft. below LS)	72008				24.74	2
	ALKALINITY TOTAL (mg/l as CaCO3) · Field	00431				•	
	REDOX POTENTIAL (millivolt) · Field	00090				•	
X	pH (units) · Field	00400				6.80	2
X	SPEC CONDUCTANCE (umhos) · Field	00094				962.	1
X	TEMP OF WATER SAMPLE (°F) · Field	00011				64.	1
X	WELL DEPTH ELE FT REF MSL	72020				420.19	2
X	DEPTH TO WATER FR MP FT	72109				9.04	2

JAN 12 1987

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EPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER 6 1 0 3 (19–22)

REGION 5 CO. MADISON

DATE COLLECTED 1 1 1 2 8 6 (23 M D Y 28)

ROXANNA/BARTON No. 2 (FACILITY NAME)

INITIAL

IEPA LAB (x or Blank) (29)

LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORTING LEVEL	
T ALK CACO3 MG/L LAB	00410				411.	1	L
NH3+NH4- N DISS MG/L	00608				0.026	3	R
NO2 & NO3 N DISS MG/L	00631				0.59	2	R
PHOS-DISS MG/L P	00666				0.10	2	R
T ORG C AS C MG/L	00680				5.17	2	R
CYANIDE CN, TOTAL MG/L	00720				0.002	3	R
CALCIUM CA, DISS MG/L	00915				84.5	1	R
MGNSIUM MG, DISS MG/L	00925				59.9	1	R
SODIUM NA, DISS MG/L	00930				9.68	2	R
PTSSIUM K, DISS MG/L	00935				0.886	3	R
CHLORIDE CL, DISS MG/L	00941				0.19	2	R
SULFATE SO4, DISS MG/L	00946				93.0	1	R
FLUORIDE F, DISS MG/L	00950				0.23	2	R
ARSENIC AS, DISS UG/L	01000			<	5.	1	L
BARIUM BA, DISS UG/L	01005				119.	1	L
BORON B, DISS UG/L	01020				49.	1	L
CADMIUM CD, DISS UG/L	01025			<	5.	1	L
CHROMIUM CR, DISS UG/L	01030				10.	1	L
IRON FE, DISS UG/L	01046			<	50	2	L
LEAD PB, DISS UG/L	01049				6.	1	L
MANGANESE MN, DISS UG/L	01056				45	1	L
NICKEL NI, DISS UG/L	01065			<	50.	2	L
SILVER AG, DISS UG/L	01075				5.	1	L
ZINC ZN, DISS UG/L	01090				28	1	L
SELENIUM SE, DISS UG/L	01145			<	5.	1	L
PHENOLS TOTAL UG/L	32730			<	5.	1	L
RESIDUE ON EVAP 180°	70300				618.	1	L
MERCURY HG, DISS UG/L	71890			<	0.2	1	R

RECEIVED
JAN 12 1987
IEPA-DLPC

RECORD CODE L P C S M 0 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 01/15/87 (36 M D Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

REGION S CO. MADISON

ROXANNA/BARTON No. 2

FACILITY NAME

INITIAL

MONITOR POINT NUMBER G 1 0 4 (19–22) (see Instructions)

DATE COLLECTED 11/11/86 (23 M D Y 28)

IEPA LAB (x or Blank) (see Instructions) (29)

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED 01/12/87 (42 M D Y 47)

SAMPLING PURPOSE CODE (see Instructions) (48)

TIME CARD PROGRAM CODE (49–52) & UNIT CODE (53)

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) (55 H M)

UNABLE TO COLLECT SAMPLE (see Instructions) J (59)

MONITOR POINT SAMPLED BY (see Instructions) (60) OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) (61) ORGANICS (X)

SAMPLE APPEARANCE (63–102)

COLLECTOR COMMENTS (103–142)

SPECIAL INSTRUCTIONS TO LAB

COLLECTED BY	INITIALS	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
Chris L Segafredo	CLS (143–145)	Environmental Analysis	Chris L Segafredo	Environmental Analysis

LAB USE ONLY

LAB SAMPLE NO. LAB NAME LAB ID NO. (146–149)

DATE RECEIVED AND ADDRESS

TIME RECEIVED

SAMPLE TEMP OKAY (Y/N) SAMPLE PROPERLY PRESERVED (Y/N) DATE COMPLETED FORWARD

LAB COMMENTS (150–199)

SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORT LEVEL
* X	DEPTH TO WATER (ft. below LS)	72019 (30–34)	(35)	(36)	(37)	(38–47)	(48)
X	ELEVATION OF GW SURFACE (ft. ref MSL)	71993					
	TOTAL WELL DEPTH (ft. below LS)	72008					
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	00431					
	REDOX POTENTIAL (millivolt) - Field	00090					
X	pH (units) - Field	00400					
X	SPEC CONDUCTANCE (umhos) - Field	00094					
X	TEMP OF WATER SAMPLE (°F) - Field	00011					
X	WELL DEPTH ELE FT RE MSL	72020					
X	DEPTH TO WATER FR MP FT	72109					

RECEIVED JAN 12 1987 IEPA-DLPC

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a c... This form has been approved by the Forms Management Center

IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER G 1 0 4 (19–22)

REGION S CO. MADISON

DATE COLLECTED 1 1 / 1 1 / 86 (23 M D Y 28)

ROXANNA/BARTON No. 2 INITIAL

FACILITY NAME

IEPA LAB (x or Blank) (29)

	LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORTING LEVEL	
*	T ALK CACO3 MG/L LAB	00410 (30–34)	35	36	37	38 — — — — . — — — — 47	48	49
	NH3+NH4- N DISS MG/L	00608				.		
	NO2 & NO3 N DISS MG/L	00631				.		
	PHOS-DISS MG/L P	00666				.		
	T ORG C AS C MG/L	00680				.		
	CYANIDE CN, TOTAL MG/L	00720				.		
	CALCIUM CA, DISS MG/L	00915				.		
	MGNSIUM MG, DISS MG/L	00925				.		
	SODIUM NA, DISS MG/L	00930				.		
	PTSSIUM K, DISS MG/L	00935				.		
	CHLORIDE CL, DISS MG/L	00941				.		
	SULFATE SO4, DISS MG/L	00946				.		
	FLUORIDE F, DISS MG/L	00950				.		
	ARSENIC AS, DISS UG/L	01000				.		
	BARIUM BA, DISS UG/L	01005				.		
	BORON B, DISS UG/L	01020				.		
	CADMIUM CD, DISS UG/L	01025				.		
	CHROMIUM CR, DISS UG/L	01030				.		
	IRON FE, DISS UG/L	01046				.		
	LEAD PB, DISS UG/L	01049				.		
	MANGANESE MN, DISS UG/L	01056				.		
	NICKEL NI, DISS UG/L	01065				.		
	SILVER AG, DISS UG/L	01075				.		
	ZINC ZN, DISS UG/L	01090				.		
	SELENIUM SE, DISS UG/L	01145				.		
	PHENOLS TOTAL UG/L	32730				.		
	RESIDUE ON EVAP 180° C MG/L	70300				.		
	MERCURY HG, DISS UG/L	71890				.		

RECEIVED JAN 12 1987

*Only Keypunch Lines with Data in Column 35 or Columns 38-47

RECORD CODE L P C S M 0 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 01/15/87 (36 M D Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER G 1 0 5 (19–22) (see Instructions)

REGION S CO. MADISON

DATE COLLECTED 11/10/86 (23 M D Y 28)

ROXANNA/BARTON No. 2 — FACILITY NAME

INITIAL

IEPA LAB (x or Blank) (see Instructions) 29

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED 01/12/87 (42 M D Y 47)

SAMPLING PURPOSE CODE (see Instructions) 48

TIME CARD PROGRAM CODE 49 — 52 & UNIT CODE 53

BACKGROUND SAMPLE (X) 54

TIME COLLECTED (24 HR CLOCK) 55 H — M 56

UNABLE TO COLLECT SAMPLE (see Instructions) 59

MONITOR POINT SAMPLED BY (see Instructions) 60 OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) 61 ORGANICS (X) 62

SAMPLE APPEARANCE 63 — 102

COLLECTOR COMMENTS 103 — 142

SPECIAL INSTRUCTIONS TO LAB

COLLECTED BY — INITIALS C L S (143–145) — DIVISION OR COMPANY Environmental Analysis — TRANSPORTED BY — DIVISION OR COMPANY Environmental Analysis

LAB USE ONLY

LAB SAMPLE NO.

LAB NAME AND ADDRESS

LAB ID NO. 146 — 149

DATE RECEIVED

TIME RECEIVED

SAMPLE TEMP OKAY (Y/N) SAMPLE PROPERLY PRESERVED (Y/N) DATE COMPLETED FORWARD

LAB COMMENTS 150 — 199

SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORTING LEVEL	
X	DEPTH TO WATER (ft. below LS)	72019 (30–34)	35	36	37	38 — 47	48	49
X	ELEVATION OF GW SURFACE (ft. ref MSL)	71993						
	TOTAL WELL DEPTH (ft. below LS)	72008						
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	00431						
	REDOX POTENTIAL (millivolt) - Field	00090						
X	pH (units) - Field	00400						
X	SPEC CONDUCTANCE (umhos) - Field	00094						
X	TEMP OF WATER SAMPLE (°F) - Field	00011						
X	WELL DEPTH ELE FT RE MSL	72020						
X	DEPTH TO WATER FR MP, FT	72109						

RECEIVED JAN 12 1987

The Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2 Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty. The form has been approved by the Forms Management Center

IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER G 1 0 5 (19–22)

REGION S CO. MADISON

DATE COLLECTED 11 M 11 D 86 Y (23–28)

ROXANNA/BARTON No. 2 INITIAL

FACILITY NAME

IEPA LAB (x or Blank) (29)

LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE		
T ALK CACO3 MG/L LAB	00410						
NH3+NH4- N DISS MG/L	00608						
NO2 & NO3 N DISS MG/L	00631						
PHOS-DISS MG/L P	00666						
T ORG C AS C MG/L	00680						
CYANIDE CN, TOTAL MG/L	00720						
CALCIUM CA, DISS MG/L	00915						
MGNSIUM MG, DISS MG/L	00925						
SODIUM NA, DISS MG/L	00930						
PTSSIUM K, DISS MG/L	00935						
CHLORIDE CL, DISS MG/L	00941						
SULFATE SO4, DISS MG/L	00946						
FLUORIDE F, DISS MG/L	00950						
ARSENIC AS, DISS UG/L	01000						
BARIUM BA, DISS UG/L	01005						
BORON B, DISS UG/L	01020						
CADMIUM CD, DISS UG/L	01025						
CHROMIUM CR, DISS UG/L	01030						
IRON FE, DISS UG/L	01046						
LEAD PB, DISS UG/L	01049						
MANGANESE MN, DISS UG/L	01056						
NICKEL NI, DISS UG/L	01065						
SILVER AG, DISS UG/L	01075						
ZINC ZN, DISS UG/L	01090						
SELENIUM SE, DISS UG/L	01145						
PHENOLS TOTAL UG/L	32730						
RESIDUE ON EVAP 180° C MG/L	70300						
MERCURY HG, DISS UG/L	71890						

RECEIVED JAN 15 1987 IEPA/DLPC

RECORD CODE L P C S M 0 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 01/15/87 (36 M / D / Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

REGION S CO. MADISON

ROXANNA/BARTON No. 2

FACILITY NAME

INITIAL

MONITOR POINT NUMBER G 1 0 6 (19–22) (see Instructions)

DATE COLLECTED 11/12/86 (23 M / D / Y 28)

IEPA LAB (x or Blank) (see Instructions) 29

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED 01/12/87 (42 M / D / Y 47)

SAMPLING PURPOSE CODE (see Instructions) 48

TIME CARD

PROGRAM CODE 49 — — 52 & UNIT CODE 53

BACKGROUND SAMPLE (X) 54

TIME COLLECTED (24 HR CLOCK) 1222 (55 H M)

UNABLE TO COLLECT SAMPLE (see Instructions) 59

MONITOR POINT SAMPLED BY (see Instructions) A (60) OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) X (61) ORGANICS (X)

SAMPLE APPEARANCE CLEAR, COLORLESS, ODORLESS (62–102)

COLLECTOR COMMENTS 103 — — — 142

SPECIAL INSTRUCTIONS TO LAB

COLLECTED BY (143)	INITIALS (145)	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
Chris Stafford	CLS	Environmental Analysis	Chris Stafford	Environmental Analysis

LAB USE ONLY

LAB SAMPLE NO. 72033 LAB NAME Environmental Analysis, Inc LAB ID NO. 0026 (146–149)

DATE RECEIVED 11/12/86 AND ADDRESS 3278 N. Lindbergh

TIME RECEIVED 1740 Florissant, MO 63033

SAMPLE TEMP OKAY Y (Y/N) SAMPLE PROPERLY PRESERVED Y (Y/N) DATE COMPLETED 12/4/86 FORWARD 1/7/87

LAB COMMENTS 150 — 199

Chris Stafford

SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

		FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REP LIMIT
*	X	DEPTH TO WATER (ft. below LS)	72019 (30–34)	35	36	37	7.95 (38–47)	
	X	ELEVATION OF GW SURFACE (ft. ref MSL)	71993				449.95	
		TOTAL WELL DEPTH (ft. below LS)	72008					
		ALKALINITY TOTAL (mg/l as CaCO3) - Field	00431					
		REDOX POTENTIAL (millivolt) - Field	00090					
	X	pH (units) - Field	00400				7.00	
	X	SPEC CONDUCTANCE (umhos) - Field	00094				761.	
	X	TEMP OF WATER SAMPLE (°F) - Field	00011				63	
	X	WELL DEPTH ELE FT RE MSL	72020				438.8	
	X	DEPTH TO WATER FR MP FT	72109				9.02	

JAN 12 1987

This Agency is authorized to require this information under Illinois Revised Statutes, 1979 Chapter 111 1/2, Section 1004 and 1021. Disclosure of the information is required. Failure to do so may result in [illegible] up to $25,000 for each day the failure continues [illegible] up to $1,000.00 and imprisonment up to one year. The form has been approved by the Forms Management Center [illegible] with Data in Column 35 or Columns 38-47

IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER G 1 0 6 (19–22)

REGION S CO. MADISON

DATE COLLECTED 11/12/86 (23 M D Y 28)

ROXANNA/BARTON No. 2 INITIAL

FACILITY NAME

IEPA LAB (x or Blank) 29

LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORTING LEVEL	
T ALK CACO3 MG/L LAB	00410				347.	1	L
NH3+NH4- N DISS MG/L	00608				0.021	3	R
NO2 & NO3 N DISS MG/L	00631				4.05	2	R
PHOS-DISS MG/L P	00666				0.15	2	R
T ORG C AS C MG/L	00680				6.56	2	R
CYANIDE CN, TOTAL MG/L	00720				0.048	3	R
CALCIUM CA, DISS MG/L	00915				46.0	1	R
MGNSIUM MG, DISS MG/L	00925				71.6	1	R
SODIUM NA, DISS MG/L	00930				10.5	1	R
PTSSIUM K, DISS MG/L	00935				1.64	2	R
CHLORIDE CL, DISS MG/L	00941			<	0.05	2	R
SULFATE SO4, DISS MG/L	00946				71.0	1	R
FLUORIDE F, DISS MG/L	00950				0.27	2	R
ARSENIC AS, DISS UG/L	01000			<	5.	1	L
BARIUM BA, DISS UG/L	01005				114.	1	L
BORON B, DISS UG/L	01020				11.	1	L
CADMIUM CD, DISS UG/L	01025				5.	1	L
CHROMIUM CR, DISS UG/L	01030			<	5.	1	L
IRON FE, DISS UG/L	01046				400.	2	L
LEAD PB, DISS UG/L	01049				8.	1	L
MANGANESE MN, DISS UG/L	01056				33.	1	L
NICKEL NI, DISS UG/L	01065			<	50.	2	L
SILVER AG, DISS UG/L	01075				16.	1	L
ZINC ZN, DISS UG/L	01090				40.	1	L
SELENIUM SE, DISS UG/L	01145			<	5.	1	L
PHENOLS TOTAL UG/L	32730				9.	1	L
RESIDUE ON EVAP 180C MG/L	70300				480.	1	L
MERCURY HG, DISS UG/L	71890			<	0.2	1	R

RECEIVED JAN 12 1987 IEPA-DLPC

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 2 (16)

MONITOR POINT NUMBER (17) G 1 0 5 (20) DATE COLLECTED (21) 0 8 2 4 8 3 (26)

Madison Co. - LPC REGION (27) S

Roxanna (Location) / SCA-Barton #2 (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected 11:10 a.m. ~~p.m.~~ Unable to collect sample (X) (30)

Stick-up (31) 1.8 (33) ft. Depth to water (from T.O.C.) (34) 2 1 . (36) 5 ft.

Sample temp. (37) 6 4 (39) °F Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ (41) *

Sample Appearance: cloudy - slight odor

Collector comments: well depth 41.5'
fast recharge

W. T. Fitzgerald — Collected by
LACLEDE GAS LAB — Div. or Company
W. T. Fitzgerald — Transported by
LACLEDE GAS LAB — Div. or Company

LAB USE ONLY

Lab No. _____

Date Rec'd 8/24/83

Rec'd by ARM Time 2:45 ~~a.m.~~ p.m.

Sample temp. acceptable YES ~~NO~~
Sample properly preserved YES ~~NO~~
Date completed 9/7/83
Date forwarded 9/14/83

Supervisor Signature

Name Laclede Gas Lab
Address of Lab 4118 Shrewsbury ~~St. Louis, Mo.~~ 63119

LPCSM020
Lab Comments:

(27) As less tha (36)
(37) Ba less tha (46)
(47) B less than (56)
(57) Cd less tha (66)
(67) Cr less tha (76)

Private Lab (X) X (77)
IEPA Lab (X) (78)

LPCSM030

	PARAMETERS+	PPM*
27	Alkalinity[1]	
31	Ammonia as N	0.18
37	Arsenic As	0.003
44	Barium Ba	0.4
49	BOD -5	
53	Boron B	0.1
58	Cadmium Cd	0.03
64	Calcium Ca	
69	COD	20
73	Chloride Cl	4

LPCSM040

27	Chromium Cr (tot)	0.10
33	Chromium Cr^{+6}	
39	Copper Cu	0.10
45	Cyanide CN	0.020
52	Fecal Coli (#/100 ml)	
56	Fluoride F	0.4
61	Hardness $CaCO_3$	
65	Iron Fe	0.1
70	Lead Pb	0.05

LPCSM050

27	Magnesium Mg	
32	Manganese Mn	0.4
38	Mercury Hg	0.001
46	Nickel Ni	
51	Nitrate-nitrite N	3.6
56	Oil and Grease	
60	pH (Units)	7.4
63	Phenolics	0.010
70	Phosphorus P	
76	Potassium K	

LPCSM060

27	R.O.E. (180°C)	658
31	Selenium Se	0.012
38	Silver Ag	0.06
44	Sodium Na	7.2
49	SC (umhos/cm)	450
53	Sulfate SO_4	116.3
58	Zinc Zn	0.1
63	TOC	2.1

+ Analyses are to be performed on unfiltered samples. Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

RECEIVED
OCT 21 1983
D.L.P.C.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0 (1)–(8) SITE INVENTORY NUMBER 1 1 9 0 9 0 0 2 (9)–(16)

MONITOR POINT NUMBER G 1 0 5 (17)–(20) DATE COLLECTED (21)–(26)

Madison Co. - LPC REGION S (27)

Roxanna / SCA-Barton #2
(Location) (Responsible Party)

Legal (1); Illegal (2); Indicate One: 1 (28) Board Order (X) (29)

Time Collected _____ a.m. p.m. Unable to collect sample (X) (30)

Stick-up (31)_(33) ft. Depth to water (from T.O.C.) (34)_(36) ft.

Sample temp. (37)_ (39) °C Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ (41)

Sample Appearance: _____

Collector comments: _____

Collected by _____ Div. or Company _____

Transported by _____ Div. or Company _____

LAB USE ONLY

Lab No. _____

Date Rec'd _____

Rec'd by _____ Time _____ a.m. p.m.

Sample temp. acceptable YES NO
Sample properly preserved YES NO
Date completed _____
Date forwarded _____

Supervisor Signature

Name _____
Address of Lab _____

LPCSM020
Lab Comments:

C u l e s s t h a (27)–(36)

C n l e s s t h a (37)–(46)

F e l e s s t h a (47)–(56)

P b l e s s t h a (57)–(66)

P h e l e s s t h (67)–(76)

Private Lab (X) X (77)

IEPA Lab (X) (78)

RECEIVED
OCT 21 1983
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

LPCSM030

•	PARAMETERS+	PPM*
27	Alkalinity[1]	
31	Ammonia as N	
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	
58	Cadmium Cd	
64	Calcium Ca	
69	COD	
73	Chloride Cl	

LPCSM040

27	Chromium Cr (tot)	
33	Chromium Cr^{+6}	
39	Copper Cu	
45	Cyanide CN	
52	Fecal Coli (#/100 ml)	
56	Fluoride F	
61	Hardness $CaCO_3$	
65	Iron Fe	
70	Lead Pb	

LPCSM050

27	Magnesium Mg	
32	Manganese Mn	
38	Mercury Hg	
46	Nickel Ni	
51	Nitrate-nitrite N	
56	Oil and Grease	
60	pH (Units)	
63	Phenolics	
70	Phosphorus P	
76	Potassium K	

LPCSM060

27	R.O.E. (180°C)	
31	Selenium Se	
38	Silver Ag	
44	Sodium Na	
49	SC (µmhos/cm)	
53	Sulfate SO_4	
58	Zinc Zn	
63	TOX	0.038

* Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

IL 532-0313

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 2 (16)

MONITOR POINT NUMBER (17) G 1 0 5 (20) DATE COLLECTED (21) (26)

Madison Co. - LPC REGION (27) S

Roxanna / SCA-Barton #2
(Location) (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected _____ a.m. p.m. Unable to collect sample (X) (30)

Stick-up (31) . (33) ft. Depth to water (from T.O.C.) (34) . (36) ft.

Sample temp. (37) ° (39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ (41)

Sample Appearance: _____

Collector comments: _____

Collected by _____ Div. or Company _____

Transported by _____ Div. or Company _____

LAB USE ONLY

Lab No. _____

Date Rec'd _____

Rec'd by _____ Time _____ a.m. p.m.

Sample temp. acceptable YES NO
Sample properly preserved YES NO

Date completed _____
Date forwarded _____

Supervisor Signature

Name _____
Address of Lab _____

LPCSM020
Lab Comments:

(27) A g l e s s t h a (36)

(37) Z n l e s s t h a (46)

(47) (56)

(57) (66)

(67) (76)

Private Lab (X) (77) X

IEPA Lab (X) (78)

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LPCSM030

	PARAMETERS+	PPM*
27	Alkalinity[1]	
31	Ammonia as N	
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	
58	Cadmium Cd	
64	Calcium Ca	
69	COD	
73	Chloride Cl	

LPCSM040

27	Chromium Cr (tot)	
33	Chromium Cr^{+6}	
39	Copper Cu	
45	Cyanide CN	
52	Fecal Coli (#/100 ml)	
56	Fluoride F	
61	Hardness $CaCO_3$	
65	Iron Fe	
70	Lead Pb	

LPCSM050

27	Magnesium Mg	
32	Manganese Mn	
38	Mercury Hg	
46	Nickel Ni	
51	Nitrate-nitrite N	
56	Oil and Grease	
60	pH (Units)	
63	Phenolics	
70	Phosphorus P	
76	Potassium K	

LPCSM060

27	R.O.E. (180°C)	
31	Selenium Se	
38	Silver Ag	
44	Sodium Na	
49	SC (umhos/cm)	
53	Sulfate SO_4	
58	Zinc Zn	
63		

* Analyses are to be performed on unfiltered samples. Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

IL 532-0313

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 2 (16)

MONITOR POINT NUMBER (17) G 1 (20) 0 4 DATE COLLECTED (21) 0 8 2 4 8 3 (26)

Madison Co. - LPC REGION (27) S

Roxanna / SCA-Barton #2
(Location) (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected 12:50 ~~a.m.~~ p.m. Unable to collect sample (X) (30)

Stick-up (31) . (33) ft. Depth to water (from T.O.C.) (34) . (36) ft.

Sample temp. (37) 6 2 (39) o F Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) (41)

Sample Appearance: Turbid - sulfur odor

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OCT 21 1983
EPA — DLPC
STATE OF ILLINOIS

Collector comments:

W. T. Fitzgerald — Collected by
LACLEDE GAS LAB — Div. or Company
W. T. Fitzgerald — Transported by
LACLEDE GAS LAB — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 8/24/83

Rec'd by ARM Time 2:45 ~~a.m.~~ p.m.

Sample temp. acceptable YES ~~NO~~
Sample properly preserved YES ~~NO~~

Date completed 9/7/83
Date forwarded 9/14/83

Supervisor Signature

Name LACLEDE GAS LAB
Address of Lab 4118 Shrewsbury St. Louis, MO. 63119

LPCSM020
Lab Comments:

B a l e s s t h a (27) (36)
B l e s s t h a n (37) (46)
C d l e s s t h a (47) (56)
C r l e s s t h a (57) (66)
C u l e s s t h a (67) (76)

Private Lab (X) X (77)
IEPA Lab (X) (78)

LPCSM030

	PARAMETERS*	PPM*
27	Alkalinity[1]	.
31	Ammonia as N	0.22
37	Arsenic As	0.004
44	Barium Ba	0.4
49	BOD -5	.
53	Boron B	0.1
58	Cadmium Cd	0.03
64	Calcium Ca	.
69	COD	16.
73	Chloride Cl	1.

LPCSM040

27	Chromium Cr (tot)	0.10
33	Chromium Cr^{+6}	.
39	Copper Cu	0.10
45	Cyanide CN	0.020
52	Fecal Coli (#/100 ml)	.
56	Fluoride F	0.4
61	Hardness $CaCO_3$	.
65	Iron Fe	0.2
70	Lead Pb	0.05

LPCSM050

27	Magnesium Mg	.
32	Manganese Mn	0.70
38	Mercury Hg	0.001
46	Nickel Ni	.
51	Nitrate-nitrite N	0.1
56	Oil and Grease	.
60	pH (Units)	7.0
63	Phenolics	0.010
70	Phosphorus P	.
76	Potassium K	.

LPCSM060

27	R.O.E. (180°C)	539.
31	Selenium Se	0.00
38	Silver Ag	0.06
44	Sodium Na	15.0
49	SC (umhos/cm)	500.
53	Sulfate SO_4	48.0
58	Zinc Zn	0.1
63	TOC	1.9

*Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 2 (16)

MONITOR POINT NUMBER (17) G 1 0 4 (20) DATE COLLECTED (21) (26)

Madison Co. - LPC REGION (27) S

Roxanna (Location) / SCA-Barton #2 (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected _____ a.m. p.m. Unable to collect sample (X) (30)

Stick-up (31) . (33) ft. Depth to water (from T.O.C.) (34) . (36) ft.

Sample temp. (37) ° (39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ (41)

Sample Appearance: _____

Collector comments: _____

Collected by _____ Div. or Company _____

Transported by _____ Div. or Company _____

LAB USE ONLY

Lab No. _____

Date Rec'd _____

Rec'd by _____ Time _____ a.m. p.m.

Sample temp. acceptable YES NO

Sample properly preserved YES NO

Date completed _____

Date forwarded _____

Supervisor Signature

Name _____

Address of Lab _____

LPCSM020
Lab Comments:

(27) C n l e s s t h a (36)

(37) P b l e s s t h a (46)

(47) P h e l e s s t h (56)

(57) S e l e s s t h a (66)

(67) A g l e s s t h a (76)

Private Lab (X) (77) X

IEPA Lab (X) (78)

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STATE OF ILLINOIS

LPCSM030

	PARAMETERS*	PPM*
27	Alkalinity[1]	
31	Ammonia as N	
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	
58	Cadmium Cd	
64	Calcium Ca	
69	COD	
73	Chloride Cl	

LPCSM040

27	Chromium Cr (tot)	
33	Chromium Cr^{+6}	
39	Copper Cu	
45	Cyanide CN	
52	Fecal Coli (#/100 ml)	
56	Fluoride F	
61	Hardness $CaCO_3$	
65	Iron Fe	
70	Lead Pb	

LPCSM050

27	Magnesium Mg	
32	Manganese Mn	
38	Mercury Hg	
46	Nickel Ni	
51	Nitrate-nitrite N	
56	Oil and Grease	
60	pH (Units)	
63	Phenolics	
70	Phosphorus P	
76	Potassium K	

LPCSM060

27	R.O.E. (180°C)	
31	Selenium Se	
38	Silver Ag	
44	Sodium Na	
49	SC (umhos/cm)	
53	Sulfate SO_4	
58	Zinc Zn	
65	TOX	0.065

*Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0 (1)–(8) SITE INVENTORY NUMBER 1 1 9 0 9 0 0 2 (9)–(16)

MONITOR POINT NUMBER G 1 0 4 (17)–(20) DATE COLLECTED (21)–(26)

Madison Co. - LPC REGION S (27)

Roxanna / SCA-Barton #2
(Location) (Responsible Party)

Legal (1); Illegal (2); Indicate One: 1 (28) Board Order (X) (29)

Time Collected _____ a.m. p.m. Unable to collect sample (X) (30)

Stick-up ___.___ ft. (31)–(33) Depth to water ___.___ ft. (from T.O.C.) (34)–(36)

Sample temp. ___ ° (37)–(39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ (41)

Sample Appearance: _____

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E.P.A. — D.L.P.C.
STATE OF ILLINOIS

Collector comments: _____

Collected by _____ Div. or Company _____

Transported by _____ Div. or Company _____

LAB USE ONLY

Lab No. _____

Date Rec'd _____

Rec'd by _____ Time _____ a.m. p.m.

Sample temp. acceptable YES NO
Sample properly preserved YES NO
Date completed _____
Date forwarded _____

Supervisor Signature

Name _____
Address of Lab _____

LPCSM020
Lab Comments:

Z n 1 e s s t h (27)–(36)

(37)–(46)

(47)–(56)

(57)–(66)

(67)–(76)

Private Lab (X) X (77)

IEPA Lab (X) (78)

LPCSM030

		PARAMETERS*	PPM*
27		Alkalinity[1]	
31		Ammonia as N	
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53		Boron B	
58		Cadmium Cd	
64		Calcium Ca	
69		COD	
73		Chloride Cl	

LPCSM040

27		Chromium Cr (tot)	
33		Chromium Cr^{+6}	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (#/100 ml)	
56		Fluoride F	
61		Hardness $CaCO_3$	
65		Iron Fe	
70		Lead Pb	

LPCSM050

27		Magnesium Mg	
32		Manganese Mn	
38		Mercury Hg	
46		Nickel Ni	
51		Nitrate-nitrite N	
56		Oil and Grease	
60		pH (Units)	
63		Phenolics	
70		Phosphorus P	
76		Potassium K	

LPCSM060

27		R.O.E. (180°C)	
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (umhos/cm)	
53		Sulfate SO_4	
58		Zinc Zn	
63			

*Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm as $CaCO_3$ at pH 4.5.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0 (1)(8) SITE INVENTORY NUMBER 1 1 9 0 9 0 0 2 (9)(16)

MONITOR POINT NUMBER G 1 0 2 (17)(20) DATE COLLECTED 0 8 2 4 8 3 (21)(26)

Madison Co. - LPC REGION S (27)

Roxanna (Location) / SCA-Barton #2 (Responsible Party)

Legal (1); Illegal (2); Indicate One: 1 (28) Board Order (X) (29)

Time Collected ~~12:30~~ ~~a.m.~~ p.m. Unable to collect sample (X) (30)

Stick-up ___ . ___ ft. (31)(33) Depth to water 2 0 . 8 ft. (from T.O.C.) (34)(36)

Sample temp. 6 3 o F (37)(39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ 1 (41)

Sample Appearance: turbid - sulfur odor

Collector comments: well depth 53.0'

W. T. Fitzgerald — Collected by
LACLEDE GAS LAB — Div. or Company
W. T. Fitzgerald — Transported by
LACLEDE GAS LAB — Div. or Company

LAB USE ONLY

Lab No. _____

Date Rec'd 8/24/83

Rec'd by ARN Time 2:45 ~~a.m.~~ p.m.

Sample temp. acceptable YES ~~NO~~
Sample properly preserved YES ~~NO~~
Date completed 9/7/83
Date forwarded 9/7/83

Supervisor Signature

Name Laclede Gas Lab
Address of Lab ~~4118 Shrewsbury St. Louis, MO 63119~~

LPCSM020
Lab Comments:

As less tha (27)(36)
Ba less tha (37)(46)
Cd less tha (47)(56)
Cr less tha (57)(66)
Cu less tha (67)(76)

Private Lab (X) X (77)
IEPA Lab (X) (78)

LPCSM030

	PARAMETERS+	PPM*
27	Alkalinity[1]	.
31	Ammonia as N	0.18
37	Arsenic As	0.003
44	Barium Ba	0.4
49	BOD -5	.
53	Boron B	0.2
58	Cadmium Cd	0.03
64	Calcium Ca	.
69	COD	28.
73	Chloride Cl	3.

LPCSM040

27	Chromium Cr (tot)	0.10
33	Chromium Cr^{+6}	.
39	Copper Cu	0.10
45	Cyanide CN	0.02
52	Fecal Coli (#/100 ml)	.
56	Fluoride F	0.4
61	Hardness $CaCO_3$	.
65	Iron Fe	0.1
70	Lead Pb	0.05

LPCSM050

27	Magnesium Mg	.
32	Manganese Mn	0.49
38	Mercury Hg	0.087
46	Nickel Ni	.
51	Nitrate-nitrite N	0.4
56	Oil and Grease	.
60	pH (Units)	7.5
63	Phenolics	0.010
70	Phosphorus P	.
76	Potassium K	.

LPCSM060

27	R.O.E. (180°C)	514.
31	Selenium Se	0.003
38	Silver Ag	0.06
44	Sodium Na	15.5
49	SC (umhos/cm)	300.
53	Sulfate SO_4	65.8
58	Zinc Zn	0.1
63	TOC	2.7

+ Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

RECEIVED OCT 21 1983 E.P.A. — D.L.P.C. ILLINOIS

IL 532-0212

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 2 (16)

MONITOR POINT NUMBER (17) G 1 0 2 (20) DATE COLLECTED (21) (26)

Madison Co. - LPC REGION (27) S

Roxanna (Location) / SCA-Barton #2 (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected _____ a.m. p.m. Unable to collect sample (X) (30)

Stick-up (31) . (33) ft. Depth to water (from T.O.C.) (34) . (36) ft.

Sample temp. (37) ° (39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ (41)

Sample Appearance: _____

Collector comments: _____

Collected by _____ Div. or Company _____

Transported by _____ Div. or Company _____

LAB USE ONLY

Lab No. _____

Date Rec'd _____

Rec'd by _____ Time _____ a.m. p.m.

Sample temp. acceptable YES NO

Sample properly preserved YES NO

Date completed _____

Date forwarded _____

Supervisor Signature

Name _____

Address of Lab _____

LPCSM020
Lab Comments:

(27) C n l e s s t h a (36)

(37) P b l e s s t h a (46)

(47) P h e l e s s t h (56)

(57) S e l e s s t h a (66)

(67) A g l e s s t h a (76)

Private Lab (X) (77) X

IEPA Lab (X) (78)

RECEIVED OCT 21 1983 E.P.A. — D.L.P.C. STATE OF ILLINOIS

LPCSM030

		PARAMETERS+	PPM*
27		Alkalinity[1]	
31		Ammonia as N	
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53		Boron B	
58		Cadmium Cd	
64		Calcium Ca	
69		COD	
73		Chloride Cl	

LPCSM040

27		Chromium Cr (tot)	
33		Chromium Cr^{+6}	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (#/100 ml)	
56		Fluoride F	
61		Hardness $CaCO_3$	
65		Iron Fe	
70		Lead Pb	

LPCSM050

27		Magnesium Mg	
32		Manganese Mn	
38		Mercury Hg	
46		Nickel Ni	
51		Nitrate-nitrite N	
56		Oil and Grease	
60		pH (Units)	
63		Phenolics	
70		Phosphorus P	
76		Potassium K	

LPCSM060

27		R.O.E. (180°C)	
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (umhos/cm)	
53		Sulfate SO_4	
58		Zinc Zn	
63			

+ Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

IL 532-0313

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 2 (16)

MONITOR POINT NUMBER (17) G 1 (20) 0 2 DATE COLLECTED (21) (26)

Madison Co. - LPC REGION (27) S

Roxanna (Location) / SCA-Barton #2 (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected _____ a.m. p.m. Unable to collect sample (X) (30)

Stick-up (31) . (33) ft. Depth to water (from T.O.C.) (34) . (36) ft.

Sample temp. (37) ° (39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ (41)

Sample Appearance: _____

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OCT 21 1983
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

Collector comments: _____

Collected by _____ Div. or Company _____

Transported by _____ Div. or Company _____

LAB USE ONLY

Lab No. _____

Date Rec'd _____

Rec'd by _____ Time _____ a.m. p.m.

Sample temp. acceptable YES NO
Sample properly preserved YES NO
Date completed _____
Date forwarded _____

Supervisor Signature

Name _____
Address of Lab _____

LPCSM020
Lab Comments:

(27) Z n l e s s t h a (36)
(37) (46)
(47) (56)
(57) (66)
(67) (76)

Private Lab (X) (77) X
IEPA Lab (X) (78)

LPCSM030

	PARAMETERS+	PPM*
27	Alkalinity[1]	
31	Ammonia as N	
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	
58	Cadmium Cd	
64	Calcium Ca	
69	COD	
73	Chloride Cl	

LPCSM040

27	Chromium Cr (tot)	
33	Chromium Cr^{+6}	
39	Copper Cu	
45	Cyanide CN	
52	Fecal Coli (#/100 ml)	
56	Fluoride F	
61	Hardness $CaCO_3$	
65	Iron Fe	
70	Lead Pb	

LPCSM050

27	Magnesium Mg	
32	Manganese Mn	
38	Mercury Hg	
46	Nickel Ni	
51	Nitrate-nitrite N	
56	Oil and Grease	
60	pH (Units)	
63	Phenolics	
70	Phosphorus P	
76	Potassium K	

LPCSM060

27	R.O.E. (180°C)	
31	Selenium Se	
38	Silver Ag	
44	Sodium Na	
49	SC (umhos/cm)	
53	Sulfate SO_4	
58	Zinc Zn	
63	T O X	0.043

+ Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

IL 532-0313

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 2 (16)

MONITOR POINT NUMBER (17) G 1 0 5 (20) DATE COLLECTED (21) 0 6 2 2 8 3 (26)

Madison Co. - LPC REGION (27) S

Roxanna / SCA-Barton #2
(Location) (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected 11:45 a.m. ~~p.m.~~ Unable to collect sample (X) (30)

Stick-up (31) . (33) ft. Depth to water (34) 21.5 (36) ft. (from T.O.C.)

Sample temp. (37) 57 ° (39) F Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) (41) 1

Sample Appearance: muddy - no odor

Collector comments: well depth 42.0' fast recharge

Scott MEIEROTTO LACLEDE LAB
Collected by " Div. or Company "
" "
Transported by Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd June 22, 1983

Rec'd by [illegible] Time 3:15 ~~a.m.~~ p.m.

Sample temp. acceptable YES NO
Sample properly preserved YES NO
Date completed July 20, 1983
Date forwarded July 21, 1983

[illegible]
Supervisor Signature

Name LACLEDE LAB
Address 4119 SHREWSBURY
of Lab ST LOUIS MO 63119

LPCSM020
Lab Comments:

(27) As LESS TH (36)
(37) Ba LESS TH (46)
(47) B LESS THA (56)
(57) Cd LESS TH (66)
(67) Cr LESS TH (76)

Private Lab (X) (77) X
IEPA Lab (X) (78)

RECEIVED OCT 21 1983 D.L.P.C. ILLINOIS

LPCSM030

	PARAMETERS+	PPM*
27	Alkalinity[1]	
31	Ammonia as N	0.18
37	Arsenic As	0.003
44	Barium Ba	0.4
49	BOD -5	
53	Boron B	0.1
58	Cadmium Cd	0.03
64	Calcium Ca	
69	COD	55
73	Chloride Cl	3

LPCSM040

27	Chromium Cr (tot)	0.10
33	Chromium Cr^{+6}	
39	Copper Cu	0.10
45	Cyanide CN	0.020
52	Fecal Coli (#/100 ml)	
56	Fluoride F	0.4
61	Hardness $CaCO_3$	
65	Iron Fe	0.1
70	Lead Pb	0.05

LPCSM050

27	Magnesium Mg	
32	Manganese Mn	1.23
38	Mercury Hg	0.000
46	Nickel Ni	
51	Nitrate-nitrite N	2.3
56	Oil and Grease	
60	pH (Units)	7.7
63	Phenolics	0.050
70	Phosphorus P	
76	Potassium K	

LPCSM060

27	R.O.E. (180°C)	558
31	Selenium Se	0.003
38	Silver Ag	0.06
44	Sodium Na	2.0
49	SC (umhos/cm)	700
53	Sulfate SO_4	77.5
58	Zinc Zn	0.1
63	TOC	3.0

+ Analyses are to be performed on unfiltered samples. Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 2 (16)

MONITOR POINT NUMBER (17) G 1 0 5 (20) DATE COLLECTED (21) (26)

Madison Co. - LPC REGION (27) S

Roxanna (Location) / SCA-Barton #2 (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected _____ a.m. p.m. Unable to collect sample (X) (30)

Stick-up (31) . (33) ft. Depth to water (from T.O.C.) (34) . (36) ft.

Sample temp. (37) ° (39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ (41)

Sample Appearance: _____

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OCT 21 1983
E.P.A. - D.L.P.C.
STATE OF ILLINOIS

Collector comments: _____

Collected by _____ Div. or Company _____

Transported by _____ Div. or Company _____

LAB USE ONLY

Lab No. _____

Date Rec'd _____

Rec'd by _____ Time _____ a.m. p.m.

Sample temp. acceptable YES NO
Sample properly preserved YES NO
Date completed _____
Date forwarded _____

Supervisor Signature

Name _____
Address of Lab _____

LPCSM020
Lab Comments:

(27) Cu LESS TH (36)
(37) CN LESS TH (46)
(47) Fe LESS TH (56)
(57) Pb LESS TH (66)
(67) Ph LESS TH (76)

Private Lab (X) (77) X
IEPA Lab (X) (78)

LPCSM030

		PARAMETERS+	PPM*
27		Alkalinity[1]	
31		Ammonia as N	
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53		Boron B	
58		Cadmium Cd	
64		Calcium Ca	
69		COD	
73		Chloride Cl	

LPCSM040

27		Chromium Cr (tot)	
33		Chromium Cr^{+6}	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (#/100 ml)	
56		Fluoride F	
61		Hardness $CaCO_3$	
65		Iron Fe	
70		Lead Pb	

LPCSM050

27		Magnesium Mg	
32		Manganese Mn	
38		Mercury Hg	
46		Nickel Ni	
51		Nitrate-nitrite N	
56		Oil and Grease	
60		pH (Units)	
63		Phenolics	
70		Phosphorus P	
76		Potassium K	

LPCSM060

27		R.O.E. (180°C)	
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (umhos/cm)	
53		Sulfate SO_4	
58		Zinc Zn	
63		TOX	0.01

+ Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

IL 532-0212

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 2 (16)

MONITOR POINT NUMBER (17) G 1 0 5 (20) DATE COLLECTED (21) (26)

Madison Co. - LPC REGION (27) S

Roxanna / SCA-Barton #2
(Location) (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected _____ a.m. p.m. Unable to collect sample (X) (30)

Stick-up (31) . (33) ft. Depth to water (from T.O.C.) (34) . (36) ft.

Sample temp. (37) ° (39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ (41)

Sample Appearance: _____

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OCT 21 1983
E.P.A. - D.L.P.C.
STATE OF ILLINOIS

Collector comments: _____

Collected by _____ Div. or Company _____

Transported by _____ Div. or Company _____

LAB USE ONLY

Lab No. _____

Date Rec'd _____

Rec'd by _____ Time _____ a.m. p.m.

Sample temp. acceptable YES NO
Sample properly preserved YES NO
Date completed _____
Date forwarded _____

Supervisor Signature

Name _____
Address of Lab _____

LPCSM020
Lab Comments:

(27) Se LESS TH (36)
(37) Ag LESS TH (46)
(47) TOX LESS T (56)
(57) (66)
(67) (76)

Private Lab (X) (77) X
IEPA Lab (X) (78)

LPCSM030

	PARAMETERS+	PPM*
27	Alkalinity[1]	
31	Ammonia as N	
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	
58	Cadmium Cd	
64	Calcium Ca	
69	COD	
73	Chloride Cl	

LPCSM040

27	Chromium Cr (tot)	
33	Chromium Cr^{+6}	
39	Copper Cu	
45	Cyanide CN	
52	Fecal Coli (#/100 ml)	
56	Fluoride F	
61	Hardness $CaCO_3$	
65	Iron Fe	
70	Lead Pb	

LPCSM050

27	Magnesium Mg	
32	Manganese Mn	
38	Mercury Hg	
46	Nickel Ni	
51	Nitrate-nitrite N	
56	Oil and Grease	
60	pH (Units)	
63	Phenolics	
70	Phosphorus P	
76	Potassium K	

LPCSM060

27	R.O.E. (180°C)	
31	Selenium Se	
38	Silver Ag	
44	Sodium Na	
49	SC (µmhos/cm)	
53	Sulfate SO_4	
58	Zinc Zn	
63		

*Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 2 (16)

MONITOR POINT NUMBER (17) G 1 (20) 0 4 DATE COLLECTED (21) 0 6 2 2 8 3 (26)

Madison Co. - LPC REGION (27) S

Roxanna / SCA-Barton #2
(Location) (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected 1:15 ~~a.m.~~ p.m. Unable to collect sample (X) (30)

Stick-up (31) . (33) ft. Depth to water (from T.O.C.) (34) . (36) ft.

Sample temp. (37) 58 ° (39) F Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) (41) 1

Sample Appearance: cloudy - no odor

Collector comments: fast recharge

Scott MEIEROTTO — Collected by
LACLEDE LAB — Div. or Company
Transported by — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd June 22, 1983

Rec'd by ARM Time 315 ~~a.m.~~ p.m.

Sample temp. acceptable YES NO
Sample properly preserved YES NO
Date completed July 20, 1983
Date forwarded July 21, 1983

ARHaun
Supervisor Signature

Name LACLEDE LAB
Address 4118 SHREWSBURY
of Lab ST. Louis Mo 63119

LPCSM020
Lab Comments:

(27) AS LESS TH (36)
(37) Ba LESS TH (46)
(47) Cd LESS TH (56)
(57) Cl LESS TH (66)
(67) Cr LESS TH (76)

Private Lab (X) (77) X
IEPA Lab (X) (78)

RECEIVED OCT 21 1983 EPA — D.L.P.C. STATE OF ILLINOIS

LPCSM030

	PARAMETERS+	PPM*
27	Alkalinity[1]	.
31	Ammonia as N	0.12
37	Arsenic As	0.003
44	Barium Ba	0.4
49	BOD -5	.
53	Boron B	0.1
58	Cadmium Cd	0.03
64	Calcium Ca	.
69	COD	39.
73	Chloride Cl	1.

LPCSM040

27	Chromium Cr (tot)	0.10
33	Chromium Cr^{+6}	.
39	Copper Cu	0.10
45	Cyanide CN	0.020
52	Fecal Coli (#/100 ml)	.
56	Fluoride F	0.4
61	Hardness $CaCO_3$	.
65	Iron Fe	0.1
70	Lead Pb	0.05

LPCSM050

27	Magnesium Mg	.
32	Manganese Mn	0.70
38	Mercury Hg	0.004
46	Nickel Ni	.
51	Nitrate-nitrite N	0.1
56	Oil and Grease	.
60	pH (Units)	7.5
63	Phenolics	0.050
70	Phosphorus P	.
76	Potassium K	.

LPCSM060

27	R.O.E. (180°C)	486.
31	Selenium Se	0.003
38	Silver Ag	0.06
44	Sodium Na	6.7
49	SC (umhos/cm)	690.
53	Sulfate SO_4	50.5
58	Zinc Zn	0.1
63	TOC	2.1

+ Analyses are to be performed on unfiltered samples. * Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0 (1)–(8) SITE INVENTORY NUMBER 1 1 9 0 9 0 0 2 (9)–(16)

MONITOR POINT NUMBER G 1 0 4 (17)–(20) DATE COLLECTED (21)–(26)

Madison Co. - LPC REGION S (27)

Roxanna (Location) / SCA-Barton #2 (Responsible Party)

Legal (1); Illegal (2); Indicate One: 1 (28) Board Order (X) (29)

Time Collected _____ a.m. p.m. Unable to collect sample (X) (30)

Stick-up ___.___ ft. (31) (33) Depth to water ___.___ ft. (from T.O.C.) (34) (36)

Sample temp. ___ ° (37) (39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ (41)

Sample Appearance: _____

Collector comments: _____

Collected by _____ Div. or Company _____

Transported by _____ Div. or Company _____

RECEIVED
OCT 21 1983
E.P.A. – D.L.P.C.
STATE OF ILLINOIS

LAB USE ONLY

Lab No. _____

Date Rec'd _____

Rec'd by _____ Time _____ a.m. p.m.

Sample temp. acceptable YES NO

Sample properly preserved YES NO

Date completed _____

Date forwarded _____

Supervisor Signature

Name _____

Address of Lab _____

LPCSM020
Lab Comments:

(27) Cu LESS TH (36)

(37) CN LESS TH (46)

(47) Fe LESS TH (56)

(57) Pb LESS TH (66)

(67) Ph EESS TH (76)

Private Lab (X) X (77)

IEPA Lab (X) (78)

LPCSM030

	PARAMETERS+	PPM*
27	Alkalinity[1]	
31	Ammonia as N	
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	
58	Cadmium Cd	
64	Calcium Ca	
69	COD	
73	Chloride Cl	

LPCSM040

27	Chromium Cr (tot)	
33	Chromium Cr^{+6}	
39	Copper Cu	
45	Cyanide CN	
52	Fecal Coli (#/100 ml)	
56	Fluoride F	
61	Hardness $CaCO_3$	
65	Iron Fe	
70	Lead Pb	

LPCSM050

27	Magnesium Mg	
32	Manganese Mn	
38	Mercury Hg	
46	Nickel Ni	
51	Nitrate-nitrite N	
56	Oil and Grease	
60	pH (Units)	
63	Phenolics	
70	Phosphorus P	
76	Potassium K	

LPCSM060

27	R.O.E. (180°C)	
31	Selenium Se	
38	Silver Ag	
44	Sodium Na	
49	SC (umhos/cm)	
53	Sulfate SO_4	
58	Zinc Zn	
63	TOX	0.01

+ Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0 (1)–(8) SITE INVENTORY NUMBER 1 1 9 0 9 0 0 2 (9)–(16)

MONITOR POINT NUMBER G 1 0 4 (17)–(20) DATE COLLECTED (21)–(26)

Madison Co. - LPC REGION S (27)

Roxanna (Location) / SCA-Barton #2 (Responsible Party)

Legal (1); Illegal (2); Indicate One: 1 (28) Board Order (X) (29)

Time Collected _____ a.m. p.m. Unable to collect sample (X) (30)

Stick-up ___ . ___ ft. (31) (33) Depth to water ___ . ___ ft. (from T.O.C.) (34) (36)

Sample temp. ___ ° (37) (39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ (41)

Sample Appearance: _____

RECEIVED
OCT 21 1983
E.P.A. – D.L.P.C.
STATE OF ILLINOIS

Collector comments: _____

Collected by _____ Div. or Company _____

Transported by _____ Div. or Company _____

LAB USE ONLY

Lab No. _____

Date Rec'd _____

Rec'd by _____ Time _____ a.m. p.m.

Sample temp. acceptable YES NO
Sample properly preserved YES NO
Date completed _____
Date forwarded _____

Supervisor Signature

Name _____
Address of Lab _____

LPCSM020
Lab Comments:

(27) Se LESS TH (36)
(37) Ag LESS TH (46)
(47) Zn LESS TH (56)
(57) TOX LESS T (66)
(67) (76)

Private Lab (X) X (77)
IEPA Lab (X) (78)

LPCSM030

	PARAMETERS+	PPM*
27	Alkalinity[1]	
31	Ammonia as N	
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	
58	Cadmium Cd	
64	Calcium Ca	
69	COD	
73	Chloride Cl	

LPCSM040

27	Chromium Cr (tot)	
33	Chromium Cr^{+6}	
39	Copper Cu	
45	Cyanide CN	
52	Fecal Coli (#/100 ml)	
56	Fluoride F	
61	Hardness $CaCO_3$	
65	Iron Fe	
70	Lead Pb	

LPCSM050

27	Magnesium Mg	
32	Manganese Mn	
38	Mercury Hg	
46	Nickel Ni	
51	Nitrate-nitrite N	
56	Oil and Grease	
60	pH (Units)	
63	Phenolics	
70	Phosphorus P	
76	Potassium K	

LPCSM060

27	R.O.E. (180°C)	
31	Selenium Se	
38	Silver Ag	
44	Sodium Na	
49	SC (umhos/cm)	
53	Sulfate SO_4	
58	Zinc Zn	
63		

+ Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 2 (16)

MONITOR POINT NUMBER (17) G 1 0 2 (20) DATE COLLECTED (21) 0 6 2 2 8 3 (26)

Madison Co. - LPC REGION (27) S

Roxanna (Location) / SCA-Barton #2 (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected 12:50 ~~a.m.~~ p.m. Unable to collect sample (X) (30)

Stick-up (31) . (33) ft. Depth to water (from T.O.C.) (34) 19.8 (36) ft.

Sample temp. (37) 59 (39) °F Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) (41) 1

Sample Appearance: muddy - no odor

Collector comments: well depth 52.8"

Scott MEIEROTTO LACLEDE LAB
Collected by " Div. or Company "
" "
Transported by Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd June 22, 1983

Rec'd by ARM Time 3:10 ~~a.m.~~ p.m.

Sample temp. acceptable (YES) NO

Sample properly preserved (YES) NO

Date completed July 20, 1983

Date forwarded July 21, 1983

Supervisor Signature

Name LACLEDE LAB

Address of Lab 4118 SHREWSBURY ST LOUIS MO 63119

LPCSM020 Lab Comments:

(27) AS LESS TH (36)

(37) BA LESS TH (46)

(47) B LESS THA (56)

(57) Cd LESS TH (66)

(67) Cr LESS TH (76)

Private Lab (X) (77) X

IEPA Lab (X) (78)

RECEIVED JUL 21 1983 C.P.A. — D.L.P.C. STATE OF ILLINOIS

LPCSM030

	PARAMETERS+	PPM*
27	Alkalinity[1]	.
31	Ammonia as N	0.07
37	Arsenic As	0.003
44	Barium Ba	0.4
49	BOD -5	.
53	Boron B	0.1
58	Cadmium Cd	0.03
64	Calcium Ca	.
69	COD	52.
73	Chloride Cl	1.

LPCSM040

27	Chromium Cr (tot)	0.10
33	Chromium Cr^{+6}	.
39	Copper Cu	0.10
45	Cyanide CN	0.020
52	Fecal Coli (#/100 ml)	.
56	Fluoride F	0.5
61	Hardness $CaCO_3$	.
65	Iron Fe	0.1
70	Lead Pb	0.05

LPCSM050

27	Magnesium Mg	.
32	Manganese Mn	1.12
38	Mercury Hg	0.000
46	Nickel Ni	.
51	Nitrate-nitrite N	0.5
56	Oil and Grease	.
60	pH (Units)	6.4
63	Phenolics	0.550
70	Phosphorus P	.
76	Potassium K	.

LPCSM060

27	R.O.E. (180°C)	452.
31	Selenium Se	0.003
38	Silver Ag	0.06
44	Sodium Na	5.5
49	SC (umhos/cm)	640.
53	Sulfate SO_4	74.2
58	Zinc Zn	0.1
63	TOC	1.6

+ Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 2 (16)

MONITOR POINT NUMBER (17) G 1 0 2 (20) DATE COLLECTED (21) (26)

Madison Co. - LPC REGION (27) S

Roxanna (Location) / SCA-Barton #2 (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected _____ a.m. p.m. Unable to collect sample (X) (30)

Stick-up (31) . (33) ft. Depth to water (from T.O.C.) (34) . (36) ft.

Sample temp. (37) ° (39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ (41)

Sample Appearance: _____

Collector comments: _____

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Collected by _____ Div. or Company _____

Transported by _____ Div. or Company _____

LAB USE ONLY

Lab No. _____

Date Rec'd _____

Rec'd by _____ Time _____ a.m. p.m.

Sample temp. acceptable YES NO

Sample properly preserved YES NO

Date completed _____

Date forwarded _____

AKMauer
Supervisor Signature

Name _____

Address of Lab _____

LPCSM020
Lab Comments:

(27) CU LESS TH (36)

(37) CN LESS TH (46)

(47) Fe LESS TH (56)

(57) Pb LESS TH (66)

(67) Se LESS TH (76)

Private Lab (X) (77) X

IEPA Lab (X) (78)

LPCSM030

		PARAMETERS+	PPM*
27		Alkalinity[1]	
31		Ammonia as N	
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53		Boron B	
58		Cadmium Cd	
64		Calcium Ca	
69		COD	
73		Chloride Cl	

LPCSM040

27		Chromium Cr (tot)	
33		Chromium Cr^{+6}	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (#/100 ml)	
56		Fluoride F	
61		Hardness $CaCO_3$	
65		Iron Fe	
70		Lead Pb	

LPCSM050

27		Magnesium Mg	
32		Manganese Mn	
38		Mercury Hg	
46		Nickel Ni	
51		Nitrate-nitrite N	
56		Oil and Grease	
60		pH (Units)	
63		Phenolics	
70		Phosphorus P	
76		Potassium K	

LPCSM060

27		R.O.E. (180°C)	
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (µmhos/cm)	
53		Sulfate SO_4	
58		Zinc Zn	
63		TOX	0.01

+ Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 2 (16)

MONITOR POINT NUMBER (17) G 1 0 2 (20) DATE COLLECTED (21) (26)

Madison Co. - LPC REGION (27) S

Roxanna (Location) / SCA-Barton #2 (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected _____ a.m. p.m. Unable to collect sample (X) (30)

Stick-up (31) . (33) ft. Depth to water (from T.O.C.) (34) . (36) ft.

Sample temp. (37) ° (39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ (41)

Sample Appearance: _____

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STATE OF ILLINOIS

Collector comments: _____

Collected by _____ Div. or Company _____

Transported by _____ Div. or Company _____

LAB USE ONLY

Lab No. _____

Date Rec'd _____

Rec'd by _____ Time _____ a.m. p.m.

Sample temp. acceptable YES NO
Sample properly preserved YES NO
Date completed _____
Date forwarded _____

Supervisor Signature

Name _____
Address of Lab _____

LPCSM020
Lab Comments:

(27) Ag LESS TH (36)
(37) Zn LESS TH (46)
(47) TOX LESS T (56)
(57) (66)
(67) (76)

Private Lab (X) (77) X
IEPA Lab (X) (78)

LPCSM030

	PARAMETERS+	PPM*
27	Alkalinity[1]	
31	Ammonia as N	
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	
58	Cadmium Cd	
64	Calcium Ca	
69	COD	
73	Chloride Cl	

LPCSM040

27	Chromium Cr (tot)	
33	Chromium Cr^{+6}	
39	Copper Cu	
45	Cyanide CN	
52	Fecal Coli (#/100 ml)	
56	Fluoride F	
61	Hardness $CaCO_3$	
65	Iron Fe	
70	Lead Pb	

LPCSM050

27	Magnesium Mg	
32	Manganese Mn	
38	Mercury Hg	
46	Nickel Ni	
51	Nitrate-nitrite N	
56	Oil and Grease	
60	pH (Units)	
63	Phenolics	
70	Phosphorus P	
76	Potassium K	

LPCSM060

27	R.O.E. (180°C)	
31	Selenium Se	
38	Silver Ag	
44	Sodium Na	
49	SC (umhos/cm)	
53	Sulfate SO_4	
58	Zinc Zn	
63		

+Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1]Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0 (1) (8) SITE INVENTORY NUMBER 1 1 9 0 9 0 0 2 (9) (16)

MONITOR POINT NUMBER G 1 0 1 (17) (20) DATE COLLECTED 0 6 2 2 8 3 (21) (26)

Madison Co. - LPC REGION S (27)

Roxanna / SCA-Barton #2
(Location) (Responsible Party)

Legal (1); Illegal (2); Indicate One: 1 (28) Board Order (X) (29)

Time Collected _____ a.m. p.m. Unable to collect sample (X) X (30)

Stick-up ___ . ___ ft. (31) (33) Depth to water ___ . ___ ft. (from T.O.C.) (34) (36)

Sample temp. ___ ° (37) (39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ (41)

Sample Appearance: _____

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Collector comments: well dry

OCT 21 1983

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STATE OF ILLINOIS

Collected by _____ Div. or Company _____

Transported by _____ Div. or Company _____

LAB USE ONLY

Lab No. _____

Date Rec'd _____

Rec'd by _____ Time _____ a.m. p.m.

Sample temp. acceptable YES NO
Sample properly preserved YES NO
Date completed _____
Date forwarded _____

A R Manner
Supervisor Signature

Name _____
Address _____
of Lab _____

LPCSM020
Lab Comments:

WELL DRY (27) (36)

(37) (46)

(47) (56)

(57) (66)

(67) (76)

Private Lab (X) X (77)

IEPA Lab (X) (78)

LPCSM030

	PARAMETERS+	PPM*
27	Alkalinity[1]	
31	Ammonia as N	
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	
58	Cadmium Cd	
64	Calcium Ca	
69	COD	
73	Chloride Cl	

LPCSM040

27	Chromium Cr (tot)	
33	Chromium Cr^{+6}	
39	Copper Cu	
45	Cyanide CN	
52	Fecal Coli (#/100 ml)	
56	Fluoride F	
61	Hardness $CaCO_3$	
65	Iron Fe	
70	Lead Pb	

LPCSM050

27	Magnesium Mg	
32	Manganese Mn	
38	Mercury Hg	
46	Nickel Ni	
51	Nitrate-nitrite N	
56	Oil and Grease	
60	pH (Units)	
63	Phenolics	
70	Phosphorus P	
76	Potassium K	

LPCSM060

27	R.O.E. (180°C)	
31	Selenium Se	
38	Silver Ag	
44	Sodium Na	
49	SC (umhos/cm)	
53	Sulfate SO_4	
58	Zinc Zn	
63		

+Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

IL 532-0313

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name Cahokia Creek - point A, upstream (North boundary)
(Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0 (1) (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 1 (9) (16)

MONITOR POINT NUMBER S 1 0 1 (17) (20)

DATE COLLECTED 0 6 1 6 8 1 (21) (26)

MADISON Co. - LPC REGION S (27)

ROXANNA (Location) / MAL - BARTON (Responsible Party)

Legal (1); Illegal (2); Indicate One: 1 (28) Board Order (X) (29)

Time Collected 3:15 a.m. p.m. Unable to collect sample (X) (30)

Stick-up (31) . (33) ft. Depth to water (from T.O.C.) (34) . (36) ft.

Sample temp. 72 (37) ° F (39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) (41)

Sample Appearance: CLEAR

Collector comments:

Rick Dardrach — Collected by
BARTTELBORT RHUTASEL — Div. or Company
" " — Transported by
" " — Div. or Company

LAB USE ONLY

Lab No. 81-6-234/LN21303

Date Rec'd 6/17/81

Rec'd by RW Time 2:45 p.m.

Sample temp. acceptable YES
Sample properly preserved YES

Date completed 7/10/81
Date forwarded 7/13/81

William A Rowe
Supervisor Signature

Name Industrial Test.Labs, Inc.
Address 2350 S. 7th St.
of Lab St. Louis, MO. 63104

LPCSM020
Lab Comments:

(27) * less than. (36)
(37) (46)
(47) (56)
(57) (66)
(67) (76)

Private Lab (X) X (77)
IEPA Lab (X) (78)

+Analyses are to be performed on filtered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

LPCSM030

		PARAMETERS+	PPM*
27		Alkalinity[1]	
31		Ammonia as N	
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	X	Boron B	*0.1
58		Cadmium Cd	
64		Calcium Ca	
69		COD	
73		Chloride Cl	

LPCSM040

27		Chromium Cr (tot)	
33		Chromium Cr^{+6}	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (#/100 ml)	
56		Fluoride F	
61	X	Hardness $CaCO_3$	340
65		Iron Fe	
70		Lead Pb	

LPCSM050

27		Magnesium Mg	
32		Manganese Mn	
38		Mercury Hg	
46		Nickel Ni	
51		Nitrate-nitrite N	
56		Oil and Grease	
60		pH (Units)	
63		Phenolics	
70		Phosphorus P	
76		Potassium K	

LPCSM060

27	X	R.O.E. (180°C)	486
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (umhos/cm)	
53	X	Sulfate SO_4	187.0
58		Zinc Zn	
63			

[1]Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name Cahokia Creek - point B, downstream (South boundary)
(Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0 (1) (8) SITE INVENTORY NUMBER 1 1 9 0 9 0 0 1 (9) (16)

MONITOR POINT NUMBER S 3 0 1 (17) (20) DATE COLLECTED 0 6 1 6 8 1 (21) (26)

MADISON Co. - LPC REGION S (27)

ROXANNA / MAL - BARTON
(Location) (Responsible Party)

Legal (1); Illegal (2); Indicate One: 1 (28) Board Order (X) (29)

Time Collected 4:20 a.m. p.m. Unable to collect sample (X) (30)

Stick-up ___ . ___ ft. (31) (33) Depth to water ___ . ___ ft. (from T.O.C.) (34) (36)

Sample temp. 72 ° F (37) (39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ (41)

Sample Appearance: SLIGHTLY CLOUDY

Collector comments: _____

Rick Dunbar — Collected by
BARTTERBORT RHOTAGEL — Div. or Company
" " — Transported by
" " — Div. or Company

LAB USE ONLY

Lab No. 81-6-234/LN21303

Date Rec'd 6/17/81

Rec'd by RW Time 2:45 ~~a.m.~~ p.m.

Sample temp. acceptable YES ~~NO~~
Sample properly preserved YES ~~NO~~

Date completed 7/10/81
Date forwarded 7/13/81

William Acone
Supervisor Signature

Name Industrial Test.Labs, Inc.
Address of Lab 2350 S. 7th St. St. Louis, MO. 63104

LPCSM020
Lab Comments:

(27) * less than. (36)
(37) (46)
(47) (56)
(57) (66)
(67) (76)

Private Lab (X) X (77)
IEPA Lab (X) (78)

+ Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

WZZ

LPCSM030

		PARAMETERS+	PPM*
27		Alkalinity[1]	
31		Ammonia as N	
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	X	Boron B	* 0.1
58		Cadmium Cd	
64		Calcium Ca	
69		COD	
73		Chloride Cl	

LPCSM040

27		Chromium Cr (tot)	
33		Chromium Cr^{+6}	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (#/100 ml)	
56		Fluoride F	
61	X	Hardness $CaCO_3$	330
65		Iron Fe	
70		Lead Pb	

LPCSM050

27		Magnesium Mg	
32		Manganese Mn	
38		Mercury Hg	
46		Nickel Ni	
51		Nitrate-nitrite N	
56		Oil and Grease	
60		pH (Units)	
63		Phenolics	
70		Phosphorus P	
76		Potassium K	

LPCSM060

27	X	R.O.E. (180°C)	518
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (umhos/cm)	
53	X	Sulfate SO_4	173.0
58		Zinc Zn	
63			

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name B-1 (N. Central Area) (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 1 (16)

MONITOR POINT NUMBER (17) G 1 0 1 (20) DATE COLLECTED (21) 0 6 1 6 8 1 (26)

MADISON Co. - LPC REGION (27) S

ROXANA (Location) / MAL-BARTON (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected 3:25 a.m. p.m. Unable to collect sample (X) (30)

Stick-up (31) 1.3 (33) ft. Depth to water (from T.O.C.) (34) 15.0 (36) ft.

Sample temp. (37) 60 (39) ° F Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) (41)

Sample Appearance: MURKY

Collector comments:

RICK DAUBACH Collected by — BARTLETT RHOTASER Div. or Company

" " Transported by — " " Div. or Company

LAB USE ONLY

Lab No. 81-6-234/LN21303

Date Rec'd 6/17/81

Rec'd by RW Time 2:45 ~~a.m.~~ p.m.

Sample temp. acceptable YES ~~NO~~
Sample properly preserved YES ~~NO~~

Date completed 7/10/81
Date forwarded 7/13/81

William A Kane
Supervisor Signature

Name Industrial Test.Labs, Inc.
Address of Lab 2350 S. 7th St. St. Louis, MO. 63104

LPCSM020 Lab Comments:

(27) (36)
(37) (46)
(47) * less than. (56)
(57) (66)
(67) (76)

Private Lab (X) X (77)
IEPA Lab (X) (78)

LPCSM030

		PARAMETERS+	PPM*
27		Alkalinity[1]	
31		Ammonia as N	
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	X	Boron B	1.0
58		Cadmium Cd	
64		Calcium Ca	
69		COD	
73		Chloride Cl	

LPCSM040

27		Chromium Cr (tot)	
33		Chromium Cr^{+6}	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (#/100 ml)	
56		Fluoride F	
61	X	Hardness $CaCO_3$	860
65		Iron Fe	
70		Lead Pb	

LPCSM050

27		Magnesium Mg	
32		Manganese Mn	
38		Mercury Hg	
46		Nickel Ni	
51		Nitrate-nitrite N	
56		Oil and Grease	
60		pH (Units)	
63		Phenolics	
70		Phosphorus P	
76		Potassium K	

LPCSM060

27	X	R.O.E. (180°C)	1190
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (umhos/cm)	
53	X	Sulfate SO_4	*0.5
58		Zinc Zn	
63			

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+ Analyses are to be performed on filtered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name B-2 (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 C (8) SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 1 (16)

MONITOR POINT NUMBER (17) G 1 0 2 (20) DATE COLLECTED (21) 0 6 1 6 8 1 (26)

MADISON Co. - LPC REGION (27) S

ROXANNA (Location) / MAL - BARTON (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected 3:35 a.m. p.m. Unable to collect sample (X) (30)

Stick-up (31) 0.0 (33) ft. Depth to water (from T.O.C.) (34) 25.3 (36) ft.

Sample temp. (37) 60 (39) °F Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) (41)

Sample Appearance: MURKY

Collector comments:

RICK DAUBACH Collected by — BARTHOLOMEW RHOTASEL Div. or Company

" " Transported by — " " Div. or Company

LAB USE ONLY

Lab No. 81-6-234/LN21303

Date Rec'd 6/17/81

Rec'd by RW Time 2:45 ~~a.m.~~ p.m.

Sample temp. acceptable YES ~~NO~~

Sample properly preserved YES ~~NO~~

Date completed 7/10/81

Date forwarded 7/13/81

William Moore
Supervisor Signature

Name Industrial Test.Labs, Inc.
Address of Lab 2350 S. 7th St. St. Louis, MO. 63104

LPCSM020 Lab Comments:

(27) (36)
(37) (46)
(47) (56)
(57) (66)
(67) (76)

Private Lab (X) X (77)
IEPA Lab (X) (78)

LPCSM030

		PARAMETERS+	PPM*
27		Alkalinity[1]	
31		Ammonia as N	
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	X	Boron B	0.6
58		Cadmium Cd	
64		Calcium Ca	
69		COD	
73		Chloride Cl	

LPCSM040

27		Chromium Cr (tot)	
33		Chromium Cr^{+6}	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (#/100 ml)	
56		Fluoride F	
61	X	Hardness $CaCO_3$	360
65		Iron Fe	
70		Lead Pb	

LPCSM050

27		Magnesium Mg	
32		Manganese Mn	
38		Mercury Hg	
46		Nickel Ni	
51		Nitrate-nitrite N	
56		Oil and Grease	
60		pH (Units)	
63		Phenolics	
70		Phosphorus P	
76		Potassium K	

LPCSM060

27	X	R.O.E. (180°C)	430
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (umhos/cm)	
53	X	Sulfate SO_4	1.2
58		Zinc Zn	
63			

+Analyses are to be performed on filtered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1]Alkalinity is to be reported as ppm of $CaCO_3$ at pH 4.5.

RECEIVED
JUL 20 1981
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

WEZ

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0 (1) (8) SITE INVENTORY NUMBER 1 1 9 0 9 0 0 1 (9) (16)

MONITOR POINT NUMBER G 1 0 7 (17) (20) DATE COLLECTED 0 6 1 6 8 1 (21) (26)

MADISON Co. - LPC REGION S (27)

ROXANA (Location) / SCA - Barton (Responsible Party)

Legal (1); Illegal (2); Indicate One: 1 (28) Board Order (X) (29)

Time Collected 4:00 a.m. p.m. Unable to collect sample (X) (30)

Stick-up 0 . 0 ft. (31) (33) Depth to water (from T.O.C.) 20 . 0 ft. (34) (36)

Sample temp. 56 ° F (37) (39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) (41)

Sample Appearance: CLOUDY

Collector comments:

RICK DAUBACH — Collected by
BARTTELBORT-RHUTASEL — Div. or Company
" " — Transported by
" " — Div. or Company

LAB USE ONLY

Lab No. 81-6-234/LN21303

Date Rec'd 6/17/81

Rec'd by RW Time 2:45 ~~XXXX~~ p.m.

Sample temp. acceptable YES ~~XX~~
Sample properly preserved YES ~~XX~~

Date completed 7/10/81
Date forwarded 7/13/81

William A Lowe
Supervisor Signature

Name Industrial Test.Labs, Inc.
Address 2350 S. 7th St.
of Lab St. Louis, MO. 63104

LPCSM020
Lab Comments:

(27) * less than. (36)
(37) (46)
(47) (56)
(57) (66)
(67) (76)

Private Lab (X) X (77)
IEPA Lab (X) (78)

LPCSM030

		PARAMETERS+	PPM*
27		Alkalinity[1]	.
31	X	Ammonia as N	*0 . 0 5
37		Arsenic As	.
44		Barium Ba	.
49		BOD -5	.
53	X	Boron B	*0 . 1
58		Cadmium Cd	.
64		Calcium Ca	.
69	X	COD	2 .
73		Chloride Cl	.

LPCSM040

27		Chromium Cr (tot)	.
33		Chromium Cr+6	.
39		Copper Cu	.
45		Cyanide CN	.
52		Fecal Coli	.
56		Fluoride F	.
61		Hardness CaCO3	.
65	X	Iron Fe	*0 . 1
70		Lead Pb	.

LPCSM050

27		Magnesium Mg	.
32		Manganese Mn	.
38		Mercury Hg	.
46		Nickel Ni	.
51		Nitrate-nitrite N	.
56		Oil and Grease	.
60		pH (Units)	.
63		Phenolics	.
70		Phosphorus P	.
76		Potassium K	.

LPCSM060

27	X	P.C.B. (1890)	6 1 8 .
31		Selenium Se	.
38		Silver Ag	.
44		Sodium Na	.
49		SC (umhos/cm)	.
53		Sulfate SO4	.
58	X	Zinc Zn	*0 . 1
63			.

+Analyses are to be performed on filtered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1]Alkalinity is to be determined as ppm of CaCO3 at pH 4.5.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0 (1–8) SITE INVENTORY NUMBER 1 1 9 0 9 0 0 1 (9–16)

MONITOR POINT NUMBER G 1 0 8 (17–23) DATE COLLECTED 0 6 1 0 8 1 (24–29)

MADISON Co. - LPC REGION S (27)

TOXANA / SCA - Barton
(Location) (Responsible Party)

Legal (1); Illegal (2); Indicate One: 1 (28) Board Order (X) (29)

Time Collected 4:25 a.m. p.m. Unable to collect sample (X) (30)

Stick-up 1.3 ft. (31–33) Depth to water 9.0 ft. (from T.O.C.) (34–36)

Sample temp. 56 °F (37–39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) (41)

Sample Appearance: VERY MURKY

Collector comments:

RICK DAUBACH — Collected by
BARTELBORT RHOTASEL — Div. or Company
" " — Transported by
" " — Div. or Company

LAB USE ONLY

Lab No. 81-6-234/LN21303

Date Rec'd 6/17/81

Rec'd by RW Time 2:45 XXXX p.m.

Sample temp. acceptable YES XX
Sample properly preserved YES XX

Date completed 7/10/81
Date forwarded 7/13/81

William A Bone
Supervisor Signature

Name Industrial Test.Labs, Inc.
Address of Lab 2350 S. 7th St. St. Louis, MO. 63104

LPCSM020
Lab Comments:

* less than. (27–36)

(37–46) (47–56) (57–66) (67–76)

Private Lab (X) X (77)
IEPA Lab (X) (78)

WR2

LPCSM030

		PARAMETERS*	PPM*
27		Alkalinity*	. X X X X
31	X	Ammonia as N	* 0 . 0 5 X X
37		Arsenic As	. X
41		Barium Ba	. X X X
45		BOD -5	. X X X X
53	X	Boron B	* 0 . 1 X X X
57		Cadmium Cd	. X X
61		Calcium Ca	. X X X
65	X	COD	4 . X X X X
73		Chloride Cl	. X X X X

LPCSM040

27		Chromium Cr (tot)	. X X
33		Chromium Cr^{+6}	. X X
39		Copper Cu	. X X
45		Cyanide CN	. X
52		Fecal Coli	. X X X X
56		Fluoride F	. X X X
61		Hardness $CaCO_3$	. X X X X
65	X	Iron Fe	* 0 . 1 X X X
70		Lead Pb	. X X

LPCSM050

27		Magnesium Mg	. X X X
32		Manganese Mn	. X X
38		Mercury Hg	.
46		Nickel Ni	. X X X
51		Nitrate-nitrite N	. X X X
56		Oil and Grease	. X X X X
61		pH (Units)	X X . X X X
67		Phenolics	. X
70		Phosphorus P	. X X
75		Potassium K	. X X X

LPCSM060

27	X	T.D.S. Filtered	4 2 4 X X X X
32		Selenium Se	. X
38		Silver Ag	. X X
44		Sodium Na	. X X X
49		SC (umhos/cm)	. X X X X
53		Sulfate SO_4	. X X X
58	X	Zinc Zn	* 0 . 1 X X X
63			.

*Analyses are to be performed on filtered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

*Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

wk 2

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0 (1) (8) SITE INVENTORY NUMBER 1 1 9 0 9 0 0 1 (9) (16)

MONITOR POINT NUMBER G 1 0 9 (17) (20) DATE COLLECTED 0 6 1 6 8 1 (21) (26)

MADISON Co. - LPC REGION S (27)

ROXANA (Location) / SCA - Barton (Responsible Party)

Legal (1); Illegal (2); Indicate One: 1 (28) Board Order (X) (29)

Time Collected 4:30 a.m. p.m. Unable to collect sample (X) (30)

Stick-up 0.7 ft. (31) (33) Depth to water 14.9 ft. (from T.O.C.) (34) (36)

Sample temp. 58° F (37) (39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing (2) Pumping; (3) Other (Specify) (41)

Sample Appearance: SLIGHTLY CLOUDY

Collector comments:

RICK DAUBACH — Collected by
BARTTELBORT RHUTASEL — Div. or Company
" " — Transported by
" " — Div. or Company

LAB USE ONLY

Lab No. 81-6-234/LN21303

Date Rec'd 6/17/81

Rec'd by RW Time 2:45 XXXX p.m.

Sample temp. acceptable YES XXX
Sample properly preserved YES XX

Date completed 7/10/81
Date forwarded 7/13/81

William A Sone
Supervisor Signature

Name Industrial Test.Labs, Inc.
Address of Lab 2350 S. 7th St. St. Louis, MO. 63104

LPCSM020
Lab Comments:

(27) (36)
(37) (46)
(47) * less than. (56)
(57) (66)
(67) (76)

Private Lab (X) X (77)
IEPA Lab (X) (78)

LPCSM030

		PARAMETERS*	PPM*
27		Alkalinity[1]	
31	X	Ammonia as N	0.36
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	X	Boron B	*0.1
58		Cadmium Cd	
64		Calcium Ca	
69	X	COD	4
73		Chloride Cl	

LPCSM040

27		Chromium Cr (tot)	
33		Chromium Cr^{+6}	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli	
56		Fluoride F	
61		Hardness $CaCO_3$	
65	X	Iron Fe	*0.1
70		Lead Pb	

LPCSM050

27		Magnesium Mg	
32		Manganese Mn	
38		Mercury Hg	
46		Nickel Ni	
51		Nitrate-nitrite N	
56		Oil and Grease	
60		pH (Units)	
63		Phenolics	
70		Phosphorus P	
75		Potassium K	

LPCSM060

27	X	P.O.E. (180°C)	670
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (umhos/cm)	
53		Sulfate SO_4	
58	X	Zinc Zn	*0.1
63			

*Analyses are to be performed on filtered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1]Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

LPC-8 REV. 7/77

D054389

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

AGENCY USE ONLY

RECORD CODE: L P C S M 0 1 (1–7) TRANS CODE: A (8)

REPORT DUE DATE: 36 M / D / Y 41 — 1198030001 — FEDERAL ID NUMBER: 2 BLANKS

SITE INVENTORY NUMBER: 9 1190900002 18 — MONITOR POINT NUMBER (see Instructions): 19 22

REGION: S — CO.: Madison — DATE COLLECTED: 23 M 03 / D 16 / Y 28 87

LOCATION: Roxana — RESPONSIBLE PARTY: Barton #2 — IEPA LAB (see Instructions): 29

FOR IEPA USE ONLY — COMPLAINT NO.

DATE RECEIVED: 42 M / D / Y 47

SAMPLING PURPOSE CODE (see Instructions): 48 4

TIME CARD PROGRAM CODE: 49 LP 50 52 & UNIT CODE: 53 M

BACKGROUND SAMPLE (X): 54 — TIME COLLECTED (24 HR CLOCK): 55 H : M 58

UNABLE TO COLLECT SAMPLE (see Instructions): 59

MONITOR POINT SAMPLED BY (see Instructions): 60 — OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X): 61 — ORGANICS (X): 62

SAMPLE APPEARANCE: 63 TRIP BLANKS USED FOR BOTH BARTON & HEDGER PRIVATE WELLS 102

COLLECTOR COMMENTS: 103 142

SPECIAL INSTRUCTIONS TO LAB: PRIVATE WELL PROJECT [X] 2 VOLATILE BLANKS

USE SW-846 PROCEDURES: YES ___ NO ___

COLLECTED BY	INITIALS	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
C. Reeter	CVR (143–145)	IEPA-DLPC	UPS	

LAB USE ONLY

LAB SAMPLE NO.: D054389 — LAB NAME: Springfield — LAB ID NO.: 146 149

DATE RECEIVED: MAR 17 1987 — AND ADDRESS:

TIME RECEIVED:

SAMPLE TEMP OKAY (Y/N): — SAMPLE PROPERLY PRESERVED (Y/N): — DATE COMPLETED: — FORWARD: 6-22-87

LAB COMMENTS: 150

J. Hurley 199

SUPERVISOR SIGNATURE

RECORD CODE: L P C S M 0 2 (1–7) TRANS CODE: A (8) (Columns 9-29 from above)

FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE		STORET NUMBER	REMARKS (SEE INST)	REPLICATE	< OR >	VALUE	REPORTING LEVEL DIGITS TO L OR R	REPORTING LEVEL L OR R OF DECIMAL
DEPTH TO WATER (ft. below LS)	507F	72019 (30–34)	35	36	37	38 — 47	48	49
ELEVATION OF GW SURFACE (ft. ref MSL)	508F	71993						
TOTAL WELL DEPTH (ft. below LS)	509F	72008						
ALKALINITY TOTAL (mg/l as CaCO3) - Field	505F	00431						
REDOX POTENTIAL (millivolt) - Field	506F	00090						
pH (units) - Field	500F	00400						
SPEC CONDUCTANCE (umhos) - Field	503F	00094						
TEMP OF WATER SAMPLE (°C) - Field	502F	00010						

RECEIVED JUN 23 1987 IEPA/DLPC

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $25,000 for each day the failure continues, a fine up to $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

IL 532-1218
LPC 160 3/84

002-002

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SAMPLE NUMBER : D754389
SAMPLING POINT DESC. : BLANK W/54387-88

SUBMITTING SOURCE # : SITE # : 1190900002
DATE COLLECTED : 870316 TIME COLLECTED : 1000 SAMPLING PROGRAM :

COLLECTED BY : C REETER DELIVERED BY : MAIL
COMMENTS :
FUNDING CODE : LP50 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : SAMPLE PURPOSE CODE : 0 REPORTING INDICATOR :

DATE RECEIVED : 870317 TIME RECEIVED : 1000 RECEIVED BY : D V
LAB OBSERVATIONS : 2 BLANKS TRIP BL SAM# :
SUPERVISORS INITIALS : JTH NOTE : K = LESS THAN VALUE

P32106	CHLOROFORM	UG/L :	1.0K
P32101	DICHLOROBROMOMETHANE	UG/L :	1.0K
P32105	CHLORODIBROMOMETHANE	UG/L :	1.0K
P32104	BROMOFORM	UG/L :	1.0K
P34423	METHYLENE CHLORIDE	UG/L :	1.0K
P34501	1,1-DICHLOROETHYLENE	UG/L :	1.0K
P34496	1,1-DICHLOROETHANE	UG/L :	1.0K
P34546	TRANS-1,2-DICHLOROETHYLENE	UG/L :	1.0K
P77279	1,2-DICHLOROETHANE	UG/L :	1.0K
P34506	1,1,1-TRICHLOROETHANE	UG/L :	1.0K
P32102	CARBON TETRACHLORIDE	UG/L :	1.0K
P39180	TRICHLOROETHYLENE	UG/L :	1.0K
P34475	TETRACHLOROETHYLENE	UG/L :	1.0K
P34301	CHLOROBENZENE	UG/L :	1.0K
P34716	DICHLOROBENZENE	UG/L :	1.0K
P78124	BENZENE	UG/L :	1.0K
P78131	TOLUENE	UG/L :	1.0K
P78113	ETHYLBENZENE	UG/L :	1.0K
P81551	XYLENE	UG/L :	1.0K
P00400	PH,FIELD	UNITS :	
P00020	TEMPERATURE,AIR	DEG.C :	
P00094	COND.(EC)FIELD	UM/CM :	
P00061	STREAMFLOW,INST	CFS :	

RECEIVED
JUL 23 1987
IEPA/DLPC

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SAMPLE NUMBER : D754388
SAMPLING POINT DESC. : MADISON/ROXANA/BARTON #2 WILLAREDT G211

SUBMITTING SOURCE # : SITE # : 1190900002
DATE COLLECTED : 870316 TIME COLLECTED : 1000 SAMPLING PROGRAM :

COLLECTED BY : C REETER DELIVERED BY : MAIL
COMMENTS :
FUNDING CODE : LP50 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : SAMPLE PURPOSE CODE : 0 REPORTING INDICATOR :

DATE RECEIVED : 870317 TIME RECEIVED : 1000 RECEIVED BY : D V
LAB OBSERVATIONS : 1 GAL/2 VOC TRIP BL SAM# :
SUPERVISORS INITIALS : JTH NOTE : K = LESS THAN VALUE

P39340	LINDANE	UG/L :	.01K
P39410	HEPTACHLOR	UG/L :	.01K
P39330	ALDRIN	UG/L :	.01K
P39422	HEPTACHLOR EPOXIDE	UG/L :	.01K
P39348	ALPHA CHLORDANE	UG/L :	.01K
P39810	GAMMA CHLORDANE	UG/L :	.01K
P39380	DIELDRIN	UG/L :	.01K
P39390	ENDRIN	UG/L :	.01K
P39480	METHOXYCHLOR	UG/L :	.05K
P39327	O,P'-DDE	UG/L :	.01K
P39320	P,P'-DDE	UG/L :	.01K
P39315	O,P'-DDD	UG/L :	.01K
P39310	P,P'-DDD	UG/L :	.01K
P39305	O,P'-DDT	UG/L :	.01K
P39300	P,P'-DDT	UG/L :	.01K
P39400	TOXAPHENE	UG/L :	1.0K
P39516	TOTAL PCBS	UG/L :	0.1K
P38871	PHORATE	UG/L :	.05K
P39570	DIAZINON	UG/L :	.05K
P39357	RONNEL	UG/L :	.05K
P39600	METHYL PARATHION	UG/L :	.05K
P82088	TERBUFOS (COUNTER)	UG/L :	.05K
P81294	FONOFOS (DYFONATE)	UG/L :	.05K
P81403	CHLOROPYRIFOS (DURSBAN)	UG/L :	.05K
P39530	MALATHION	UG/L :	.05K
P39398	ETHION	UG/L :	.05K
P81284	TRIFLURALIN (TREFLAN)	UG/L :	.01K
P39630	ATRAZINE (AATREX)	UG/L :	.05K
P77825	ALACHLOR (LASSO)	UG/L :	.02K
P39356	METOLACHLOR (DUAL)	UG/L :	0.1K
P81757	CYANAZINE (BLADEX)	UG/L :	.05K

RECEIVED
JUL 23 1987
IEPA/DLPC

SAMPLE NUMBER : D754303

P39730	2,4-D	UG/L	: 0.1K
P39760	SILVEX	UG/L	: 0.05K
P32106	CHLOROFORM	UG/L	: 1.0K
P32101	DICHLOROBROMOMETHANE	UG/L	: 1.0K
P32105	CHLORODIBROMOMETHANE	UG/L	: 1.0K
P32104	BROMOFORM	UG/L	: 1.0K
P34423	METHYLENE CHLORIDE	UG/L	: 1.0K
P34501	1,1-DICHLOROETHYLENE	UG/L	: 1.0K
P34496	1,1-DICHLOROETHANE	UG/L	: 1.0K
P34546	TRANS-1,2-DICHLOROETHYLENE	UG/L	: 1.0K
P77279	1,2-DICHLOROETHANE	UG/L	: 1.0K
P34506	1,1,1-TRICHLOROETHANE	UG/L	: 1.0K
P32102	CARBON TETRACHLORIDE	UG/L	: 1.0K
P39180	TRICHLOROETHYLENE	UG/L	: 1.0K
P34475	TETRACHLOROETHYLENE	UG/L	: 1.0K
P34301	CHLOROBENZENE	UG/L	: 1.0K
P34716	DICHLOROBENZENE	UG/L	: 1.0K
P78124	BENZENE	UG/L	: 1.0K
P78131	TOLUENE	UG/L	: 1.0K
P78113	ETHYLBENZENE	UG/L	: 1.0K
P81551	XYLENE	UG/L	: 1.0K
P00400	PH,FIELD	UNITS	: 7.54
P00020	TEMPERATURE,AIR	DEG.C	: 51.8
P00094	COND.(EC)FIELD	UM/CM	: 759
P00061	STREAMFLOW,INST	CFS	:

001 : NO OTHER ORGANIC COMPOUNDS WERE DETECTED IN THE EXTRACTS OF THIS SAMPLE.

RECEIVED
JUL 23 1987
IEPA/DLPC

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY

TO: Chuck Reeter DATE: 5/15

FROM THE DESK OF: Paul Purseglove

RE: Private Well

- ☐ FOR YOUR APPROVAL
- ☐ TAKE NECESSARY ACTION
- ☐ APPROVED
- ☐ REPLY REQUESTED
- ☐ FOR YOUR COMMENTS
- ☐ FOR YOUR INFORMATION
- ☐ PER YOUR REQUEST
- ☐ SEE ME ABOUT ATTACHED
- ☐ PLEASE RETURN
- ☐ PLEASE CALL ME

COMMENTS:

Sodium @ 229 mg/l

Individuals on restricted salt diets should limit intake to 20 mg/l. Well owners should be advised.

RECEIVED
IEPA
JUN 03 1987
COLLINSVILLE OFFICE

IL 532-0562
EPA 004 (Rev. 3/82)

076-002

AGENCY USE ONLY

Page 1 of 2

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECORD CODE: L P C S M 0 1 (1–7) TRANS CODE: A (8)

REPORT DUE DATE 36 M / D / Y 41 FEDERAL ID NUMBER

SITE INVENTORY NUMBER 119090002 (9–18) MONITOR POINT NUMBER G211 (19–22)
(see Instructions)
REGION S CO. Madison DATE COLLECTED 03/16/87 (23 M / D / Y 28)
Roxana 1. Barton #2 IEPA LAB X (29)
LOCATION RESPONSIBLE PARTY (see Instructions)

FOR IEPA USE ONLY COMPLAINT NO.

DATE RECEIVED 42 M / D / Y 47
SAMPLING PURPOSE CODE 4 (48)
(see Instructions)
TIME CARD PROGRAM CODE LP50 (49–52) & UNIT CODE M (53)

BACKGROUND SAMPLE (X) 54 TIME COLLECTED (24 HR CLOCK) 10.00 (55 H M 58)
UNABLE TO COLLECT SAMPLE (see Instructions) 59
MONITOR POINT SAMPLED BY R (60) OTHER (SPECIFY)
SAMPLE FIELD FILTERED - INORGANICS (X) 61 ORGANICS (X) 62

SAMPLE APPEARANCE (63) PRIVATE WELL USED FOR DRINKING WILLAREDT RESIDENCE

COLLECTOR COMMENTS (103) GEORGE WILLAREDT RR #6 (102) EDWARDSVILLE IL 62025 656-6052

SPECIAL INSTRUCTIONS TO LAB PRIVATE WELL PROJECT ☒ INORGANIC LIST + TOC (142)
USE SW-846 PROCEDURES: YES ___ NO X

COLLECTED BY	INITIALS (143–145)	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
C Reeter	CVR	IEPA DLPC	UPS	

LAB USE ONLY

LAB SAMPLE NO. B704165 MAR 17 1987 LAB NAME ENVIRONMENTAL PROTECTION AGENCY Division of Laboratory Services 2125 South First Street Champaign, Illinois 61820 LAB ID NO. 000B (146–149)
DATE RECEIVED AND ADDRESS
TIME RECEIVED 11A
SAMPLE TEMP OKAY ✓ (Y/N) SAMPLE PROPERLY PRESERVED ✓ (Y/N) DATE COMPLETED FORWARD MAY 6 1987
LAB COMMENTS (150) RECEIVED IEPA JUN 03 1987 COLLINSVILLE OFFICE
SUPERVISOR SIGNATURE (199) CHAMPAIGN

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (Columns 9-29 from above)

FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE		STORET NUMBER (30–34)	REMARK (35)	SIGNIFICANT (36)	QUALIFIER (37)	< OR >	VALUE (38–47)	REPORTING LEVEL (48)	REPORTING LEVEL (49)
DEPTH TO WATER (ft. below LS)	507F	72019							
ELEVATION OF GW SURFACE (ft. ref MSL)	508F	71993							
TOTAL WELL DEPTH (ft. below LS)	509F	72008					UNKNOWN		
ALKALINITY TOTAL (mg/l as CaCO3) - Field	505F	00431							
REDOX POTENTIAL (millivolt) - Field	506F	00090							
pH (units) - Field	500F	00400							
SPEC CONDUCTANCE (umhos) - Field	503F	00094							
TEMP OF WATER SAMPLE (°C) - Field	502F	00010							

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $25,000 for each day the failure continues, a fine up to $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

IEPA/DLPC

CHEMICAL ANALYSIS FORM

AGENCY USE ONLY

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 119090002 (9–18)

MONITOR POINT NUMBER G211 (19–22)

REGION S CO. Madison

Roxana / Bartog #2

FACILITY NAME

AQUEOUS LIQUIDS NOT FIELD FILTERED

DATE COLLECTED 03/16/82 (23 M D Y 28)

IEPA LAB (x or Blank) X (29)

	LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–34)	REMARKS (35)	REPLICATE (36)	< OR > (37)	VALUE (38–47)	REPORTING LEVEL DIGITS TO L OR R (48)	REPORTING LEVEL L OR R OF DECIMAL (49)
* X	119T COD, MG/L	00335				3.		
X	100T PH, LAB - SU	00403				7.8		
X	103T ALKALINITY AS CACO3 MG/L	00410				381.		
X	111T AMMONIA NITROGEN, TOT MG/L	00610			<	0.1		
X	110T NITRITE + NITRATE, TOT MG/L	00630				4.7		
X	116T CYANIDE, TOTAL MG/L AS CN	00720			<	0.005		
X	160T SODIUM, TOTAL MG/L AS NA	00929				229.		
X	108T CHLORIDE, TOTAL MG/L AS CL	00940				8.5		
X	109T SULFATE, TOTAL MG/L AS SO4	00945				29.		
X	107T FLUORIDE, TOTAL MG/L AS F	00951				0.29		
X	144T ARSENIC, TOTAL UG/L AS AS	01002				1.		
X	145T BARIUM, TOTAL UG/L AS BA	01007			<	5.		
X	106T BORON, TOTAL UG/L AS B	01022				68.		
X	146T CADMIUM TOTAL UG/L AS CD	01027			<	3.		
X	147T CHROMIUM, TOTAL UG/L AS CR	01034			<	5.		
X	149T COPPER, TOTAL UG/L AS CU	01042				125.		
X	150T IRON, TOTAL UG/L AS FE	01045			<	50.		
X	151T LEAD, TOTAL UG/L AS PB	01051			<	5.		
X	152T MANGANESE, TOTAL UG/L AS MN	01055			<	5.		
X	154T NICKEL, TOTAL UG/L AS NI	01067			<	5.		
X	156T SILVER, TOTAL UG/L AS AG	01077			<	3.		
X	157T ZINC, TOTAL UG/L AS ZN	01092			<	50.		
X	155T SELENIUM, TOTAL UG/L AS SE	01147				2.		
X	112T PHENOLS, TOTAL UG/L	32730			<	5.		
X	102T RESIDUE ON EVA.-180°C MG/L	70300				538.		
X	153T MERCURY, TOTAL UG/L AS HG	71900			<	0.05		
X	TOC					3.0		

*Only Keypunch Lines with Data in Column 35 or Columns 38-47

SAMPLE NUMBER : B704165
SAMPLING POINT DESC. : ROXANA BARTON #2

SUBMITTING SOURCE # : SITE # : 1190900002G211
DATE COLLECTED : 870316 TIME COLLECTED : 1000 SAMPLING PROGRAM :

COLLECTED BY : C REETER DELIVERED BY : UPS
COMMENTS :
FUNDING CODE : LP50 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : LPWT SAMPLE PURPOSE CODE : 0

DATE RECEIVED : 870317 TIME RECEIVED : 1100 RECEIVED BY : PMD
LAB OBSERVATIONS : REPORTING INDICATOR :
SUPERVISORS INITIALS : RPF NOTE : K = LESS THAN VALUE

P00403	PH-LABORATORY	UNITS	: 7.8	P70300	(ROE) TDS @ 180C	MG/L	: 538
P00410	ALKALINITY,TOTAL	MG/L	: 381	~~P01022~~	~~BORON,TOTAL~~	~~UG/L~~	~~: 100K~~
P00951	FLUORIDE,TOTAL	MG/L	: 0.29	P00940	CHLORIDE,TOTAL	MG/L	: 8.5
P00945	SULFATE,TOTAL	MG/L	: 29	P00630	NITRATE&NO2-NTOTAL	MG/L	: 4.7
P00610	AMMONIA-N,TOTAL	MG/L	: 0.1K	P32730	PHENOLS,TOTAL	UG/L	: 5K
P00720	CYANIDE,TOTAL	MG/L	: 0.005K	P00335	COD,TOTAL	MG/L	: 3
P00680	CARBON,T-ORG(TOC)	MG/L	: 3.0	P01002	ARSENIC,TOTAL	UG/L	: 1
P01051	LEAD,TOT.FURNACE	UG/L	: 5K	P71900	MERCURY,TOTAL	UG/L	: 0.05K
P01147	SELENIUM,TOTAL	UG/L	: 2	P00916	CALCIUM,TOTAL	MG/L	: 0.3K
P00927	MAGNESIUM,TOTAL	MG/L	: 0.3K	P00929	SODIUM,TOTAL	MG/L	: 229
P00937	POTASSIUM,TOTAL	MG/L	: 0.3K	P01105	ALUMINUM,TOTAL	UG/L	: 50K
P01007	BARIUM,TOTAL	UG/L	: 5K	P01022	BORON,TOTAL	UG/L	: 68
P01012	BERYLLIUM,TOTAL	UG/L	: 0.5K	P01027	CADMIUM,TOTAL	UG/L	: 3K
P01034	CHROMIUM,TOTAL	UG/L	: 5K	P01042	COPPER,TOTAL	UG/L	: 125
P01037	COBALT,TOTAL	UG/L	: 5K	P01045	IRON,TOTAL	UG/L	: 50K
P01055	MANGANESE,TOTAL	UG/L	: 5K	P01067	NICKEL,TOTAL	UG/L	: 5K
P01077	SILVER,TOTAL	UG/L	: 3K	P01082	STRONTIUM,TOTAL	UG/L	: 5K
P01087	VANADIUM,TOTAL	UG/L	: 5K	P01092	ZINC,TOTAL	UG/L	: 50K
P00900	HARDNESS CALC.	MG/L	: 0C				

D054388

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

AGENCY USE ONLY

RECORD CODE: L P C S M 0 1 (1–7) TRANS CODE: A (8)

REPORT DUE DATE: 36 M / D / Y 41 FEDERAL ID NUMBER

SITE INVENTORY NUMBER: 1190900002 (9–18)
REGION: S CO.: Madison
Roxana (LOCATION) / Barton #2 (RESPONSIBLE PARTY)

MONITOR POINT NUMBER (see Instructions): 6211 (19–22)
DATE COLLECTED: 03/16/87 (23 M D Y 28)
IEPA LAB (see Instructions): X (29)

FOR IEPA USE ONLY — COMPLAINT NO.

DATE RECEIVED: 42 M / D / Y 47
SAMPLING PURPOSE CODE (see Instructions): 4 (48)
TIME CARD PROGRAM CODE: LP50 (49–52) & UNIT CODE: M (53)

BACKGROUND SAMPLE (X): 54
TIME COLLECTED (24 HR CLOCK): 10:00 (55 H M 58)
UNABLE TO COLLECT SAMPLE (see Instructions): 59
MONITOR POINT SAMPLED BY (see Instructions): R (60) OTHER (SPECIFY)
SAMPLE FIELD FILTERED - INORGANICS (X): 61 ORGANICS (X): 62

SAMPLE APPEARANCE: PRIVATE WELL USED FOR DRINKING WILLAREDT RESIDENCE (63–102)

COLLECTOR COMMENTS: GEORGE WILLAREDT RR #6 EDWARDSVILLE IL 62025 656-6052 (103–142)

SPECIAL INSTRUCTIONS TO LAB: PRIVATE WELL PROJECT [X] VOLATILES & SEMI VOLATILES
USE SW-846 PROCEDURES: YES ___ NO X

COLLECTED BY	INITIALS	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
C. Reeter	CVR (143–145)	IEPA-DLPC	UPS	

LAB USE ONLY

LAB SAMPLE NO.: D054388 LAB NAME: Springfield LAB ID NO.: 146 — 149
DATE RECEIVED: MAR 17 1987 AND ADDRESS
TIME RECEIVED
SAMPLE TEMP OKAY (Y/N) SAMPLE PROPERLY PRESERVED (Y/N) DATE COMPLETED FORWARD: 4-7-87
LAB COMMENTS: 150

J. Hurley 199
SUPERVISOR SIGNATURE

RECORD CODE: L P C S M 0 2 (1–7) TRANS CODE: A (8) (Columns 9-29 from above)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE		STORET NUMBER	REMARKS SEE INST	REPLICATE	< OR >	VALUE	REPORTING LEVEL DIGITS TO L OR R	REPORTING LEVEL L OR R OR DECIMAL
	DEPTH TO WATER (ft. below LS)	507F	72019 (30–34)	35	36		38 — 47	48	49
	ELEVATION OF GW SURFACE (ft. ref MSL)	508F	71993						
	TOTAL WELL DEPTH (ft. below LS)	509F	72008				UNKNOWN		
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	505F	00431						
	REDOX POTENTIAL (millivolt) - Field	506F	00090						
X	pH (units) - Field	500F	00400				7.54	2	R
X	SPEC CONDUCTANCE (umhos) - Field	503F	00094				759	3	L
X	TEMP OF WATER SAMPLE (°C) - Field	502F	00010				51.8	1	R

RECEIVED IEPA JUL 21 1987 COLLINSVILLE OFFICE

RECEIVED APR - 8 1987 IEPA-DLPC

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IL 532-1218
LPC 160 3/84

002-002

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SAMPLE NUMBER : D754388
SAMPLING POINT DESC. : MADISON/ROXANA/BARTON #2 WILLAREDT G211

SUBMITTING SOURCE # : SITE # : 1190900002
DATE COLLECTED : 870316 TIME COLLECTED : 1000 SAMPLING PROGRAM :

COLLECTED BY : C REETER DELIVERED BY : MAIL
COMMENTS :
FUNDING CODE : LF50 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : SAMPLE PURPOSE CODE : D

DATE RECEIVED : 870317 TIME RECEIVED : 1000 RECEIVED BY : D V
LAB OBSERVATIONS : 1 GAL/2 VOC REPORTING INDICATOR :
SUPERVISORS INITIALS : JTH NOTE : K = LESS THAN VALUE

P39340	LINDANE	UG/L	.01K
P39410	HEPTACHLOR	UG/L	.01K
P39330	ALDRIN	UG/L	.01K
P39422	HEPTACHLOR EPOXIDE	UG/L	.01K
P39348	ALPHA CHLORDANE	UG/L	.01K
P39810	GAMMA CHLORDANE	UG/L	.01K
P39380	DIELDRIN	UG/L	.01K
P39390	ENDRIN	UG/L	.01K
P39480	METHOXYCHLOR	UG/L	.05K
P39327	O,P'-DDE	UG/L	.01K
P39320	P,P'-DDE	UG/L	.01K
P39315	O,P'-DDD	UG/L	.01K
P39310	P,P'-DDD	UG/L	.01K
P39305	O,P'-DDT	UG/L	.01K
P39300	P,P'-DDT	UG/L	.01K
P39400	TOXAPHENE	UG/L	1.0K
P39516	TOTAL PCBS	UG/L	0.1K
P38871	PHORATE	UG/L	.05K
P39570	DIAZINON	UG/L	.05K
P39357	RONNEL	UG/L	.05K
P39600	METHYL PARATHION	UG/L	.05K
P82088	TERBUFOS (COUNTER)	UG/L	.05K
P81294	FONOFOS (DYFONATE)	UG/L	.05K
P81403	CHLOROPYRIFOS (DURSBAN)	UG/L	.05K
P39530	MALATHION	UG/L	.05K
P39398	ETHION	UG/L	.05K
P81284	TRIFLURALIN (TREFLAN)	UG/L	.01K
P39630	ATRAZINE (AATREX)	UG/L	.05K
P77825	ALACHLOR (LASSO)	UG/L	.02K
P39356	METOLACHLOR (DUAL)	UG/L	0.1K
P81757	CYANAZINE (BLADEX)	UG/L	.05K
P39730	2,4-D	UG/L	0.1K
P39760	SILVEX	UG/L	0.05K
P32106	CHLOROFORM	UG/L	1.0K

SAMPLE NUMBER : D754388

P32101	DICHLOROBROMOMETHANE	UG/L	: 1.0K
P32105	CHLORODIBROMOMETHANE	UG/L	: 1.0K
P32104	BROMOFORM	UG/L	: 1.0K
P34423	METHYLENE CHLORIDE	UG/L	: 1.0K
P34501	1,1-DICHLOROETHYLENE	UG/L	: 1.0K
P34496	1,1-DICHLOROETHANE	UG/L	: 1.0K
P34546	TRANS-1,2-DICHLOROETHYLENE	UG/L	: 1.0K
P77279	1,2-DICHLOROETHANE	UG/L	: 1.0K
P34506	1,1,1-TRICHLOROETHANE	UG/L	: 1.0K
P32102	CARBON TETRACHLORIDE	UG/L	: 1.0K
P39180	TRICHLOROETHYLENE	UG/L	: 1.0K
P34475	TETRACHLOROETHYLENE	UG/L	: 1.0K
P34301	CHLOROBENZENE	UG/L	: 1.0K
P34716	DICHLOROBENZENE	UG/L	: 1.0K
P78124	BENZENE	UG/L	: 1.0K
P78131	TOLUENE	UG/L	: 1.0K
P78113	ETHYLBENZENE	UG/L	: 1.0K
P81551	XYLENE	UG/L	: 1.0K
P00400	PH,FIELD	UNITS	: 7.54
P00020	TEMPERATURE,AIR	DEG.C	: 51.8
P00094	COND.(EC)FIELD	UM/CM	: 759
P00061	STREAMFLOW,INST	CFS	:

001 : NO OTHER ORGANIC COMPOUNDS WERE DETECTED IN THE EXTRACTS OF THIS SAMPLE.

AGENCY USE ONLY

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECORD CODE: L P C S M 0 1 (1–7) TRANS CODE: A (8)

REPORT DUE DATE (36) M / D / Y (41) FEDERAL ID NUMBER

SITE INVENTORY NUMBER (9–18): 1190900002

REGION: S CO.: Madison

LOCATION: Roxana RESPONSIBLE PARTY: I. Barton #2

MONITOR POINT NUMBER (see Instructions) (19–22): G210

DATE COLLECTED (23) M 03 / D 16 / Y 87 (28)

IEPA LAB (see Instructions) (29): X

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED (42) M / D / Y (47)

SAMPLING PURPOSE CODE (see Instructions) (48): 4

TIME CARD PROGRAM CODE (49–52): CP50 & UNIT CODE (53): M

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) (55–58): H 09 M 25

UNABLE TO COLLECT SAMPLE (see Instructions) (59)

MONITOR POINT SAMPLED BY (see Instructions) (60): R OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) (61) ORGANICS (X) (62)

SAMPLE APPEARANCE (63–102): PRIVATE WELL USED FOR DRINKING WILLAREDT RENTAL HOUSE

COLLECTOR COMMENTS (103–142): GEORGE WILLAREDT RR #6 EDWARDSVILLE IL 62025 656-6052

SPECIAL INSTRUCTIONS TO LAB: PRIVATE WELL PROJECT [X] VOLATILES & SEMI VOLATILES

USE SW-846 PROCEDURES: YES ___ NO X

COLLECTED BY (143)	INITIALS (144)	DIVISION OR COMPANY (145)	TRANSPORTED BY	DIVISION OR COMPANY
C. Reeter	CVR	IEPA-DLPC	UPS	

LAB USE ONLY

LAB SAMPLE NO. D054387 LAB NAME Springfield LAB ID NO. (146–149)

DATE RECEIVED MAR 17 1987 AND ADDRESS

TIME RECEIVED

SAMPLE TEMP OKAY (Y/N) SAMPLE PROPERLY PRESERVED (Y/N) DATE COMPLETED FORWARD 6-22-87

LAB COMMENTS (150)

SUPERVISOR SIGNATURE (199)

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (Columns 9-29 from above)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE		STORET NUMBER (30–34)	REMARK (35)	QUALIFIER (36)	< OR > (37)	VALUE (38–47)	REPORTING LEVEL (48)	(49)
	DEPTH TO WATER (ft. below LS)	507F	72019						
	ELEVATION OF GW SURFACE (ft. ref MSL)	508F	71993						
X	TOTAL WELL DEPTH (ft. below LS)	509F	72008				20		
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	505F	00431						
	REDOX POTENTIAL (millivolt) - Field	506F	00090						
X	pH (units) - Field	500F	00400				7.00	2	R
X	SPEC CONDUCTANCE (umhos) - Field	503F	00094				2080	4	L
X	TEMP OF WATER SAMPLE (°C) - Field	502F	~~00010~~				54.9	L	R

RECEIVED JUL 23 1987 IEPA/DLPC

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SAMPLE NUMBER : D754387
SAMPLING POINT DESC. : MADISON/ROXANA/BARTON #2 WILLAREDT G210

SUBMITTING SOURCE # : SITE # : 1190900002
DATE COLLECTED : 870316 TIME COLLECTED : 0925 SAMPLING PROGRAM :

COLLECTED BY : C REETER DELIVERED BY : MAIL
COMMENTS :
FUNDING CODE : LP50 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : SAMPLE PURPOSE CODE : 0 REPORTING INDICATOR :

DATE RECEIVED : 870317 TIME RECEIVED : 1000 RECEIVED BY : D V
LAB OBSERVATIONS : 1 GAL/2 VOC TRIP BL SAM# :
SUPERVISORS INITIALS : JTH NOTE : K = LESS THAN VALUE

P39340	LINDANE	UG/L :	.01K
P39410	HEPTACHLOR	UG/L :	.01K
P39330	ALDRIN	UG/L :	.01K
P39422	HEPTACHLOR EPOXIDE	UG/L :	.01K
P39348	ALPHA CHLORDANE	UG/L :	.01K
P39810	GAMMA CHLORDANE	UG/L :	.01K
P39380	DIELDRIN	UG/L :	.01K
P39390	ENDRIN	UG/L :	.01K
P39480	METHOXYCHLOR	UG/L :	.05K
P39327	O,P'-DDE	UG/L :	.01K
P39320	P,P'-DDE	UG/L :	.01K
P39315	O,P'-DDD	UG/L :	.01K
P39310	P,P'-DDD	UG/L :	.01K
P39305	O,P'-DDT	UG/L :	.01K
P39300	P,P'-DDT	UG/L :	.01K
P39400	TOXAPHENE	UG/L :	1.0K
P39516	TOTAL PCBS	UG/L :	0.1K
P46313	PHORATE	UG/L :	.05K
P39570	DIAZINON	UG/L :	.05K
P39357	RONNEL	UG/L :	.05K
P39600	METHYL PARATHION	UG/L :	.05K
P82088	TERBUFOS (COUNTER)	UG/L :	.05K
P81294	FONOFOS (DYFONATE)	UG/L :	.05K
P81403	CHLOROPYRIFOS (DURSBAN)	UG/L :	.05K
P39530	MALATHION	UG/L :	.05K
P39398	ETHION	UG/L :	.05K
P81284	TRIFLURALIN (TREFLAN)	UG/L :	.01K
P39630	ATRAZINE (AATREX)	UG/L :	.05K
P77825	ALACHLOR (LASSO)	UG/L :	.02K
P39356	METOLACHLOR (DUAL)	UG/L :	0.1K
P81757	CYANAZINE (BLADEX)	UG/L :	.05K

RECEIVED
JUL 23 1987
IEPA/DLPC

SAMPLE NUMBER : D754[illegible]7

P39730	2,4-D	UG/L	: 0.1K
P39760	SILVEX	UG/L	: 0.05K
P32106	CHLOROFORM	UG/L	: 1.0K
P32101	DICHLOROBROMOMETHANE	UG/L	: 1.0K
P32105	CHLORODIBROMOMETHANE	UG/L	: 1.0K
P32104	BROMOFORM	UG/L	: 1.0K
P34423	METHYLENE CHLORIDE	UG/L	: 1.0K
P34501	1,1-DICHLOROETHYLENE	UG/L	: 1.0K
P34496	1,1-DICHLOROETHANE	UG/L	: 1.0K
P34546	TRANS-1,2-DICHLOROETHYLENE	UG/L	: 1.0K
P77279	1,2-DICHLOROETHANE	UG/L	: 1.0K
P34506	1,1,1-TRICHLOROETHANE	UG/L	: 1.0K
P32102	CARBON TETRACHLORIDE	UG/L	: 1.0K
P39180	TRICHLOROETHYLENE	UG/L	: 1.0K
P34475	TETRACHLOROETHYLENE	UG/L	: 1.0K
P34301	CHLOROBENZENE	UG/L	: 1.0K
P34716	DICHLOROBENZENE	UG/L	: 1.0K
P78124	BENZENE	UG/L	: 1.0K
P78131	TOLUENE	UG/L	: 1.0K
P78113	ETHYLBENZENE	UG/L	: 1.0K
P81551	XYLENE	UG/L	: 1.0K
P00400	PH,FIELD	UNITS	: 7.00
P00020	TEMPERATURE,AIR	DEG.C	: 54.9
P00094	COND.(EC)FIELD	UM/CM	: 2080
P00061	STREAMFLOW,INST	CFS	:

001 : NO OTHER ORGANIC COMPOUNDS WERE DETECTED IN THE EXTRACTS OF THIS SAMPLE.

RECEIVED
JUL 23 1987
IEPA/DLPC

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY

TO: Chuck Reeter DATE: 5/15

FROM THE DESK OF: Paul Purseglove

RE: Private Well

- ☐ FOR YOUR APPROVAL
- ☐ TAKE NECESSARY ACTION
- ☐ APPROVED
- ☐ REPLY REQUESTED
- ☐ FOR YOUR COMMENTS
- ☐ FOR YOUR INFORMATION
- ☐ PER YOUR REQUEST
- ☐ SEE ME ABOUT ATTACHED
- ☐ PLEASE RETURN
- ☐ PLEASE CALL ME

COMMENTS:

Sodium @ 24 mg/l
Nitrate @ 44 mg/l
Infants below 6 months of age should not drink the water
Individuals on restricted salt diets should limit intake to 20 mg/l

RECEIVED
IEPA
JUN 03 1987
COLLINSVILLE OFFICE

IL 532-0562
EPA 004 (Rev. 3/82)

076-002

AGENCY USE ONLY

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECORD CODE: L P C S M 0 1 (1–7) TRANS CODE: A (8)

REPORT DUE DATE 36 M / D / Y 41 FEDERAL ID NUMBER

SITE INVENTORY NUMBER 119090002 (9–18) MONITOR POINT NUMBER (see Instructions) G210 (19–22)

REGION S CO. Madison DATE COLLECTED 03/16/87 (23 M / D / Y 28)

Roxana / Barton #2 IEPA LAB (see Instructions) X (29)

LOCATION / RESPONSIBLE PARTY

FOR IEPA USE ONLY — COMPLAINT NO.

DATE RECEIVED 42 M / D / Y 47

SAMPLING PURPOSE CODE (see Instructions) 4 (48)

TIME CARD PROGRAM CODE LP 50 (49–52) & UNIT CODE M (53)

BACKGROUND SAMPLE (X) 54 TIME COLLECTED (24 HR CLOCK) 9 25 (58)

UNABLE TO COLLECT SAMPLE (see Instructions) 59

MONITOR POINT SAMPLED BY (see Instructions) R 60 COLLECTOR OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) 61 ORGANICS (X) 62

RECEIVED IEPA JUN 03 1987 EDWARDSVILLE OFFICE

SAMPLE APPEARANCE 63 PRIVATE WELL USED FOR DRINKING WILLARDT RENTAL HOUSE

COLLECTOR COMMENTS 103 GEORGE WILLARDT RR #6 EDWARDSVILLE IL 62025 656-6052 102

SPECIAL INSTRUCTIONS TO LAB PRIVATE WELL PROJECT [X] INORGANIC CHT + TOC 142

USE SW-846 PROCEDURES: YES ___ NO X

COLLECTED BY	INITIALS (143–145)	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
C. Reeter	CVR	IEPA Dupe	UPS	

LAB USE ONLY

LAB SAMPLE NO. 6704.64 LAB NAME ~~ENVIRONMENTAL PROTECTION AGENCY~~ Division of Laboratory Services LAB ID NO. 003 (146–149)

DATE RECEIVED MAR 17 1987 AND ADDRESS ~~2125 South First Street~~

TIME RECEIVED 11A ~~Champaign, Illinois 61820~~

SAMPLE TEMP OKAY ✓ (Y/N) SAMPLE PROPERLY PRESERVED ✓ (Y/N) DATE COMPLETED ___ FORWARD MAY 6 1987

LAB COMMENTS 150

199

SUPERVISOR SIGNATURE CHAMPAIGN

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (Columns 9-29 from above)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE		STORET NUMBER	REMARKS (35)	REPLICATE (36)	< OR > (37)	VALUE (38–47)	REPORTING LEVEL (48)	REPORTING LEVEL (49)
	DEPTH TO WATER (ft. below LS)	507F	72019						
	ELEVATION OF GW SURFACE (ft. ref MSL)	508F	71993						
X	TOTAL WELL DEPTH (ft. below LS)	509F	72008				20.		
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	505F	00431						
	REDOX POTENTIAL (millivolt) - Field	506F	00090						
	pH (units) - Field	500F	00400						
	SPEC CONDUCTANCE (umhos) - Field	503F	00094						
	TEMP OF WATER SAMPLE (°C) - Field	502F	00010						

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $25,000 for each day the failure continues, a fine up to $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

IEPA/DLPC

CHEMICAL ANALYSIS FORM

AGENCY USE ONLY

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER G-210 (19–22)

REGION S CO. Madison

Roxana / Barton #2

FACILITY NAME

AQUEOUS LIQUIDS NOT FIELD FILTERED

DATE COLLECTED 03/16/82 (23 M D Y 28)

IEPA LAB (x or Blank) X (29)

	LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–34)	REMARKS (35)	QUALIFIER (36)	< OR > (37)	VALUE (38–47)	REPORTING LEVEL DIGITS TO L OR R (48)	REPORTING LEVEL L OR R OF DECIMAL (49)
* X	119T COD, MG/L	00335				5.		
X	100T PH, LAB - SU	00403				7.6		
X	103T ALKALINITY AS CACO3 MG/L	00410				389.		
X	111T AMMONIA NITROGEN, TOT MG/L	00610			<	0.1		
X	110T NITRITE + NITRATE, TOT MG/L	00630				44.		
X	116T CYANIDE, TOTAL MG/L AS CN	00720			<	0.005		
X	160T SODIUM, TOTAL MG/L AS NA	00929				~~27~~ 25.5 JA		
X	108T CHLORIDE, TOTAL MG/L AS CL	00940				264.		
X	109T SULFATE, TOTAL MG/L AS SO4	00945				314.		
X	107T FLUORIDE, TOTAL MG/L AS F	00951				0.23		
X	144T ARSENIC, TOTAL UG/L AS AS	01002			<	1.		
X	145T BARIUM, TOTAL UG/L AS BA	01007				123.		
X	106T BORON, TOTAL UG/L AS B	01022			<	~~100.~~ ~~106.~~ JA 50		
X	146T CADMIUM TOTAL UG/L AS CD	01027			<	3.		
X	147T CHROMIUM, TOTAL UG/L AS CR	01034			<	5.		
X	149T COPPER, TOTAL UG/L AS CU	01042			~~<~~ JA	JA ~~7.6~~ JA		
X	150T IRON, TOTAL UG/L AS FE	01045			<	~~535~~ 50 JA		
X	151T LEAD, TOTAL UG/L AS PB	01051			<	5.		
X	152T MANGANESE, TOTAL UG/L AS MN	01055				~~118~~ 9. JA		
X	154T NICKEL, TOTAL UG/L AS NI	01067			<	5.		
X	156T SILVER, TOTAL UG/L AS AG	01077			<	3.		
X	157T ZINC, TOTAL UG/L AS ZN	01092			<	180. JA		
X	155T SELENIUM, TOTAL UG/L AS SE	01147				3.		
X	112T PHENOLS, TOTAL UG/L	32730			<	5.		
X	102T RESIDUE ON EVA.-180°C MG/L	70300				1540.		
X	153T MERCURY, TOTAL UG/L AS HG	71900			<	0.05		
X	TOC					2.6		

*Only Keypunch Lines with Data in Column 35 or Columns 38-47

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SAMPLE NUMBER : B704164
SAMPLING POINT DESC. : ROXANA BARTON #2

SUBMITTING SOURCE # : SITE # : 1190900002G210
DATE COLLECTED : 870316 TIME COLLECTED : 0925 SAMPLING PROGRAM :

COLLECTED BY : C REETER DELIVERED BY : UPS
COMMENTS :
FUNDING CODE : LP50 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : LPWT SAMPLE PURPOSE CODE : 0

DATE RECEIVED : 870317 TIME RECEIVED : 1100 RECEIVED BY : PMD
LAB OBSERVATIONS : REPORTING INDICATOR :
SUPERVISORS INITIALS : RPF NOTE : K = LESS THAN VALUE

P00403	PH-LABORATORY	UNITS	: 7.8	P70300	(ROE) TDS @ 180C	MG/L	: 1540
P00410	ALKALINITY,TOTAL	MG/L	: 389	~~P01022~~	~~BORON,TOTAL~~	~~UG/L~~	~~: 100K~~
P00951	FLUORIDE,TOTAL	MG/L	: 0.23	P00940	CHLORIDE,TOTAL	MG/L	: 264
P00945	SULFATE,TOTAL	MG/L	: 314	P00630	NITRATE&NO2-NTOTAL	MG/L	: 44
P00610	AMMONIA-N,TOTAL	MG/L	: 0.1K	P32730	PHENOLS,TOTAL	UG/L	: 5K
P00720	CYANIDE,TOTAL	MG/L	: 0.005K	P00335	COD,TOTAL	MG/L	: 5
P00680	CARBON,T-ORG(TOC)	MG/L	: 2.6	P01002	ARSENIC,TOTAL	UG/L	: 1K
P01051	LEAD,TOT.FURNACE	UG/L	: 5K	P71900	MERCURY,TOTAL	UG/L	: 0.05K
P01147	SELENIUM,TOTAL	UG/L	: 3	P00916	CALCIUM,TOTAL	MG/L	: 252
P00927	MAGNESIUM,TOTAL	MG/L	: 149	P00929	SODIUM,TOTAL	MG/L	: 24
P00937	POTASSIUM,TOTAL	MG/L	: 1.8	P01105	ALUMINUM,TOTAL	UG/L	: 152
P01007	BARIUM,TOTAL	UG/L	: 123	P01022	BORON,TOTAL	UG/L	: 50K
P01012	BERYLLIUM,TOTAL	UG/L	: 0.5K	P01027	CADMIUM,TOTAL	UG/L	: 3K
P01034	CHROMIUM,TOTAL	UG/L	: 5K	P01042	COPPER,TOTAL	UG/L	: 7
P01037	COBALT,TOTAL	UG/L	: 13	P01045	IRON,TOTAL	UG/L	: 50K
P01055	MANGANESE,TOTAL	UG/L	: 9	P01067	NICKEL,TOTAL	UG/L	: 5K
P01077	SILVER,TOTAL	UG/L	: 3K	P01082	STRONTIUM,TOTAL	UG/L	: 407
P01087	VANADIUM,TOTAL	UG/L	: 7	P01092	ZINC,TOTAL	UG/L	: 100K
P00900	HARDNESS CALC.	MG/L	: 1240C				

Illinois Environmental Protection Agency · 2200 Churchill Road, Springfield, IL 62706

Refer to: Site No. 1190900002 - Madison County
Roxanna/Barton No. 2
Permit No. 1982-43-OP and 1985-214-SP
Log No. 1985-214

Feburary 18, 1986

ATTACHMENT A
WATER MONITORING PROGRAM

1. The following monitoring points are to be used in the water monitoring program for this facility. These monitoring points supersede all previously required monitoring points and represent the entire list of monitoring points now required for this facility.

Applicant Designation	Agency Designation
G101	+G101
G102	G102
G103	#G103
G104	+G104
G105	G105
GEI-B-2	#G106

+ represents upgradient monitoring point(s)
# represents monitor point(s) added to the monitoring program

2. Well G109 is hereby deleted from the monitoring program and shall be plugged and abandoned in accordance with the attached permit letter. Well plugging and abandonment methods and certification shall be submitted to the following address within 60 days after the wells are removed from the monitoring program.

Illinois Environmental Protection Agency
Compliance Monitoring Section
Division of Land Pollution Control -- #24
2200 Churchill Road
Springfield, Illinois 62706

3. To establish initial water quality, the concentrations or values of the following parameters in the water samples shall be determined and reported quarterly during the first year. Initial water quality must be established for monitoring wells G103 and G106 of Item 1.

RECORD CODE L P C S M 0 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 04/15/87 (36 M D Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER G 1 0 1 (19–22)
(see Instructions)

REGION S CO. MADISON

DATE COLLECTED 01/27/87 (23 M D Y 28)

ROXANNA/BARTON No. 2
FACILITY NAME

INITIAL IEPA LAB (x or Blank) (29)
(see Instructions)

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED 04/03/87 (42 M D Y 47)

SAMPLING PURPOSE CODE (48)
(see Instructions)

TIME CARD
PROGRAM CODE (49–52) & UNIT CODE (53)

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) 1225 (55 H)

UNABLE TO COLLECT SAMPLE (59)
(see Instructions)

MONITOR POINT SAMPLED BY A (60)
(see Instructions)

OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) X (61) ORGANICS (X)

SAMPLE APPEARANCE (63) RED/BROWN COLOR + TURB ID + ODORLESS (102)

COLLECTOR COMMENTS (103)

(142)

SPECIAL INSTRUCTIONS TO LAB

COLLECT BY INITIALS (145) DIVISION OR COMPANY TRANSF D BY DIVISION OR COMPANY

LAB USE ONLY

LAB SAMPLE NO. 7 708 LAB NAME ENVIRONMENTAL ANALYSIS, INC LAB ID NO. 0 0 2 2 (146–149)

DATE RECEIVED 01/27/87 AND ADDRESS 3278 N. LINDBERGH

TIME RECEIVED 1545 FLORISSANT, MO 63033

SAMPLE TEMP OKAY Y (Y/N) SAMPLE PROPERLY PRESERVED Y (Y/N) DATE COMPLETED 2/5/87 FORWARD

LAB COMMENTS (150) (199)

S VISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER	< OR >	VALUE	REPORTI LEVI
* X	DEPTH TO WATER (ft. below LS)	7 2 0 1 9		6.3	2
X	ELEVATION OF GW SURFACE (ft. ref MSL)	7 1 9 9 3		46.9	2
	TOTAL WELL DEPTH (ft. below LS)	7 2 0 0 8		39.1	2
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	0 0 4 3 1		.	
	REDOX POTENTIAL (millivolt) - Field	0 0 0 9 0		.	
X	pH (units) - Field	0 0 4 0 0		6.95	2
	SPEC CONDUCTANCE (umhos) - Field	0 0 0 9 4		770.	1
X	TEMP OF WATER SAMPLE (°F) - Field	0 0 0 1 1		44.	1
X	DEPTH ELE FT R MSL - 3-1987	7 2 0 2 0		56.42	2 K
X	DEPTH TO WATER FR MP FT IEPA-DLPC	7 2 1 0 9		28.79	2

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $25,000 for each day the failure continues, a fine up to $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

*Only Keypunch Lines with Data in Column 35 or Columns 38-47

EPA/DLPC

CHEMICAL ANALYSIS FORM

ECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

ITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER G 1 0 1 (19–22)

EGION S CO. MADISON

DATE COLLECTED 01 27 87 (23 M D Y 28)

ROXANNA/BARTON No. 2 INITIAL

FACILITY NAME

IEPA LAB (x or Blank) 29

LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–34)	(35)	(36)	< OR > (37)	VALUE (38–47)	REPORTING LEVEL (48)	(49)
T ALK CACO3 MG/L LAB	00410				392.	1	L
NH3+NH4- N DISS MG/L	00608				0.033	3	R
NO2 & NO3 N DISS MG/L	00631				2.38	2	R
PHOS-DISS MG/L P	00666				0.12	2	R
T ORG C AS C MG/L	00680				1.96	2	R
CYANIDE CN, TOTAL MG/L	00720			<	0.001	3	R
CALCIUM CA, DISS MG/L	00915				68.1	1	R
MGNSIUM MG, DISS MG/L	00925				48.5	1	R
SODIUM NA, DISS MG/L	00930				7.52	2	R
PTSSIUM K, DISS MG/L	00935			<	0.50	2	R
CHLORIDE CL, DISS MG/L	00941				10.3	1	R
SULFATE SO4, DISS MG/L	00946				84.5	1	R
FLUORIDE F, DISS MG/L	00950				0.27	2	R
ARSENIC AS, DISS UG/L	01000			<	5.	1	L
BARIUM BA, DISS UG/L	01005				133.	1	L
BORON B, DISS UG/L	01020				22.	1	L
CADMIUM CD, DISS UG/L	01025			<	5.	1	L
CHROMIUM CR, DISS UG/L	01030				23.	1	L
IRON FE, DISS UG/L	01046				50.	2	L
LEAD PB, DISS UG/L	01049				6.	1	L
MANGANESE MN, DISS UG/L	01056				8.	1	L
NICKEL NI, DISS UG/L	01065			<	50.	2	L
SILVER AG, DISS UG/L	01075			<	5.	1	L
ZINC ZN, DISS UG/L	01090				76.	1	L
SELENIUM SE, DISS UG/L	01145				5.	1	L
PHENOLS TOTAL UG/L	32730			<	5.	1	L
RESIDUE ON EVAP 180° C MG/L	70300				518.	1	L
MERCURY HG, DISS UG/L	71890			<	0.2	1	R

RECEIVED 3 1987

RECORD CODE: L P C S M 0 1 (1–7) TRANS CODE: A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 04 15 87 (36 M D Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

REGION S CO. MADISON

ROXANNA/BARTON NO. 2 — FACILITY NAME

ROUTINE

MONITOR POINT NUMBER (see Instructions) G 1 0 2 (19–22)

DATE COLLECTED 01 27 87 (23 M D Y 28)

IEPA LAB (x or Blank) (see Instructions) (29)

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED 04 03 87 (42 M D Y 47)

SAMPLING PURPOSE CODE (see Instructions) (48)

TIME CARD PROGRAM CODE (49–52) & UNIT CODE (53)

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) 13 11 (55 H M 58)

UNABLE TO COLLECT SAMPLE (see Instructions) (59)

MONITOR POINT SAMPLED BY (see Instructions) A (60)

OTHER (SPECIFY) X

SAMPLE FIELD FILTERED · INORGANICS (X) (61) ORGANICS (X) (62)

SAMPLE APPEARANCE (63) CLEAN, COLORLESS, ODOR LESS (102)

COLLECTOR COMMENTS (103–142)

SPECIAL INSTRUCTIONS TO LAB

COLLECTED BY	INITIALS (143–145)	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
Chris Hegfield	CLS	Environmental Analysis	Chris Hegfield	Environmental Analysis

LAB USE ONLY

LAB SAMPLE NO. 725709

LAB NAME Environmental Analysis, Inc

LAB ID NO. 0022 (146–149)

DATE RECEIVED 1/27/87

AND ADDRESS 3278 N. Lindbergh, Florissant, MO 63033

TIME RECEIVED 1545

SAMPLE TEMP OKAY Y (Y/N) SAMPLE PROPERLY PRESERVED Y (Y/N) DATE COMPLETED 2/5/87 FORWARD

LAB COMMENTS (150–199)

Chris Hegfield — SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER	< OR >	VALUE	REPORTING LEVEL
	DEPTH TO WATER (ft. below LS)	7 2 0 1 9		16.52	2
X	ELEVATION OF GW SURFACE (ft. ref MSL)	7 1 9 9 3		451.16	2 R
	TOTAL WELL DEPTH (ft. below LS)	7 2 0 0 8		50.3	2
	ALKALINITY TOTAL (mg/l as CaCO3) · Field	0 0 4 3 1			
	REDOX POTENTIAL (millivolt) · Field	0 0 0 9 0			
	pH (units) · Field	0 0 4 0 0		6.70	2 R
	SPEC CONDUCTANCE (umhos) · Field	0 0 0 9 4		865	1 L
	TEMP OF WATER SAMPLE (°F) · Field	0 0 0 1 1		55	1 L

Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil ... by the Forms Management Center

RECORD CODE L P C S M 0 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 04/15/87 (36 M D Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

REGION S CO. MADISON

ROXANNA/BARTON No. 2 INITIAL

FACILITY NAME

MONITOR POINT NUMBER G 1 0 3 (19–22) (see Instructions)

DATE COLLECTED 02/02/87 (23 M D Y 28)

IEPA LAB (x or Blank) (see Instructions) (29)

FOR IEPA USE ONLY COMPLAINT NO.

DATE RECEIVED 04/03/87 (42 M D Y 47)

SAMPLING PURPOSE CODE (see Instructions) (48)

TIME CARD PROGRAM CODE (49–52) & UNIT CODE (53)

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) 1131 (55 H M 58)

UNABLE TO COLLECT SAMPLE (see Instructions) (59)

MONITOR POINT SAMPLED BY (see Instructions) A (60) OTHER (SPECIFY)

SAMPLE FIELD FILTERED INORGANICS (X) X (61) ORGANICS (X) (62)

SAMPLE APPEARANCE (63) BROWN, HEAVY SEDIMENT + ODORLESS (102)

COLLECTOR COMMENTS (103) (142)

SPECIAL INSTRUCTIONS TO LAB

COLLECTED BY	INITIALS	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
Chris L Sagafredo	CLS (143–145)	Environmental Analysis	Chris L Sagafredo	Environmental Analysis

LAB USE ONLY

LAB SAMPLE NO. 726027 LAB NAME Environmental Analysis, Inc LAB ID NO. 0022 (146–149)

DATE RECEIVED 2/2/87 AND ADDRESS 3278 N. Lindbergh

TIME RECEIVED 1540 Florissant, MO 63033

SAMPLE TEMP OKAY Y (Y/N) SAMPLE PROPERLY PRESERVED Y (Y/N) DATE COMPLETED 2/15/87 FORWARD

LAB COMMENTS (150) (199)

Chris L Sagafredo

SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER	< OR >	VALUE	REPORTING LEVEL
X	DEPTH TO WATER (ft. below LS)	72019		9.14	2
X	ELEVATION OF GW SURFACE (ft. ref MSL)	71993		436.11	2 R
	TOTAL WELL DEPTH (ft. below LS)	72008		25.06	2 R
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	00431		.	
	REDOX POTENTIAL (millivolt) - Field	00090		.	
X	pH (units) - Field	00400		7.10	2
	SPEC CONDUCTANCE (umhos) - Field	00094		921.	1 L
X	TEMP OF WATER SAMPLE (°F) - Field	00011		57.	1 L
X	WELL DEPTH ELE FT RE MSL	72020		420.19	2 R
X	DEPTH TO WATER FR MP FT	72109		9.78	2 R

This Agency is authorized to require this information under Illinois Revised Statutes 1979 Chapter 111 1 2, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil [illegible] $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center

EPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER 6 1 0 3 (19–22)

REGION S CO. MADISON

DATE COLLECTED 02 02 87 (23 M D Y 28)

ROXANNA/BARTON No. 2 INITIAL

FACILITY NAME

IEPA LAB (x or Blank) (29)

LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORTING LEVEL	
T ALK CACO3 MG/L LAB	00410				407.	1	L
NH3+NH4- N DISS MG/L	00608				29.	1	L
NO2 & NO3 N DISS MG/L	00631				0.47	2	R
PHOS-DISS MG/L P	00666				0.05	2	R
T ORG C AS C MG/L	00680				16.5	1	R
CYANIDE CN, TOTAL MG/L	00720			<	0.001	3	R
CALCIUM CA, DISS MG/L	00915				112.	1	L
MGNSIUM MG, DISS MG/L	00925				61.0	1	R
SODIUM NA, DISS MG/L	00930				15.5	1	R
PTSSIUM K, DISS MG/L	00935				1.14	2	R
CHLORIDE CL, DISS MG/L	00941				43.0	1	R
SULFATE SO4, DISS MG/L	00946				101.	1	L
FLUORIDE F, DISS MG/L	00950				0.24	2	R
ARSENIC AS, DISS UG/L	01000			<	5.	1	L
BARIUM BA, DISS UG/L	01005				80.	1	L
BORON B, DISS UG/L	01020				65	1	L
CADMIUM CD, DISS UG/L	01025			<	5.	1	L
CHROMIUM CR, DISS UG/L	01030				36.	1	L
IRON FE, DISS UG/L	01046			<	50	2	L
LEAD PB, DISS UG/L	01049				10.	1	L
MANGANESE MN, DISS UG/L	01056				110.	1	L
NICKEL NI, DISS UG/L	01065			<	50.	2	L
SILVER AG, DISS UG/L	01075			<	5.	1	L
ZINC ZN, DISS UG/L	01090				242.	1	L
SELENIUM SE, DISS UG/L	01145			<	5.	1	L
PHENOLS TOTAL UG/L	32730			<	5.	1	L
RESIDUE ON EVAP 180° C MG/L	70300				649.	1	L
MERCURY HG, DISS UG/L	71890			<	0.2	1	R

RECORD CODE L P C S M 0 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 04/15/87 (36 M D Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

REGION S CO. MADISON

ROXANNA/BARTON No. 2

FACILITY NAME

INITIAL

MONITOR POINT NUMBER R 1 0 4 (19–22)
(see Instructions)

DATE COLLECTED 02/02/87 (23 M D Y 28)

IEPA LAB (x or Blank) (29)
(see Instructions)

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED 04/03/87 (42 M D Y 47)

SAMPLING PURPOSE CODE (48)
(see Instructions)

TIME CARD
PROGRAM CODE (49–52) & UNIT CODE (53)

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) 1010 (55 H M 58)

UNABLE TO COLLECT SAMPLE (59)
(see Instructions)

MONITOR POINT SAMPLED BY A (60)
(see Instructions)

OTHER (SPECIFY)

SAMPLE FIELD FILTERED INORGANICS (X) X (61) ORGANICS (X) (62)

SAMPLE APPEARANCE (63) CLEAR + COLORLESS + ODORLESS (102)

COLLECTOR COMMENTS (103) (142)

SPECIAL INSTRUCTIONS TO LAB

COLLECTED BY (143) INITIALS CLS (145) DIVISION OR COMPANY ENVIRONMENTAL ANALYSIS

TRANSPORTED BY DIVISION OR COMPANY ENVIRONMENTAL ANALYSIS

LAB USE ONLY

LAB SAMPLE NO. 726118

LAB NAME ENVIRONMENTAL ANALYSIS, INC

LAB ID NO. 002 (146–149)

DATE RECEIVED 2/3/87

AND ADDRESS 3278 N. LINDBERGH
FLORISSANT, MO 63033

TIME RECEIVED 1200

SAMPLE TEMP OKAY Y (Y/N)

SAMPLE PROPERLY PRESERVED Y (Y/N)

DATE COMPLETED 2/15/87

FORWARD

LAB COMMENTS (150) (199)

SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

FB

		FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER	< OR >	VALUE	REPORTING LEVEL
*	X	DEPTH TO WATER (ft. below LS)	72019		2.66	2
	X	ELEVATION OF GW SURFACE (ft. ref MSL)	71993		51.44	2
		TOTAL WELL DEPTH (ft. below LS)	72008		44.34	2
		ALKALINITY TOTAL (mg/l as CaCO3) - Field	00431			
		REDOX POTENTIAL (millivolt) - Field	00090			
	X	pH (units) - Field	00400		6.70	2
		SPEC CONDUCTANCE (umhos) - Field	00094		745.	LL
	X	TEMP OF WATER SAMPLE (°F) - Field	00011		54.	1L
	X	WELL DEPTH ELE FT RE MSL	72020		436.29	2R
	X	DEPTH TO WATER FR MP FT	72109		27.0	2

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil fine of $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER R 1 0 4 (19–22)

REGION S CO. MADISON

DATE COLLECTED 02 02 87 (23 M D Y 28)

ROXANNA/BARTON No. 2 (FACILITY NAME)

INITIAL

IEPA LAB (x or Blank) 29

	LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER			< OR >	VALUE	REPORTING LEVEL	
*	T ALK CACO3 MG/L LAB	00410				283.	1	L
	NH3+NH4- N DISS MG/L	00608				0.022	3	R
	NO2 & NO3 N DISS MG/L	00631				2.73	2	R
	PHOS-DISS MG/L P	00666			<	0.05	2	R
	T ORG C AS C MG/L	00680				19.1	1	R
	CYANIDE CN, TOTAL MG/L	00720			<	0.001	3	R
	CALCIUM CA, DISS MG/L	00915				66.5	1	R
	MGNSIUM MG, DISS MG/L	00925				41.8	1	R
	SODIUM NA, DISS MG/L	00930				10.3	1	R
	PTSSIUM K, DISS MG/L	00935				1.30	2	R
	CHLORIDE CL, DISS MG/L	00941				110.	1	L
	SULFATE SO4, DISS MG/L	00946				114.	1	L
	FLUORIDE F, DISS MG/L	00950				0.22	2	R
	ARSENIC AS, DISS UG/L	01000			<	5.	1	L
	BARIUM BA, DISS UG/L	01005				135.	1	L
	BORON B, DISS UG/L	01020				23.	1	L
	CADMIUM CD, DISS UG/L	01025			<	5.	1	L
	CHROMIUM CR, DISS UG/L	01030				11.	1	L
	IRON FE, DISS UG/L	01046			<	50.	2	L
	LEAD PB, DISS UG/L	01049				10.	1	L
	MANGANESE MN, DISS UG/L	01056				350.	1	L
	NICKEL NI, DISS UG/L	01065				8.	1	L
	SILVER AG, DISS UG/L	01075				5.	1	L
	ZINC ZN, DISS UG/L	01090				187.	1	L
	SELENIUM SE, DISS UG/L	01145				5.	1	L
	PHENOLS TOTAL UG/L	32730			<	5.	1	L
	RESIDUE ON EVAP 180° C MG/L	70300				479.	1	L
	MERCURY HG, DISS UG/L	71890			<	0.2	1	R

RECORD CODE L P C S M 0 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 04 15 87 (36 M D Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

REGION S CO. MADISON

ROXANNA/BARTON No. 2 INITIAL

FACILITY NAME

MONITOR POINT NUMBER R 1 0 5 (see Instructions) (22)

DATE COLLECTED 02 02 87 (23 M D Y 28)

IEPA LAB (x or Blank) (see Instructions) (29)

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED 04 03 87 (42 M D Y 47)

SAMPLING PURPOSE CODE (see Instructions) (48)

TIME CARD PROGRAM CODE (49–52) & UNIT CODE (53)

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) 1220 (55 H M 58)

UNABLE TO COLLECT SAMPLE (see Instructions) (59)

MONITOR POINT SAMPLED BY (see Instructions) A (60) OTHER (SPECIFY)

SAMPLE FIELD FILTERED INORGANICS (X) X (61) ORGANICS (X) (62)

SAMPLE APPEARANCE (63) BROWN COLOR, TURBID, O DORLESS (102)

COLLECTOR COMMENTS (103) (142)

SPECIAL INSTRUCTIONS TO LAB

COLLECTED BY	INITIALS	DIVISION OR COMPANY	TRANSPORTED BY	DIVISION OR COMPANY
Chris L Hegafredo	CLS (143–145)	Environmental Analysis	Chris L Hegafredo	Environmental Analysis

LAB USE ONLY

LAB SAMPLE NO. 726028 LAB NAME Environmental Analysis LAB ID NO. 0 0 2 2 (146–149)

DATE RECEIVED 2/2/87 AND ADDRESS 3278 N. Lindbergh

TIME RECEIVED 1540 Florissant, MO 63033

SAMPLE TEMP OKAY Y (Y/N) SAMPLE PROPERLY PRESERVED Y (Y/N) DATE COMPLETED 2/15/87 FORWARD

LAB COMMENTS (150) (199)

Chris L Hegafredo

SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

	FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER	< OR >	VALUE	REPORTING LEVEL
X	DEPTH TO WATER (ft. below LS)	72019		27.0	2
X	ELEVATION OF GW SURFACE (ft. ref MSL)	71993		21.	2 R
	TOTAL WELL DEPTH (ft. below LS)	72008		33.88	2
	ALKALINITY TOTAL (mg/l as CaCO3) - Field	00431		.	
	REDOX POTENTIAL (millivolt) - Field	00090		.	
X	pH (units) - Field	00400		7.05	2
	SPEC CONDUCTANCE (umhos) - Field	00094		691.	L
X	TEMP OF WATER SAMPLE (°F) - Field	00011		56.	1 L
X	WELL DEPTH ELE FT RE MSL	72020		415.06	2
X	DEPTH TO WATER FR MP FT	72109		29.2	2 R

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IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER R 1 0 5 (19)

REGION S CO. MADISON

DATE COLLECTED 02 02 (23 M D Y)

ROXANNA/BARTON No. 2 — INITIAL

FACILITY NAME

IEPA LAB (x or Blank) (29)

LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER	< OR >	VALUE	REPORTING LEVEL	
T ALK CACO3 MG/L LAB	00410		355.	1	L
NH3+NH4- N DISS MG/L	00608		0.244	3	
NO2 & NO3 N DISS MG/L	00631		0.39	2	R
PHOS-DISS MG/L P	00666		0.04	2	R
T ORG C AS C MG/L	00680		20.9	1	
CYANIDE CN, TOTAL MG/L	00720		0.001	3	R
CALCIUM CA, DISS MG/L	00915		62.2	1	R
MGNSIUM MG, DISS MG/L	00925		39.1	1	R
SODIUM NA, DISS MG/L	00930		1.5	1	R
PTSSIUM K, DISS MG/L	00935		6.16	2	
CHLORIDE CL, DISS MG/L	00941		8.0	2	
SULFATE SO4, DISS MG/L	00946		7.0	1	R
FLUORIDE F DISS MG L	00950		0.31	2	
ARSENIC AS, DISS UG/L	01000	<	5.	1	L
BARIUM BA, DISS UG/L	01005		235.	1	L
BORON B, DISS UG/L	01020		23.	1	L
CADMIUM CD, DISS UG/L	01025	<	5.	1	L
CHROMIUM CR, DISS UG/L	01030		15.	1	L
IRON FE, DISS UG/L	01046	<	50.	2	L
LEAD PB, DISS UG/L	01049			1	L
MANGANESE MN, DISS UG/L	01056		550.	1	L
NICKEL NI, DISS UG/L	01065	<	50.	2	L
SILVER AG, DISS UG/L	01075	<	5.	1	L
ZINC ZN, DISS UG/L	01090		2.	1	
SELENIUM SE, DISS UG/L	01145	<	.	1	
PHENOLS TOTAL UG/L	32730	<	5.	1	L
RESIDUE ON EVAP 180° C MG/L	70300		459.	1	L
MERCURY HG, DISS UG/L	71890	<	0.2	1	R

RECORD CODE L P C S M 0 1 (1–7) TRANS CODE A (8)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

REPORT DUE DATE 04/15/87 (36 M D Y 41)

FEDERAL ID NUMBER

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

REGION S CO. MADISON

ROXANNA/BARTON No. 2

FACILITY NAME

INITIAL

MONITOR POINT NUMBER G 1 0 6 (19–22) (see Instructions)

DATE COLLECTED 01/27/87 (23 M D Y 28)

IEPA LAB (x or Blank) (see Instructions) (29)

FOR IEPA USE ONLY

COMPLAINT NO.

DATE RECEIVED 04/03/87 (42 M D Y 47)

SAMPLING PURPOSE CODE (see Instructions) (48)

TIME CARD

PROGRAM CODE (49–52) & UNIT CODE (53)

BACKGROUND SAMPLE (X) (54)

TIME COLLECTED (24 HR CLOCK) 1328 (55 H M 58)

UNABLE TO COLLECT SAMPLE (see Instructions) (59)

MONITOR POINT SAMPLED BY (see Instructions) A (60)

OTHER (SPECIFY)

SAMPLE FIELD FILTERED - INORGANICS (X) X (61) ORGANICS (X) (62)

SAMPLE APPEARANCE (63) PALE BROWN COLOR, TUR BID, ODORLESS (102)

COLLECTOR COMMENTS (103)

SPECIAL INSTRUCTIONS TO LAB (142)

COLLECTED BY (143) INITIALS L S (145) DIVISION OR COMPANY ANALYSIS

TRANSPORTED BY DIVISION OR COMPANY

LAB USE ONLY

LAB SAMPLE NO. 725710

LAB NAME ENVIRONMENTAL ANALYSIS, INC

LAB ID NO. 0022 (146–149)

DATE RECEIVED 1/27/87

AND ADDRESS 3278 N. LINDBERGH

TIME RECEIVED 1545

FLORISSANT, MO 63033

SAMPLE TEMP OKAY Y (Y/N) SAMPLE PROPERLY PRESERVED Y (Y/N) DATE COMPLETED 2/5/87 FORWARD

LAB COMMENTS (150) (199)

SUPERVISOR SIGNATURE

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (COLUMNS 9-29 FROM ABOVE)

		FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER	< OR >	VALUE	REPORTING LEVEL
*	X	DEPTH TO WATER (ft. below LS)	72019		10.43	2
	X	ELEVATION OF GW SURFACE (ft. ref MSL)	71993		447.19	
		TOTAL WELL DEPTH (ft. below LS)	72008		18.81	2
		ALKALINITY TOTAL (mg/l as CaCO3) - Field	00431		.	
		REDOX POTENTIAL (millivolt) - Field	00090		.	
	X	pH (units) - Field	00400		6.95	2
		SPEC CONDUCTANCE (umhos) - Field	00094		766.	1
	X	TEMP OF WATER SAMPLE (°F) - Field	00011		55.	1
	X	WELL DEPTH ELE FT RE MSL	72020		438.81	
	X	DEPTH TO WATER FR MP FT	72109		11.78	2

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IEPA/DLPC

CHEMICAL ANALYSIS FORM

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 1 9 0 9 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER G 1 0 6 (19–22)

REGION S CO. MADISON

DATE COLLECTED 01 27 87 (23 M D Y 28)

ROXANNA/BARTON No. 2 INITIAL

FACILITY NAME

IEPA LAB (x or Blank) (29)

LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER (30–34)	(35)	(36)	< OR > (37)	VALUE (38–47)	REPORTING LEVEL (48)	(49)
T ALK CACO3 MG/L LAB	00410				523.	1	L
NH3+NH4- N DISS MG/L	00608				0.031	3	R
NO2 & NO3 N DISS MG/L	00631				3.41	2	R
PHOS-DISS MG/L P	00666				0.09	2	R
T ORG C AS C MG/L	00680				2.46	2	R
CYANIDE CN, TOTAL MG/L	00720				0.001	3	R
CALCIUM CA, DISS MG/L	00915				57.7	1	R
MGNSIUM MG, DISS MG/L	00925				58.9	1	R
SODIUM NA, DISS MG/L	00930				9.50	2	R
PTSSIUM K, DISS MG/L	00935				1.12	2	R
CHLORIDE CL, DISS MG/L	00941				19.2	1	R
SULFATE SO4, DISS MG/L	00946				70.8	1	R
FLUORIDE F, DISS MG/L	00950				0.31	2	R
ARSENIC AS, DISS UG/L	01000			<	5.	1	L
BARIUM BA, DISS UG/L	01005				135.	1	L
BORON B, DISS UG/L	01020				38.	1	L
CADMIUM CD, DISS UG/L	01025			<	5.	1	L
CHROMIUM CR, DISS UG/L	01030			<	5.	1	L
IRON FE, DISS UG/L	01046			<	50.	2	L
LEAD PB, DISS UG/L	01049			<	5.	1	L
MANGANESE MN, DISS UG/L	01056				16.	1	L
NICKEL NI, DISS UG/L	01065			<	50.	2	L
SILVER AG, DISS UG/L	01075			<	5.	1	L
ZINC ZN, DISS UG/L	01090				90.	1	L
SELENIUM SE, DISS UG/L	01145			<	5.	1	L
PHENOLS TOTAL UG/L	32730			<	5.	1	L
RESIDUE ON EVAP 180° C MG/L	70300				482.	1	L
MERCURY HG, DISS UG/L	71890				0.2	1	R

S -846 (NA Y ICA ,OCE urge Mus e followe

Purpose

Program LP41

Sample #1

C 4661 APR 10 '84

Time Collected: 2:15 PM

Lab # B037182

SPECIAL ANALYSIS FORM

Date Collected: 3/30/84

Date Received APR 23 1984

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
Madison	Roxana / SCA - Barton	LPC 11909001

SOURCE OF SAMPLE: (Exact Location) Sludge-like sample taken from under tail-gat of tandem dump truck - as it was parked at guard house of landfi truck was actually observed spilling/leaking its load on Wanda Road Truck → Illinois license # 39 106 Red Ford Tandem Dump - name "Gary Write"

PHYSICAL OBSERVATIONS, REMARKS: Appeard on door - Special Waste hauler # 1016/00 decal was present but expired on 9/30/83.

- Sludge-like taken off of truck as it was parked - black-oily-li material - with a field pH of ≤ 2

TESTS REQUESTED: test for corrosivity (if enough sample exists, then test for EP. TOX)

COLLECTED BY: Tom Powell TRANSPORTED BY: BOS

LABORATORY

RECEIVED BY: Angie Rund DATE COMPLETED: DATE FORWARDED: JUN. 21. 1984

J Daugherty

As	0.116
Hg	< 0.0001
Se	0.117
Ba	Interference
Cd	< 0.01
Pb	3.3
Ag	< 0.01
pH	- no liquid was available to perform pH analysis.
Cr	0.24

Initial pH - 1.7
Final pH - 1.7

RECEIVED
JUN 22 1984
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

RESULTS EXPRESSED IN MG/LITER UNLESS OTHERWISE SPECIFIED.

IL 532-0314
LPC 8A 4/77

C004661

(NOT FOR DATA PROCESSING)

Environmental Protection Agency
Division of Laboratory Services
2121 W. Taylor Street
Chicago, Illinois 60612

Purpose "SW-846 Analytical procedure Mus be followed"
Program LP41

Sample #2

C 4662 APR 10

Time Collected: 4:35 PM

Lab #

SPECIAL ANALYSIS FORM

Date Collected: 3/30/84

Date Received B037183

APR -3 1984

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
Madison	Roxana / SCA-Barton	LPC 1190 9001

SOURCE OF SAMPLE: (Exact Location) sludge-like sample taken from near mid point of active area of landfill. Taken from approx 80' down gradient from highest point of fill - This material had been mixed w/ dry refuse - however sample was obtained from accumulations.

PHYSICAL OBSERVATIONS, REMARKS: Sample was split w/ Chuck End of SCA

- Dark oily like material with pH ≤ 2

TESTS REQUESTED: test for corrosivity (if enough sample exists then test for EP TOX.)

COLLECTED BY: Tom Powell TRANSPORTED BY: BOS

LABORATORY

RECEIVED BY: Inge Rund DATE COMPLETED: DATE FORWARDED: JUN 21 1984

J Daugherty

As	<0.1
Hg	<0.0001
Se	0.094
Ba	Interference
Cd	<0.01
Cr	0.16
Pb	2.0
Ag	<0.01

Initial pH - 2.5
Final pH 3.2

RESULTS EXPRESSED IN MG/LITER UNLESS OTHERWISE SPECIFIED.

RECEIVED
JUN 22 1984
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

pH — no liquid was available to perform pH analysis.

IL 532-0314
LPC 8A 4/77

C004662

(NOT FOR DATA PROCESSING)

Environmental Protection Agency
Division of Laboratory Services
2121 W. Taylor Street
Chicago, Illinois 60612

-SW 846 Analytical procedures must be lower -

Purpose Program LP41

Sample #3

C 4663 APR 10 '84

B037184

Time Collected: 4:40 PM

Lab #

SPECIAL ANALYSIS FORM

Date Collected: 3/30/84

Date Received APR. -3. 1984

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
Madison	Roxana / SCA - Barton	LPC 11909001

SOURCE OF SAMPLE: (Exact Location) sludge-like sample taken from upper portions of active area. (Elevation) Taken from approx 50' down gradient from highest point of fill. Material had been mixed w/ dry refuse - Sample was obtained from an accumulation of the material. Sample was split w/ Chuck of SCA.

PHYSICAL OBSERVATIONS, REMARKS:

Dark oily like material w/ field ph of ≤2

TESTS REQUESTED: Test for Corrosivity pH (if enough sample exists then test for EP Tox Also)

COLLECTED BY: [signature] TRANSPORTED BY: Bus

LABORATORY

RECEIVED BY: Angie Rund DATE COMPLETED: DATE FORWARDED: JUN. 21. 1984

[signature] J Daugherty

As	<0.1
Hg	0.00023
Se	0.037
Ba	Interference
Cd	<0.01
Cr	0.29
Pb	2.95
Ag	<0.01

Initial pH - 1.4
Final pH - 1.3

RESULTS EXPRESSED IN MG/LITER UNLESS OTHERWISE SPECIFIED.

RECEIVED
JUN 22 1984
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

pH - no liquid was available to perform pH analysis.

IL 532-0314
LPC 8A 4/77

(NOT FOR DATA PROCESSING)

C004663

Environmental Protection Agency
Division of Laboratory Services
2121 W. Taylor Street
Chicago, Illinois 60612

Purpose: SW-846 Analytical procedures must be followed.

Program LP41 Sample # 4

C 4664 APR 10 84

Time Collected: 4:55 Lab # B03/185

SPECIAL ANALYSIS FORM

Date Collected: 3/30/83 Date Received APR -3 1984

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
Madison	Roxana / SCA - Barton	LPC 1190900 1

SOURCE OF SAMPLE: (Exact Location) sludge-like sample taken from a point between where samples #2 + #3 were collected. this material had been mixed w/ dry refuse. Sample, however, was obtained from an accumulation of the material

PHYSICAL OBSERVATIONS, REMARKS:

Dark oily-like material w/ field ph of ≤2

TESTS REQUESTED: (RCRA) Test for Corrosivity pH - (if Enough sample Exists then test for EP TOX Also)

COLLECTED BY: Don Powell TRANSPORTED BY: BUS

LABORATORY

RECEIVED BY: Angie Rund DATE COMPLETED: DATE FORWARDED: JUN 21 1984

J. Daugherty

pH - no liquid was available to perform pH analysis.

As	<0.1
Hg	<0.0001
Se	0.018
Ba	0.3
Cd	<0.01
Cr	0.06
Pb	1.88
Ag	<0.01

Initial pH - 3.3
Final pH - 3.7

RECEIVED
JUN 22 1984
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

RESULTS EXPRESSED IN MG/LITER UNLESS OTHERWISE SPECIFIED.

RCRA

IL 532-0314
LPC 84 4/77

C004664 (NOT FOR DATA PROCESSING)

Environmental Protection Agency
Division of Laboratory Services
2121 W. Taylor Street
Chicago, Illinois 60612

urpose —
Program LP41

NA ICA roce ure Mus be follo.

Sample #2

C 4662 APR

Time Collected: 4:35 PM

Lab #

SPECIAL ANALYSIS FORM

Date Collected: 3/30/84

Date Received B037183

APR -3 1984

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
Madison	Royana / SCA-Barton	LPC 1190900

SOURCE OF SAMPLE: (Exact Location) sludge-like sample taken from near point of active area of landfill. Taken from approx 80' down gradient from highest point of fill - This material had mixed w/ dry refuse - however sample was obtained a accumulation. Sample was split w/ Chu

PHYSICAL OBSERVATIONS, REMARKS:

- Dark oil like material with pH ≤ 2

TESTS REQUESTED: test for corrosivity (if enough sam exists then test for EPTOX.)

COLLECTED BY: Tom Powell

TRANSPORTED BY: BUS

LABORATORY

RECEIVED BY: Angie Rund

DATE COMPLETED:

DATE FORWARDED: MAY -1 198

RECEIVED
MAY 04 1984
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

J Daugherty

Initial pH - 2.5
Final pH 3.2

RECEIVED
MAY 03 1984
ILL. E.P.A. - D.L.P.C.
STATE OF ILLINOIS

Gs, Hg, Se } sent to Champaign lab

Ba	Interfuse
Cd	<0.01
Cr	0.16
Pb	2.0
Ag	<0.01

RESULTS EXPRESSED IN MG/LITER UNLESS OTHERWISE SPECIFIED.

pH — no liquid was available to perform analysis

IL 532-0314
LPC 8A 4/77

C004662

(NOT FOR DATA PROCESSING)

Environmental Protection Age
Division of Laboratory Servic
2121 W. Taylor Street
Chicago, Illinois 60612

-SW 846 Analytical procedures must be followed -

Purpose Program LP41

Sample #3

C 4663 APR 10

B037184

Time Collected: 4:40 PM

Lab #

SPECIAL ANALYSIS FORM

Date Collected: 3/30/84

Date Received APR. -3. 1984

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
Madison	Roxana / SCA - Barton	LPC 1190900

SOURCE OF SAMPLE: (Exact Location) Sludge-like sample taken from upper portions of active area. (Elevation) Taken from approx 50' down gradient from highest point of fill. Material has been mixed w/ dry refuse - Sample was obtained from an accumulation of the material. Sample was split w/ Chu of S

PHYSICAL OBSERVATIONS, REMARKS:

Dark oily like material w/ field ph of ≤2

TESTS REQUESTED: Test for Corrosivity pH (if enough sample exists then test for EP Tox Also)

COLLECTED BY: Tom Powell

TRANSPORTED BY: Bus

LABORATORY

RECEIVED
MAY 04 1984
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

RECEIVED BY: Angie Rund

DATE COMPLETED:

DATE FORWARDED: MAY -1 1984

N. Iacobo

J Daugherty

Cs, Hg, Se } sent to Champaign lab

Initial pH - 1.4

Final pH - 1.3

Ba Interference

Cd <0.01

Cr 0.29

Pb 2.95

Ag <0.01

RESULTS EXPRESSED IN MG/LITER UNLESS OTHERWISE SPECIFIED.

RECEIVED
MAY 03 1984
ILL. E.P.A. - D.L.P.C.
STATE OF ILLINOIS

pH - no liquid was available to perform pH analysis

IL 532-0314
LPC 8A 4/77

(NOT FOR DATA PROCESSING)

Environmental Protection Agency
Division of Laboratory Services
2121 W. Taylor Street

Purpose Program LP41

SW-846 analytical procedures must be followed

Sample # 4

C 4664 APR 10 84

Time Collected: 4:55

Lab # B037185

SPECIAL ANALYSIS FORM

Date Collected: 3/30/84

Date Received APR -3 1984

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
Madison	Roiana / SCA - Barton	LPC 11909001

SOURCE OF SAMPLE: (Exact Location) sludge-like sample taken from a point between where samples # 2 + #3 were collected. this material had been mixed w/ dry refuse. Sample, however, was obtained from an accumulation of the material

PHYSICAL OBSERVATIONS, REMARKS:

Dark [illegible] material w/ field ph of ≤ 2

TESTS REQUESTED: (RCRA) Test for Corrosivity pH - (if Enough sample Exists then test for EP TOX Also)

COLLECTED BY: [signature] TRANSPORTED BY: RUS

LABORATORY

RECEIVED BY: Angie Rund DATE COMPLETED: DATE FORWARDED: MAY -1 1984

[signature]

pH - no liquid was available to perform pH analysis.

J Daugherty

As, Hg, Se } sent to Champaign Lab

Initial pH -3.3

Final pH -3.7

RECEIVED MAY 04 1984 E.P.A. — D.L.P.C. STATE OF ILLINOIS

Ba 0.3

Cd <0.01

Cr 0.05

Pb 1.88

Ag <0.01

RESULTS EXPRESSED IN MG/LITER UNLESS OTHERWISE SPECIFIED.

RECEIVED MAY 03 1984 ILL. E.P.A. - D.L.P.C. STATE OF ILLINOIS

RCRA

IL 532-0314
LPC 84 4/77

C004664 (NOT FOR DATA PROCESSING)

Environmental Protection Agency
Division of Laboratory Services
2121 W. Taylor Street
Illinois 60612

Illinois Environmental Protection Agency · 2200 Churchill Road, Springfield, IL 62706

217/782-6761

Refer to: 1190900001 -- Madison County
1190900002 -- Madison County
GSX Barton #1 and 2
Groundwater File

February 25, 1987

Charles E. Emde
GSX Corporation
1838 North Broadway
St. Louis, MO 63102

Dear Mr. Emde:

This letter is in response to your January 8, 1987 letter in regard to the replacement of monitor wells G104, G105, and G111. Please submit boring logs, well completion diagrams, and an updated site location map showing both the abandoned and replacement well locations. One quarter of initial water quality parameters will be adequate to establish groundwater quality at the replacement wells at the time of installation. The wells shall be renumbered and reported as R104, R105, and R111, respectively. Please note these changes on your Chemical Analysis Forms reported to the Agency.

If you have any questions, please contact me at 217/782-6761.

Sincerely,

Steve Van Hook

Steve Van Hook
Facilities Compliance Unit
Compliance Monitoring Section
Division of Land Pollution Control

SV:tk:2/12/45

cc: Division Files
Region Files

AGENCY USE ONLY

Page 1 of 2

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECORD CODE: L P C S M 0 1 (1–7) TRANS CODE: A (8)

REPORT DUE DATE (36) M / D / Y (41) FEDERAL ID NUMBER

SITE INVENTORY NUMBER (9) 1190900002 (18)
REGION J CO. Madison
Roxana / Barton #2
LOCATION RESPONSIBLE PARTY

MONITOR POINT NUMBER (see Instructions) G211 (19–22)
DATE COLLECTED (23) M 03 / D 16 / Y 87 (28)
IEPA LAB (see Instructions) X (29)

FOR IEPA USE ONLY — COMPLAINT NO.

DATE RECEIVED (42) M / D / Y (47)
SAMPLING PURPOSE CODE (see Instructions) 4 (48)
TIME CARD PROGRAM CODE LP50 (49–52) & UNIT CODE M (53)

BACKGROUND SAMPLE (X) (54)
TIME COLLECTED (24 HR CLOCK) 10:0 (55 H M 58)
UNABLE TO COLLECT SAMPLE (see Instructions) (59)
MONITOR POINT SAMPLED BY (see Instructions) R (60) OTHER (SPECIFY)
SAMPLE FIELD FILTERED - INORGANICS (X) (61) ORGANICS (X) (62)

SAMPLE APPEARANCE (63) PRIVATE WELL USED FOR DRINKING WILLAREDT RESIDENCE (102)

COLLECTOR COMMENTS (103) GEORGE WILLAREDT RR #6 EDWARDSVILLE IL 62025 656-6052 (142)

SPECIAL INSTRUCTIONS TO LAB PRIVATE WELL PROJECT [X] INORGANIC LIST + TOC
USE SW-846 PROCEDURES: YES ___ NO X

C Reeter — COLLECTED BY
CVR (143–145) INITIALS
IEPA DLPC — DIVISION OR COMPANY
UPS — TRANSPORTED BY
DIVISION OR COMPANY

LAB USE ONLY

LAB SAMPLE NO. 6704165 MAR 17 1987
LAB NAME ENVIRONMENTAL PROTECTION AGENCY
AND ADDRESS Division of Laboratory Services, 2125 South First Street, Champaign, Illinois 61820
LAB ID NO. 000B (146–149)
DATE RECEIVED
TIME RECEIVED 11A
SAMPLE TEMP OKAY (Y/N) ✓ SAMPLE PROPERLY PRESERVED (Y/N) ✓ DATE COMPLETED FORWARD MAY 6 1987
LAB COMMENTS (150)

SUPERVISOR SIGNATURE CHAMPAIGN (199)

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8) (Columns 9-29 from above)

FIELD MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE		STORET NUMBER	REMARKS SEE INST	REPLICATE	< OR >	VALUE	REPORTING LEVEL DIGITS TO L OR R	REPORTING LEVEL L OR R OR DECIMAL
DEPTH TO WATER (ft. below LS)	507F	72019 (30–34)	(35)	(36)	(37)	(38–47)	(48)	(49)
ELEVATION OF GW SURFACE (ft. ref MSL)	508F	71993						
TOTAL WELL DEPTH (ft. below LS)	509F	72008				UNKNOWN		
ALKALINITY TOTAL (mg/l as CaCO3) - Field	505F	00431						
REDOX POTENTIAL (millivolt) - Field	506F	00090						
pH (units) - Field	500F	00400				MAY 8 - 1987		
SPEC CONDUCTANCE (umhos) - Field	503F	00094						
TEMP OF WATER SAMPLE (°C) - Field	502F	00010						

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1004 and 1021. Disclosure of this information is required. Failure to do so may result in a civil penalty up to $25,000 for each day the failure continues, a fine up to $1,000.00 and imprisonment up to one year. This form has been approved by the Forms Management Center.

IL 532-1218
LPC 160 3/84

002-002

IEPA/DLPC

CHEMICAL ANALYSIS FORM

AGENCY USE ONLY

RECORD CODE L P C S M 0 2 (1–7) TRANS CODE A (8)

SITE INVENTORY NUMBER 1 19 09 0 0 0 0 2 (9–18)

MONITOR POINT NUMBER G 2 1 1 (19–22)

REGION S CO. Madison

DATE COLLECTED 03 / 16 / 82 (23 M D Y 28)

Roxana / Burton #2

FACILITY NAME

AQUEOUS LIQUIDS NOT FIELD FILTERED

IEPA LAB (x or Blank) X (29)

	LAB MEASUREMENTS CONSTITUENT DESCRIPTION AND REQUIRED UNIT OF MEASURE	STORET NUMBER	REMARKS		< OR >	VALUE	REPORTING LEVEL DIGITS TO L OR R	REPORTING LEVEL L OR R OF DECIMAL
* X	119T COD, MG/L	00335 (30–34)	(35)	(36)	(37)	3. (38–47)	(48)	(49)
X	100T PH, LAB - SU	00403				7.4		
X	103T ALKALINITY AS CACO3 MG/L	00410				381.		
X	111T AMMONIA NITROGEN, TOT MG/L	00610			<	0.1		
X	110T NITRITE + NITRATE, TOT MG/L	00630				4.7		
X	116T CYANIDE, TOTAL MG/L AS CN	00720			<	0.005		
X	160T SODIUM, TOTAL MG/L AS NA	00929				229.		
X	108T CHLORIDE, TOTAL MG/L AS CL	00940				4.5		
X	109T SULFATE, TOTAL MG/L AS SO4	00945				29.		
X	107T FLUORIDE, TOTAL MG/L AS F	00951				0.29		
X	144T ARSENIC, TOTAL UG/L AS AS	01002				1.		
X	145T BARIUM, TOTAL UG/L AS BA	01007			<	5.		
X	106T BORON, TOTAL UG/L AS B	01022				68.		
X	146T CADMIUM TOTAL UG/L AS CD	01027			<	3.		
X	147T CHROMIUM, TOTAL UG/L AS CR	01034			<	5.		
X	149T COPPER, TOTAL UG/L AS CU	01042				125.		
X	150T IRON, TOTAL UG/L AS FE	01045			<	50.		
X	151T LEAD, TOTAL UG/L AS PB	01051			<	5.		
X	152T MANGANESE, TOTAL UG/L AS MN	01055			<	5.		
X	154T NICKEL, TOTAL UG/L AS NI	01067			<	5.		
X	156T SILVER, TOTAL UG/L AS AG	01077			<	3.		
X	157T ZINC, TOTAL UG/L AS ZN	01092			<	50.		
X	155T SELENIUM, TOTAL UG/L AS SE	01147				2.		
X	112T PHENOLS, TOTAL UG/L	32730			<	5.		
X	102T RESIDUE ON EVA.-180°C MG/L	70300				538.		
X	153T MERCURY, TOTAL UG/L AS HG	71900			<	0.05		
X	TOC					3.0		

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

SAMPLE NUMBER : B704165
SAMPLING POINT DESC. : ROXANA BARTON #2

SUBMITTING SOURCE # : SITE # : 1190900002G211
DATE COLLECTED : 870316 TIME COLLECTED : 1000 SAMPLING PROGRAM :

COLLECTED BY : C REETER DELIVERED BY : UPS
COMMENTS :
FUNDING CODE : LP50 AGENCY ROUTING : 00 UNIT CODE :
SAM TYPE CODE : LPWT SAMPLE PURPOSE CODE : 0

DATE RECEIVED : 870317 TIME RECEIVED : 1100 RECEIVED BY : PMD
LAB OBSERVATIONS : REPORTING INDICATOR :
SUPERVISORS INITIALS : RPF NOTE : K = LESS THAN VALUE

P00403	PH-LABORATORY	UNITS	: 7.8	P70300	(ROE) TDS @ 180C	MG/L	: 538
P00410	ALKALINITY,TOTAL	MG/L	: 381	~~P01022~~	~~BORON,TOTAL~~	~~UG/L~~	~~: 100K~~
P00951	FLUORIDE,TOTAL	MG/L	: 0.29	P00940	CHLORIDE,TOTAL	MG/L	: 8.5
P00945	SULFATE,TOTAL	MG/L	: 29	P00630	NITRATE&NO2-NTOTAL	MG/L	: 4.7
P00610	AMMONIA-N,TOTAL	MG/L	: 0.1K	P32730	PHENOLS,TOTAL	UG/L	: 5K
P00720	CYANIDE,TOTAL	MG/L	: 0.005K	P00335	COD,TOTAL	MG/L	: 3
P00680	CARBON,T-ORG(TOC)	MG/L	: 3.0	P01002	ARSENIC,TOTAL	UG/L	: 1
P01051	LEAD,TOT.FURNACE	UG/L	: 5K	P71900	MERCURY,TOTAL	UG/L	: 0.05K
P01147	SELENIUM,TOTAL	UG/L	: 2	P00916	CALCIUM,TOTAL	MG/L	: 0.3K
P00927	MAGNESIUM,TOTAL	MG/L	: 0.3K	P00929	SODIUM,TOTAL	MG/L	: 229
P00937	POTASSIUM,TOTAL	MG/L	: 0.3K	P01105	ALUMINUM,TOTAL	UG/L	: 50K
P01007	BARIUM,TOTAL	UG/L	: 5K	P01022	BORON,TOTAL	UG/L	: 68
P01012	BERYLLIUM,TOTAL	UG/L	: 0.5K	P01027	CADMIUM,TOTAL	UG/L	: 3K
P01034	CHROMIUM,TOTAL	UG/L	: 5K	P01042	COPPER,TOTAL	UG/L	: 125
P01037	COBALT,TOTAL	UG/L	: 5K	P01045	IRON,TOTAL	UG/L	: 50K
P01055	MANGANESE,TOTAL	UG/L	: 5K	P01067	NICKEL,TOTAL	UG/L	: 5K
P01077	SILVER,TOTAL	UG/L	: 3K	P01082	STRONTIUM,TOTAL	UG/L	: 5K
P01087	VANADIUM,TOTAL	UG/L	: 5K	P01092	ZINC,TOTAL	UG/L	: 50K
P00900	HARDNESS CALC.	MG/L	: 0C				

Client Laidlaw Waste Systems, Inc.
Project Barton Newton Monitoring Well Replacement
Location Edwardsville, IL
Drilling Contractor
Inspector DWR
Surface Elev. 436.42 feet

Boring No. G-115
Sheet 1 of 2
File No. 5971
Date Started 1/16/87
Date Completed 1/16/87

SAMPLE NO.	SAMPLE REC.	BLOWS /12"	DEPTH (FT.)	SOIL TYPE	SOIL DESCRIPTION
S-1	18"		0		
				ML	Brown, Clayey SILT.
S-2	60"				
			5		
				ML	Light gray, mottled, stiff-slightly plastic, Clayey SILT. Notes: Laminated layers of coarse silt present; occasional oxidized brown staining.
S-3	60"			CL	Gray, plastic, stiff, Silty CLAY.
			10		
				ML-SM	Light gray, mottled, soft, coarse Clayey SILT and fine SAND. Notes: Oxidized light brown staining; sand content increases with depth.
S-4	60"				
			15		
S-5	48"			SM	Same as above.
			20		

Sampler Type: 3" Ø Continuous Sample Tube System, 5' long.

Boring Method: 3-3/4" I.D. Hollow Stem Auger

GeoEngineering, Inc.

61

arton Newton Monitoring Well Replacement

File No. 5971

Boring No. G-115

Sheet 2 of 2

SAMPLE NO.	SAMPLE REC.	BLOWS /12"	DEPTH (FT.)	SOIL TYPE	SOIL DESCRIPTION
			20	SM	Same as above.
				SM	Dark gray, loose, Clayey SILT; fine Sand.
				SP	Gray, loose, medium to fine Sand; little Silt. Notes: Poorly sorted. Boring terminated at 23.5 feet.

GeoEngineering, Inc.

62

Client: Laidlaw Waste Systems, Inc. √ | Boring No. G-104
Project: Barton Newton Monitoring Well Replacement | Sheet 1 of 2
Location: Edwardsville, IL | File No. 5971
Drilling Contractor: Brotcke Engineering, Inc.
Inspector: DWR | Date Started 1/13/87
Surface Elev. 480.38 | Date Completed 1/13/87

SAMPLE NO.	SAMPLE REC.	BLOWS /12"	DEPTH (FT.)	SOIL TYPE	SOIL DESCRIPTION
S-1	60"		0	Fill	Brown, Clayey SILT.
S-2	60"		5	ML	Light brown, Clayey SILT.
S-3	60"		10	CL	Brown, mottled, soft, plastic, Silty CLAY. Notes: Clay content increases with depth.
S-4	60"		15	ML	Brown, mottled, Clayey SILT. Notes: Irregular fractures present.
				ML	Same as above. Notes: Fractures oriented on horizontal surface and soil appears saturated at approximately 19.5 feet.
			20		

Sampler Type: ■ - 3" ϕ Continuous Sample Tube System, 5' long

Boring Method: 3-3/4" I.D. Hollow Stem Auger

GeoEngineering, Inc.

57

Project Barton Newton Monitoring Well Replacement Boring No. G-104
File No. 5971 Sheet 2 of 2

SAMPLE NO.	SAMPLE REC.	BLOWS /12"	DEPTH (FT.)	SOIL TYPE	SOIL DESCRIPTION
S-5	60"		20		
				CL/ML	Brown to light gray, soft, Clayey SILT. Notes: Layers of coarse silt present.
S-6	60"		25		
				ML/SM	Light gray, soft, Clayey SILT. Notes: Grades to a brown, loose, fine SAND and Clayey SILT.
S-7	60"		30		
				CL	Light gray, moderate (+) plastic, Silty CLAY.
				ML	Reddish brown to gray, Clayey SILT. Notes: Irregular fractures present.
S-8	60"		35		
				ML	Gray, moderate stiff, Clayey SILT. Notes: Becomes stiffer with depth; irregular fan-shaped fractures present.
S-9	60"		40		
			45		Boring terminated at 45 feet.

GeoEngineering, Inc.

CP

Client: Laidlaw Waste Systems, Inc.
Boring No.: G-105
Project: Barton Newton Monitoring Well Replacement
Sheet: 1 of 2
Location: Edwardsville, IL
File No.: 5971
Drilling Contractor: Brotcke Engineering, Inc.
Inspector: DWR
Date Started: 1/23/87
Surface Elev.: 448.94 feet
Date Completed: 1/23/87

SAMPLE NO.	SAMPLE REC.	BLOWS /12"	DEPTH (FT.)	SOIL TYPE	SOIL DESCRIPTION
S-1	48"		0	CL	Brown, mottled, plastic, soft, Silty CLAY. Notes: Root fragments present.
S-2	60"		5		
S-3	60"		10	CL	Alternate bands of light gray to light brown very mottled, Clayey SILT. Notes: Silt content increases with depth; irregular fractures present, becomes saturated at approximately 8 feet.
				CL	Dark gray, stiff, plastic, Silty CLAY. Notes: Homogenous texture.
S-4	60"		15	CL/ML	Same as above; except less plastic. Notes: Occasional layers of Clayey SILT.
S-5	60"		20		

Sampler Type: [redacted]-3"ϕ Continuous Sample Tube System, 5' long
Boring Method: 3-3/4" I.D. Hollow Stem Auger

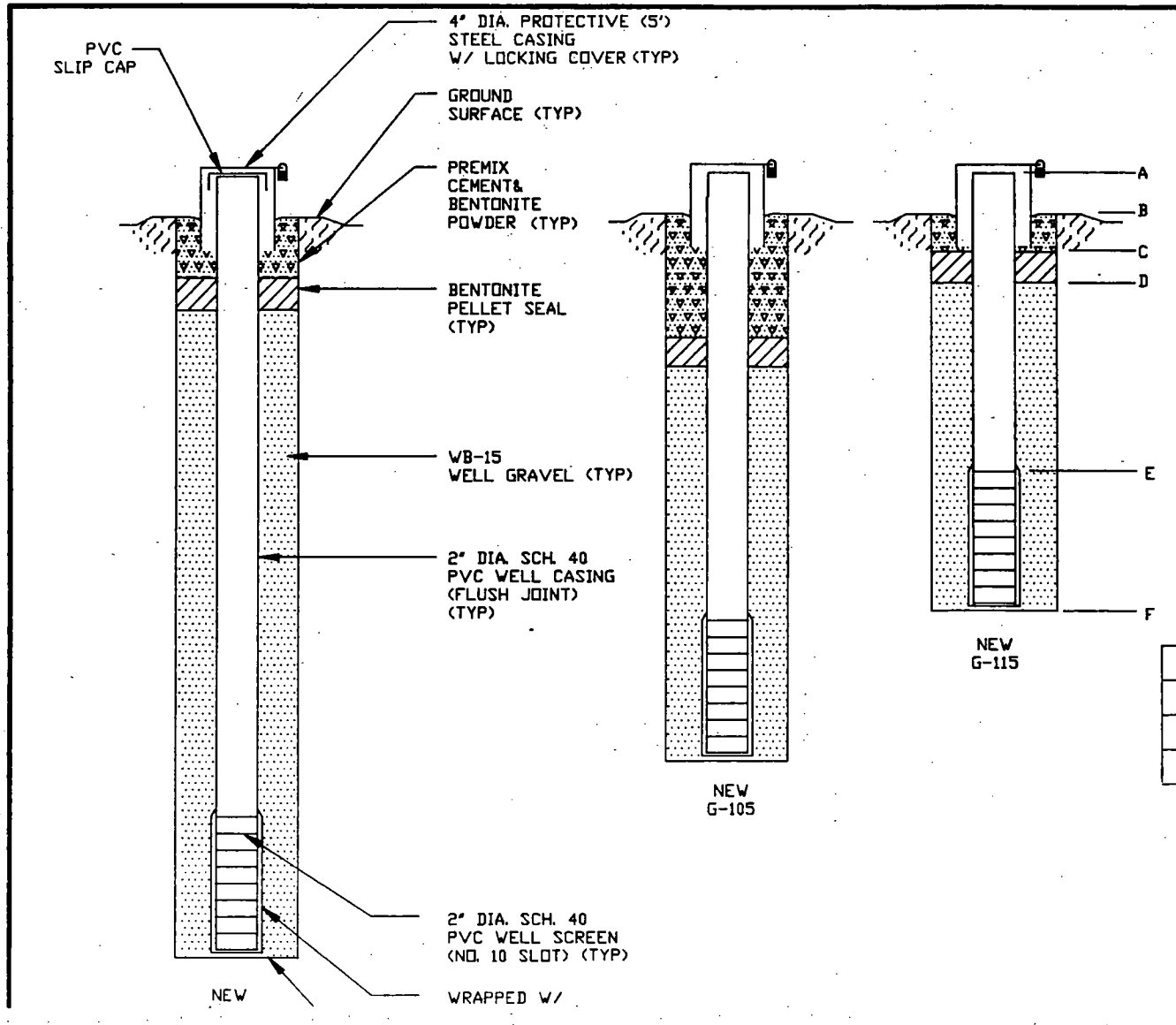
GeoEngineering, Inc.

59

Project Barton Newton Monitoring Well Replacement Boring No. G-105
File No. 5971 Sheet 2 of 2

SAMPLE NO.	SAMPLE REC.	BLOWS /12"	DEPTH (FT.)	SOIL TYPE	SOIL DESCRIPTION
			20	SM	Dark gray, loose, fine SAND and Clayey SILT.
				CL/ML	Dark gray, Silty CLAY and Clayey SILT. Notes: Alternate layers horizontally laminated; low plasticity in coarse silt layers.
S-6	42"				
			25	CL/ML	Dark gray, stiff, plastic Silty CLAY.
				CL/ML	Dark gray, soft, slightly plastic, Clayey SILT, Notes: Fine SAND seams present.
S-7	48"				
			30	SM	Dark gray, loose, fine SAND and Clayey SILT. Notes: Non-plastic; homogenous texture; irregular fractures present.
					Boring terminated at 34 feet.
			35		

GeoEngineering, Inc.



Manila folder
Barton L.F.

ELEVATION ft. MSL

WELL #	A	B	C	D	E	F
GEI-104	483.06	480.56	470.56	468.56	446.56	436.56
GEI-105	450.58	448.58	440.58	438.58	425.58	415.58
GEI-115	438.61	436.61	433.61	431.61	423.61	413.61

LAIDLAW WASTE SYSTEMS

BARTON LANDFILL

EDWARDSVILLE ILLINOIS

GeoEngineering, Inc.

Date: April 1987 GEI File No. 5871

ENVIRONMENTAL PROTECTION AGENCY STATE OF ILLINOIS

L P C F C 0 5 5 C
(1) (8) (9)

INSPECTION REPORT - SITE INVENTORY NO. 1190900002
(11) (18)

Madison CO. - L.P.C. Region # 6 Date 10/22/86
(20) (25)

Roxana / Barton Landfill Letter Sent (Yes or No) Y
(Location) (Responsible Party) (26)

Samples Taken: Yes (X) No ( ) Time: From 10:15 am Weather P. Cloudy - 65°
Ground Water( ) Surface( ) Other(X) Leachate To 12:25 pm
Photos Taken: Yes (X) No ( ) Interviewed Gayle Dille Inspector C V R
(27) (29)

Previous Inspection N/A Previous Correspondence N/A Site Open: Yes(X) No( )

OPERATIONAL STATUS:		TYPE OF OPERATION:				AUTHORIZATION:	
Operating	(X)	Landfill	(X)	Storage	( )	E.P.A. Permit	(X)
Temporarily Closed	( )	Random Dump	( )	Salvage	( )	Variance	( )
Closed Not Covered	( )	Other _____	( )	A.C.D.	( )	21(e)	( )
Closed and Covered	( )	Quantity Received Daily(1-6)				Board Order	( )
						Illegal (5)	( )

(30) (31)

IMPROVED

SAME

DETERIORATED

RECEIVED
OCT 27 1986
IEPA-DLPC

I S or D
(62)

GENERAL REMARKS: I arrived at the Barton Landfill office at about 10:15 am on 10/22/86. I was told by a GSX employee that Mike Whitlock, landfill manager, was in St. Louis, and the only one with authority on site was Gayle Dille. After reporting to the guard station, Gayle was located and called over. I explained to Gayle that I was there to observe the slurry wall construction project, and walk along the Cahokia Creek embankment to look for leachate flows. Gayle said that was fine, and that he was busy, so I could go ahead and conduct my business without his assistance.

INTERVIEW: Initially, I went to the finished section of the slurry wall at the northwest section of the old landfill area. As I was walking along the wall, I observed a general area of leachate flow originating from 3-4 points out of the toe of the north slope onto the ground. The leachate was flowing to a low area, where the slurry wall had been constructed. The leachate was then spreading out in the low area. About 7 (seven) photographs were taken. At that time, the leachate did not appear to be leaving the site. However, runoff from a rainstorm could flush the leachate contaminated low area into the Cahokia Creek. I continued on to look at the wall and walked along the Creek. No leachate flows were observed along Cahokia Creek.

DIAGRAM: After that, I returned to the original leachate area and I collected 2 sets of samples (L101). One set was for IEPA, and the other was for GSX. I then went over to the Northwest side of the landfill where the active slurry wall was being constructed, and observed for a few minutes. Photographs were taken.

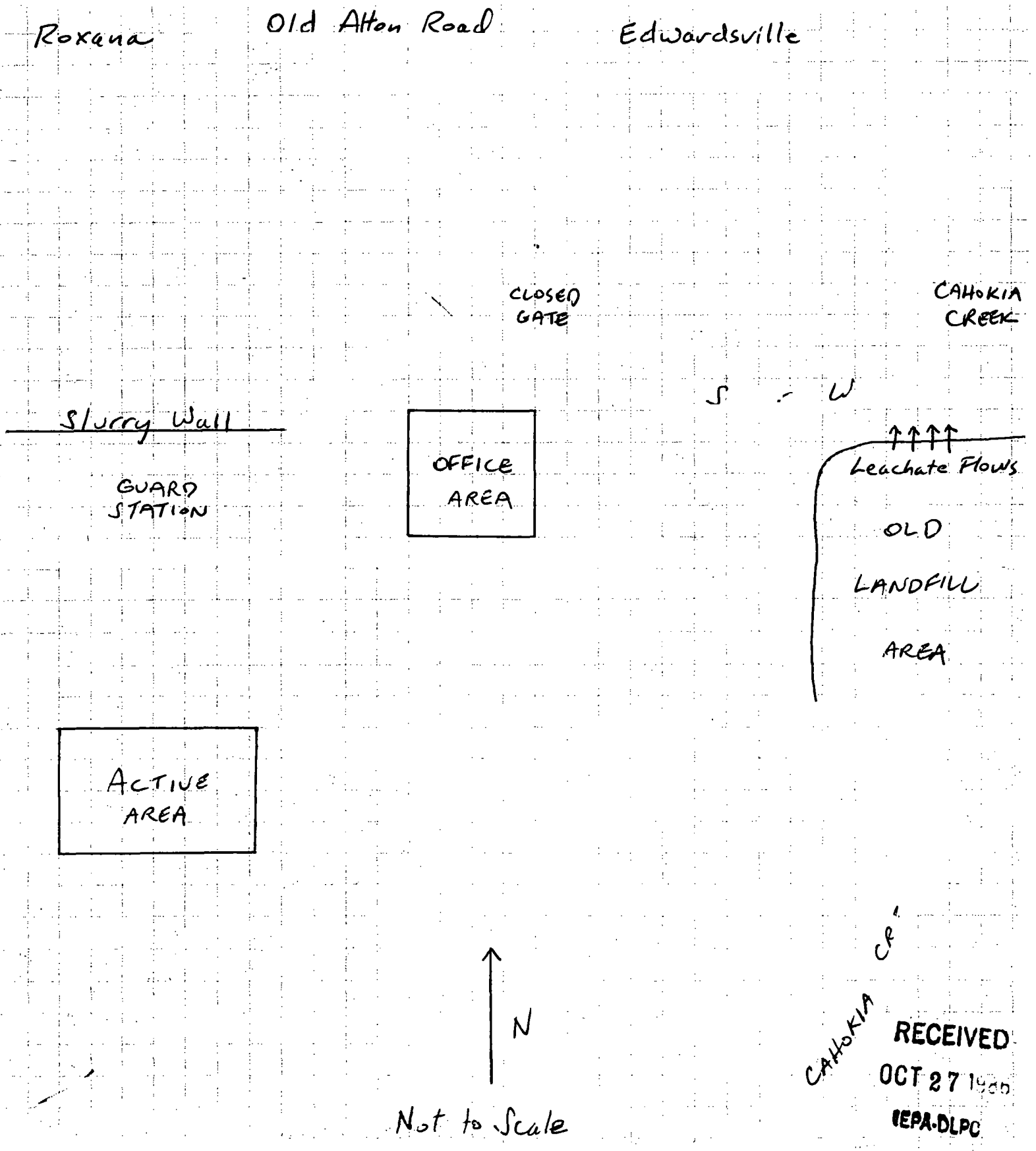
At about 12:15 pm, I located and talked to Gayle about the leachate problem that I had discovered, and told him that if the leachate were leaving the site, it could be subject to an administrative citation violation. Gayle said he would take a look at the leachate area and fix the problem. I told Gayle that I took samples of the leachate, Gayle said to place the GSX sample that I took in the office, with a note to Mike Whitlock, which I did. I left the

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY

Subject BARTON LANDFILL

Data SITE DIAGRAM

Reviewed by C. REETER - Inspector Date 10/22/86



Not to Scale

RECEIVED
OCT 27 1986
IEPA-DLPC

217/782/6760

CERTIFIED
P-580 336 263

Refer to: 1190900002 - Madison County - Roxana/GSX-Barton - Compliance File

DEC. 3, 1986

Mr. Charles Emde
GSX Corporation of Illinois
1838 North Broadway
St. Louis, Missouri 63102

Dear Mr. Emde:

On October 22, 1986, a Compliance Inspection was conducted at your sanitary landfill located between Roxana and Edwardsville, Illinois. The purpose of this letter is to inquire as to your position with respect to the validity of the Agency's findings. During the inspection, the following apparent violations of the Illinois Environmental Protection Act and 35 Ill. Adm. Code, Part 807: Solid Waste were noted:

> Failure to take adequate measures to monitor and control leachate, in violation of Section 807.314(e) of Subtitle G: Waste Disposal.

Please submit in writing within fifteen (15) days of the date of this letter, the reasons for the apparent violations outlined above, as well as a description of the steps which will be initiated to prevent any further recurrence of the above cited violations. The written response should be sent to the address of this office, given above.

Further, take notice that non-compliance with the requirements of the Environmental Protection Act and the Rules and Regulations adopted thereunder may be the subject of an enforcement action pursuant to the Illinois Environmental Protection Act, Ill. Rev. Stat., Ch. 111 1/2, Par. 1001 et seq.

Very truly yours,

ENVIRONMENTAL PROTECTION AGENCY

Glenn D. Savage, Manager
Field Operations Section
Division of Land Pollution Control

GDS:KGM:jlr/0269L

cc: Division File ✓
cc: DLPC - Collinsville
cc: Glenn Savage

AGENCY File

DATE: April 26, 1984

TO: Division File

FROM: P. M. McCarthy PMM

SUBJECT: LPC 11909002 - Madison County - Roxana/SCA-Barton #2

Please refer to the attached letter and "Special Waste Stream Applicatic especially noting the pH level.

If I understand the January 30, 1984 letter to SCA Services of Illinois, the lime grit generated by the Sauget Wastewater Treatment Plant is no longer considered a special waste, however it is "nearly" a hazardous waste. The basis for the classification is justified by 1981 analyses. I am concerned that we allow a material that is "nearly hazardous":

1) to not be regulated, or

2) if regulated, to be done so on "old" data.

I feel strongly that the policies governing these decisions be carefully reviewed.

PMM:jlr

cc: Bob Kuykendall
~~Tom Cavanagh~~
Larry Eastep
SCA-Milam - 16304501 (FILE)
Southern Region

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MAY 02 1984
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

Illinois Environmental Protection Agency

217/782-6762

Refer to: [illegible] Madison County
Roxana/SCA - Barton Number 2
Village of Sauget
Screenings and grit from Municipal
Wastewater Treatment Plant

January 30, 1984

SCA Services of Illinois, Inc.
1838 North Broadway
St. Louis, Missouri 63102

Attn: Richard T. Kogler

Dear Mr. Kogler:

Grit and screenings from municipal wastewater treatment plants are no longer considered as special waste and may be received for disposal as general refuse.

Your application to receive grit from the referenced site is returned herewith and may be considered as rejected for procedural purposes. If you have any questions concerning this action contact Robert C. Mulvey at telephone 217/782-3335.

Very truly yours,

Rama K. Chaturvedi

Rama K. Chaturvedi, P.E., Manager
RCRA Unit
Permit Section
Division of Land Pollution Control

RCM
RKC:RCM:st:0232d/1

cc: Southern Region
Village of Sauget
File
R.C. Mulvey

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MAY 02 1984
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

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FEB 06 1984
ILL. E.P.A. — D.L.P.C.
STATE OF ILLINOIS

TP

This Ag[illegible] is authorized to require this information u[illegible] Illinois [illegible]d Statutes, 1979, Chapter [illegible] 1/2, Section [illegible]. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

REFERENCE # L-0180

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
SPECIAL WASTE STREAM APPLICATION

(FOR AGENCY USE L P S W C WASTE STREAM NUMBER (AUTHORIZATION) 840129 TRANS CODE ___ DATE ENTERED __/__/__)

RD YPE

This application is a: (check one) X New Application ___ Renewal _____ Waste Stream Number

This application is for waste: (check one) ___ storage X X disposal ___ treatment

APPLICANT (SITE)

SITE ADDRESS	APPLICANT ADDRESS
Name: SCA-Barton Number Two	Name: SCA Services of Illinois, Inc.
Address: Wanda Road	Address: 1838 N. Broadway
Madison (county) / S. Roxana (community) / Illinois (state) / 62085 (zip)	(county) / St. Louis (community) / Mo. (state) / 63102 (zip)

IEPA SITE CODE 1 1 9 0 9 0 0 2 USEPA SITE CODE _____

DISPOSAL METHOD 0 1 TREATMENT METHOD ___ STORAGE METHOD ___

Site Contact Name Richard T. Kogler Telephone (314) 241 - 3721

The undersigned hereby makes application for a supplemental permit for the storage, treatment or disposal of this waste stream and certifies that the information referenced herein is true, correct and current.

Signature Richard T. Kogler (Owner/Authorized Agent) Signature Richard T. Kogler (Operator/Authorized Agent)

RECEIVED

DATE 01/16/84

FOR AGENCY USE STATUS ___ START DATE __/__/__ EXPIRATION DATE __/__/__

MAY 112 1984

E.P.A. — D.L.P.C.
STATE OF ILLINOIS

RECEIVED
JAN 23 1984
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

WASTE GENERATOR INFORMATION

PLANT ADDRESS	MAILING ADDRESS
Name: Village of Sauget WWTP	Name: Village of Sauget WWTP
Address: 2897 Monsanto Ave.	Address: 2897 Monsanto Ave
ST. Clair (county) / Sauget (community) / IL (state) / 62206 (zip)	ST. Clair (county) / Sauget (community) / IL (state) / 6220 (zip)

Generator IEPA Code: 1 6 3 1 2 1 0 0 0 3 6 Generator USEPA Code: _____

Generator Contact Name: C A R L M A R C I A N T E

Telephone (618) 874 - 3188

Process/Operation Name: S E W A G E T R E A T M E N T P L A N T

Process Description: waste water discharges from industrial and domestic sources are treated at this plant. Lime grit waste results from this process

Generic Waste Name: L I M E G R I T

IL 532-0474

(FOR AGENCY USE L P S W C WASTE STREAM NUMBER (AUTHORIZATION) 840129 TRANS CODE ___ DATE ENTERED ___/___/___)

WASTE CHARACTERISTICS

This waste is: (check one) ___ Hazardous ___ Non-Hazardous as defined by U.S.E.P.A. in the Resource Conservation and Recovery Act, and regulations adopted thereunder, and the Illinois Pollution Control Board in Title 35 - Subtitle G, Part 721.

USEPA Hazardous Waste Number(s) ___

Total Annual Waste Volume 750 Volume Units 1 Waste Phase 2

Transport Frequency 3 Waste Class (Agency Use) ___

1 = CUBIC YARDS
2 = GALLONS

1 = SOLID
2 = SEMI-SOLID
3 = LIQUID
4 = GAS
5 = POWDERS

1 = ONE TIME
2 = DAILY
3 = WEEKLY
4 = BI-WEEKLY
5 = MONTHLY
6 = BI-MONTHLY
7 = QUARTERLY
8 = SEMI-ANNUALLY

RECEIVED MAY 02 1984 E.P.A. — D.L.P.C. STATE OF ILLINOIS

COMPONENT NAME	PERCENT	COMPONENT NAME	PERCENT
1 LIME GRIT	70.0	2 WATER	30.0
3		4	
5		6	

Flash Point ___ °F Percent Acidity ___ Percent Alkalinity ___ pH 12.2 Total Solids 70.00

Solid Waste: Fire Hazard ___ Corrosive ___ Reactive ___

	TOTAL (ppm)		REACTIVE (ppm)	
Sulfide	13		Sulfide	
Cyanide	01		Cyanide	
Phenol	14			

RECEIVED JAN 01 1984 ILL. E.P.A. — D.L.P.C. STATE OF ILLINOIS

METAL	KEY	EP TOXICITY (ppm)	METAL	KEY	EP TOXICITY (ppm)
Ag	03	0.1	Hg	04	0.0
As	05	0.1			
Ba	07	0.4	Pb	08	0.6
Cd	09	0.0	Se	10	0.1
Cr	11	0.1			
ENDRIN	15		LINDANE	16	
METHOXYCHLOR	17		TOXAPHENE	18	
2, 4 - D	19		2, 4, 5 - TP	20	

Laboratory Name: INDUSTRIAL TESTING

Certification Number: ___ Reviewed by: (Agency Use) ___/___

RECEIVED JAN 23 1984 E.P.A. — D.L.P.C. STATE OF ILLINOIS

ADM-1067 (Rev. 1/82)

INDUSTRIAL TESTING LABORATORIES inc.

Chemists
Engineers
Metallurgists

2350 Seventh Blvd. • St. Louis, Missouri 63104 314/771-7111

April 7, 1981

Mr. C. J. Marciante
Village of Sauget
c/o Waste Treatment Plant
2897 Monsanto Avenue
Sauget, IL. 62206

Dear Mr. Marciante:

Industrial Testing Laboratories, Inc. has reviewed the analyses which we have performed on the "Lime Grit" sample submitted by you. This review was made specifically with respect to the hazardous waste categories stipulated in the Federal RCRA Regulations 40CFR261. The analysis were performed in our laboratories and reported on April 6, 1981, copy attached.

The categories of hazardous waste classification were evaluated, namely ignitable, corrosive, reactive and toxic. In the ignitable category the only parameter that could be of interest was flash point and that was found to be more than satisfactory for elimination. The nature of the grit material was such that its pH of 12.2 was less than the limit of 12.5 and allowed it to be eliminated as a hazardous material in the corrosive category. The reactive category was of no concern since information provided by the generator and information known by the laboratory showed that the material had no constituents that might be unstable or explosive in nature. An EP Toxicity test was performed on the waste to evaluate the toxic hazardous waste characteristics. All determinations were below the limits established by regulation.

Based on information provided to us by the generator and information obtained through laboratory investigation, the material identified as being "Lime Grit" and submitted to us for evaluation does not fail any of the four categories of ignitable, corrosive, reactive or toxic and is therefore considered non-hazardous as defined by the Federal RCRA Regulation 40CFR261.

Respectfully submitted,

INDUSTRIAL TESTING LABORATORIES, INC.

E. Edgerley

E. Edgerley, Jr., Ph.D., P.E.
Associate Director

RECEIVED
MAY 02 1984
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

RECEIVED
MAY 01 1984
ILL. E.P.A. — D.L.P.C.
STATE OF ILLINOIS

RECEIVED
JAN 23 1984
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

EE/hj
cnc.
cc; SCA, inc.

INDUSTRIAL TESTING LABORATORIES inc.

Chemists
Engineers
Metallurgists

2350 Seventh Blvd. • St. Louis, Missouri 63104 314/771-7111

4012

Report No. 81-3-358 April 6, 1981

Examination of one (1) sample submitted marked, "Lime Grit".

Village of Sauget
c/o Waste Treatment Plant
2897 Monsanto Avenue
Sauget, IL. 62206

P.O.: 4079
Attn: Mr. C. J. Marciante

TEST REPORT

Arsenic, mg/l	*0.1
Barium, mg/l	0.4
Cadmium, mg/l	*0.01
Chromium, mg/l	0.1
Lead, mg/l	*0.5
Mercury, mg/l	*0.001
Selenium, mg/l	*0.1
Silver, mg/l	*0.1
pH of 10% Solution	12.2
Flash Point, °F. (Pensky-Martens)	**150

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*less than.
**more than.

Analysis conducted in accordance with Federal Register, Appendix II, Vol. 45, No. 98, May 19, 1980.

RECEIVED MAY 02 1984 E.P.A. — D.L.P.C. STATE OF ILLINOIS

RECEIVED JAN 23 1984 E.P.A. — D.L.P.C. STATE OF ILLINOIS

Respectfully submitted,

INDUSTRIAL TESTING LABORATORIES, INC.

Allan M. Siegel, P.E.
Director

Lab No. 18520

Client: Laidlaw Waste Systems, Inc. V
Boring No.: G-104
Project: Barton Newton Monitoring Well Replacement
Sheet 1 of 2
Location: Edwardsville, IL
File No. 5971
Drilling Contractor: Brotcke Engineering, Inc.
Inspector: DWR
Date Started: 1/13/87
Surface Elev.: 480.38
Date Completed: 1/13/87

SAMPLE NO.	SAMPLE REC.	BLOWS /12"	DEPTH (FT.)	SOIL TYPE	SOIL DESCRIPTION
S-1	60"		0	Fill	Brown, Clayey SILT.
S-2	60"		5	ML	Light brown, Clayey SILT.
S-3	60"		10	CL	Brown, mottled, soft, plastic, Silty CLAY. Notes: Clay content increases with depth.
S-4	60"		15	ML	Brown, mottled, Clayey SILT. Notes: Irregular fractures present.
				ML	Same as above. Notes: Fractures oriented on horizontal surface and soil appears saturated at approximately 19.5 feet.
			20		

Sampler Type: 1-3" ϕ Continuous Sample Tube System, 5' long

Boring Method: 3-3/4" I.D. Hollow Stem Auger

GeoEngineering, Inc.

20

Project Barton Newton Monitoring Well Replacement Boring No. G-104
File No. 5971 Sheet 2 of 2

SAMPLE NO.	SAMPLE REC.	BLOWS /12"	DEPTH (FT.)	SOIL TYPE	SOIL DESCRIPTION
S-5	60"		20		
				CL/ML	Brown to light gray, soft, Clayey SILT. Notes: Layers of coarse silt present.
S-6	60"		25		
				ML/SM	Light gray, soft, Clayey SILT. Notes: Grades to a brown, loose, fine SAND and Clayey SILT.
S-7	60"		30		
				CL	Light gray, moderate (+) plastic, Silty CLAY.
				ML	Reddish brown to gray, Clayey SILT. Notes: Irregular fractures present.
S-8	60"		35		
				ML	Gray, moderate stiff, Clayey SILT. Notes: Becomes stiffer with depth; irregular fan-shaped fractures present.
S-9	60"		40		
			45		Boring terminated at 45 feet.

GeoEngineering, Inc.

Client: Laidlaw Waste Systems, Inc.
Boring No.: G-105
Project: Barton Newton Monitoring Well Replacement
Sheet: 1 of 2
Location: Edwardsville, IL
File No.: 5971
Drilling Contractor: Brotcke Engineering, Inc.
Inspector: DWR
Date Started: 1/23/87
Surface Elev.: 448.94 feet
Date Completed: 1/23/87

SAMPLE NO.	SAMPLE REC.	BLOWS /12"	DEPTH (FT.)	SOIL TYPE	SOIL DESCRIPTION
S-1	48"		0	CL	Brown, mottled, plastic, soft, Silty CLAY. Notes: Root fragments present.
S-2	60"		5		
S-3	60"		10	CL	Alternate bands of light gray to light brown very mottled, Clayey SILT. Notes: Silt content increases with depth; irregular fractures present, becomes saturated at approximately 8 feet.
S-4	60"		15	CL	Dark gray, stiff, plastic, Silty CLAY. Notes: Homogenous texture.
S-5	60"		20	CL/ML	Same as above; except less plastic. Notes: Occasional layers of Clayey SILT.

Sampler Type: 3"ϕ Continuous Sample Tube System, 5' long
Boring Method: 3-3/4" I.D. Hollow Stem Auger

GeoEngineering, Inc.

Project Barton Newton Monitoring Well Replacement Boring No. G-105
File No. 5971 Sheet 2 of 2

SAMPLE NO.	SAMPLE REC.	BLOWS /12"	DEPTH (FT.)	SOIL TYPE	SOIL DESCRIPTION
			20	SM	Dark gray, loose, fine SAND and Clayey SILT.
				CL/ML	Dark gray, Silty CLAY and Clayey SILT. Notes: Alternate layers horizontally laminated; low plasticity in coarse silt layers.
S-6	42"		25	CL/ML	Dark gray, stiff, plastic Silty CLAY.
				CL/ML	Dark gray, soft, slightly plastic, Clayey SILT, Notes: Fine SAND seams present.
S-7	48"		30	SM	Dark gray, loose, fine SAND and Clayey SILT. Notes: Non-plastic; homogenous texture; irregular fractures present.
					Boring terminated at 34 feet.
			35		

GeoEngineering, Inc.

Client Laidlaw Waste Systems, Inc. **Boring No.** G-115
Project Barton Newton Monitoring Well Replacement **Sheet** 1 **of** 2
Location Edwardsville, IL **File No.** 5971
Drilling Contractor
Inspector DWR **Date Started** 1/16/87
Surface Elev. 436.42 feet **Date Completed** 1/16/87

SAMPLE NO.	SAMPLE REC.	BLOWS /12"	DEPTH (FT.)	SOIL TYPE	SOIL DESCRIPTION
S-1	18"		0		
				ML	Brown, Clayey SILT.
S-2	60"				
			5		
				ML	Light gray, mottled, stiff-slightly plastic, Clayey SILT. Notes: Laminated layers of coarse silt present; occasional oxidized brown staining.
S-3	60"			CL	Gray, plastic, stiff, Silty CLAY.
			10		
				ML-SM	Light gray, mottled, soft, coarse Clayey SILT and fine SAND. Notes: Oxidized light brown staining; sand content increases with depth.
S-4	60"				
			15		
S-5	48"			SM	Same as above.
			20		

Sampler Type: 3" Ø Continuous Sample Tube System, 5' long.
Boring Method: 3-3/4" I.D. Hollow Stem Auger

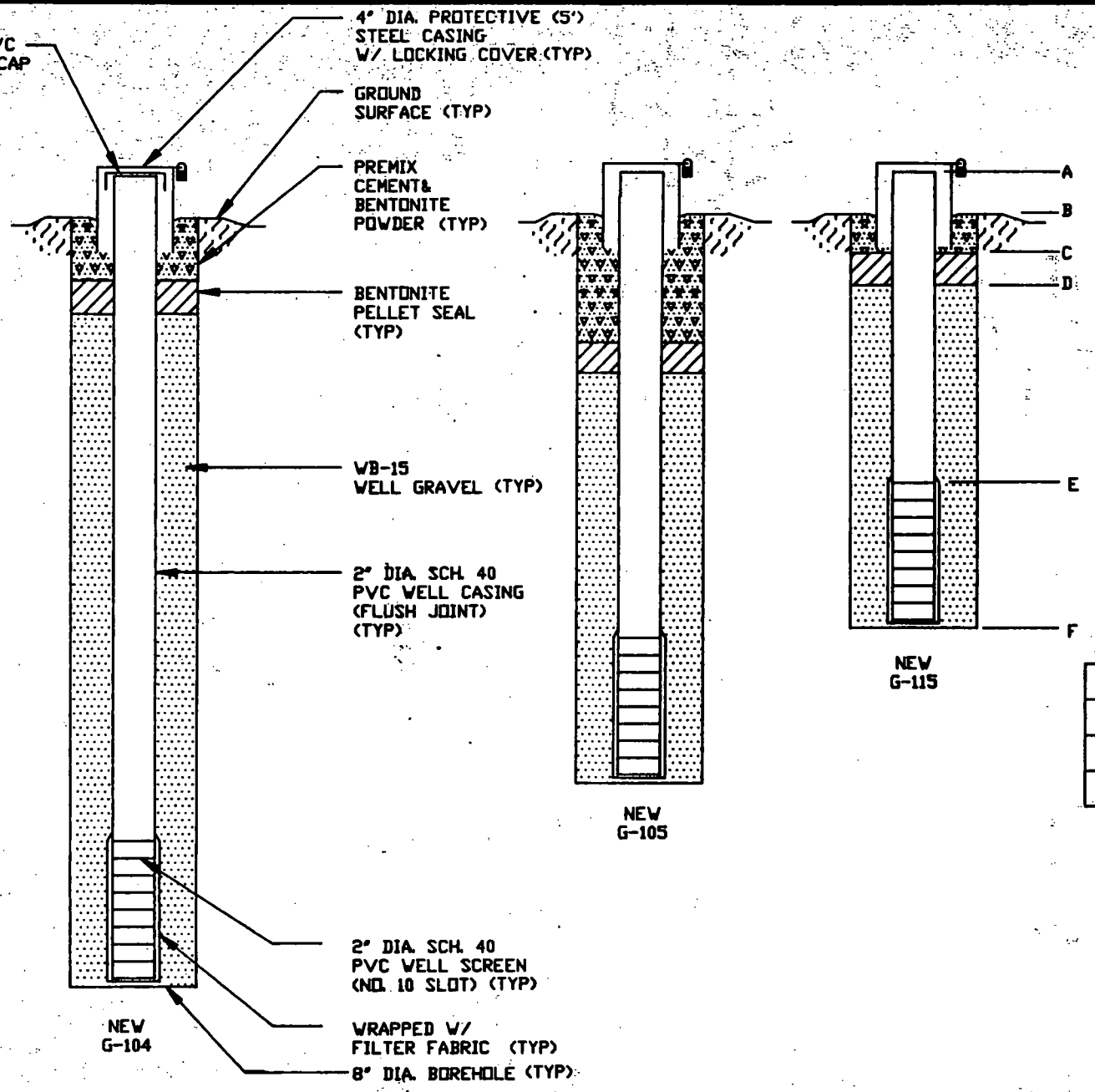
GeoEngineering, Inc.

Project Barton Newton Monitoring Well Replacement Boring No. G-115
File No. 5971 Sheet 2 of 2

SAMPLE NO.	SAMPLE REC.	BLOWS /12"	DEPTH (FT.)	SOIL TYPE	SOIL DESCRIPTION
			20	SM	Same as above.
				SM	Dark gray, loose, Clayey SILT; fine Sand.
				SP	Gray, loose, medium to fine Sand; little Silt. Notes: Poorly sorted. Boring terminated at 23.5 feet.

GeoEngineering, Inc.

25



ELEVATION ft. MSL

WELL #	A	B	C	D	E	
GEI-104	483.06	480.56	470.56	468.56	446.56	4
GEI-105	450.58	448.58	440.58	438.58	425.58	4
GEI-115	438.61	436.61	433.61	431.61	423.61	4

LAIDLAW WASTE SYST

BARTON LANDFIL

EDWARDSVILLE D

GeoEngineering,

Date: April 1987 GEI File No. 59

MONITOR WELL
CONSTRUCTION

LAIDLAW

LAIDLAW WASTE SYSTEMS INC.

June 3, 1987

Illinois Environmental Protection Agency
Division of Land Pollution Control #24
Field Operations Section
Glenn Savage, Manager
220 Churchill Road
P.O. Box 19276
Springfield, Illinois 62794-9276

Re: 119090001 Madison County
Roxana/GSX Barton #1 Inspection
Dated May 13, 1987

Dear Mr. Savage:

I am in receipt of your letter dated May 26, 1987, relative to the inspection of GSX Barton I on May 13, 1987. After review of the inspection report and a conference with the site manager, Mr. Mike Whitlock, I offer the following information relative to corrective measures.

Line 26:

Inadequate measures to monitor and control leachate:

The apparent leachate seep which is described on the report was repaired immediately by one of our operators. The seep was cut-out and clay was compacted into this area. We have increased our walk around inspections of the site from three (3) times a week to everyday. Notations of seeps are made and the areas are repaired immediately. The notations all kept on site by Mr. Whitlock, and are available for agency inspection.

GSX is committed to running safe and secure pollution control facilities. If you have any further questions or I can help in any way, please contact me.

Very truly yours,

Charles E. Emde

Charles E. Emde
Vice President
GSX of Illinois

1838 NORTH BROADWAY, ST. LOUIS, MISSOURI 63102 (314) 241-3721

CEE/1

RECEIVED
JUN - 5 1987
IEPA-DLPC
D. R. Hand

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION R-1 Dup

SAMPLING DATE 4/14/88 SAMPLING TIME 1315

ORGANIC TRAFFIC NUMBER EW 140

INORGANIC TRAFFIC NUMBER ME W 951

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3-1l amber	Organics	5-077583, 84, 85	H8015034
2-40ml	VOA	86 87	B7274061
2-1l plastic	Metal / CN	88 89	C8048034

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION R-1 Dup

SAMPLING DATE 4/14/88 SAMPLING TIME 1315

ORGANIC TRAFFIC NUMBER EW 139

INORGANIC TRAFFIC NUMBER ME W950

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3-1l amber	Organics	5-077590, 91, 92	H8015034
2-40ml	VOA	93 94	B7274061
2-1l plastic	Metal / CN	95 96	C8048034

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION R-2 + MSD

SAMPLING DATE 4/14/88 SAMPLING TIME 1350

ORGANIC TRAFFIC NUMBER EW 141

INORGANIC TRAFFIC NUMBER ME W 952

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3-1l amber	Organics	5-077597, 98, 99	H8015034
2-40ml	VOA	5-077600, 01, 02	B7274061
2-1l plastic	Metal / CN	03 04	C8048034
MSD 3-1l amber	Organics	05 06	H8015034
MSD 2-40ml	VOA	07 08	B7274061

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION R-3

SAMPLING DATE 4/14/88 SAMPLING TIME 1420

ORGANIC TRAFFIC NUMBER EW 142

INORGANIC TRAFFIC NUMBER ME W 953

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3-1l amber	Organics	5-077609, 10, 11	H8020064
2-40ml	VOA	12 13	B7274061
2-1l plastic	Metal / CN	14 15	C8048034

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION BLANK

SAMPLING DATE 4/14/88 SAMPLING TIME 11:00

ORGANIC TRAFFIC NUMBER EW 145

INORGANIC TRAFFIC NUMBER ME W 956

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3-1l amber	Organics	5-077630, 31, 32	H8020064
2-40ml	VOA	33 34	B727406
2-1l plastic	Metal / CN	35 36	C8048034

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION WS-1

SAMPLING DATE 4/13/88 SAMPLING TIME 1750

ORGANIC TRAFFIC NUMBER EW 146

INORGANIC TRAFFIC NUMBER MEW 957

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
2-80oz	Organics	5-077637- 38	A8049054
2-40ml	VOA	39 40	B7274061
2-1l plastic	metals/CN	41 42	C8067174

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION WS-1 Dup

SAMPLING DATE 4/13/88 SAMPLING TIME 1750

ORGANIC TRAFFIC NUMBER EW 147

INORGANIC TRAFFIC NUMBER MEW 958

BOTTLE	ANALYSIS	TAG NUMBERS		LOT NUMBER
2-80oz	Organics	5-077643	44	A8049054
2-40ml	VOA	45	46	B7274061
2-1l plastic	metals/CN	47	48	C8067174

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION WS-2 + MSD

SAMPLING DATE 4/13/88 SAMPLING TIME 1720

ORGANIC TRAFFIC NUMBER EW 148

INORGANIC TRAFFIC NUMBER MEW 959

	BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
	2-80oz	Organics	5-077649-50	A8049054
	2-40ml	VOA	51 52	B7274061
	2-1l plastic	metals/CN	53 54	C8067174
MSD	2-80oz	Org	55 56	A8049054
MSD	2-40ml	VOA	57 58	B7274061

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION WS-3

SAMPLING DATE 4/13/88 SAMPLING TIME 17:00

ORGANIC TRAFFIC NUMBER EW 149

INORGANIC TRAFFIC NUMBER MEW 960

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
2-80oz	organics	5-077659-60	A8049054
2-40ml	VOA	61 62	B7274061
2-1l plastic	metals/CN	63, 5-174180	C8067174

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION WS-4

SAMPLING DATE 4/13/88 SAMPLING TIME 1625

ORGANIC TRAFFIC NUMBER EW 150

INORGANIC TRAFFIC NUMBER MEW 961

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
2-80oz	Organics	5-077664-65	A8049054
2-40ml	VOA	66 67	B7274061
2-1l plastic	metals/CN	68 69	C8067174

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION S-1

SAMPLING DATE 4/13/88 SAMPLING TIME 1750

ORGANIC TRAFFIC NUMBER EW 154

INORGANIC TRAFFIC NUMBER MEW 965

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
1-16 oz	extractables	5-077688	E7273242
2-120 ml	VOA	89 90	D7254021
1-16 oz	metal/cyanide	91	E7273242

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION S-2

SAMPLING DATE 4/13/88 SAMPLING TIME 1720

ORGANIC TRAFFIC NUMBER EW 155

INORGANIC TRAFFIC NUMBER MEW 9166

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
1-16 oz	extractables	5-077692	E7273242
2-120 ml	VOA	93 94	D7254021
1-16 oz	metal/cyanide	95	E7273242

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION S-3

SAMPLING DATE 4/13/88 SAMPLING TIME 1700

ORGANIC TRAFFIC NUMBER EW 156

INORGANIC TRAFFIC NUMBER MEW 967

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
1-16 oz	extractables	5-077696	E7273242
2-120 ml	VOA	97, 98	D7254021
1-16 oz	metal/cyanide	99	E7273242

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION S-4

SAMPLING DATE 4/13/88 SAMPLING TIME 16:25

ORGANIC TRAFFIC NUMBER EW 157

INORGANIC TRAFFIC NUMBER MEW 968

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
1-16 oz	extractables	5-0770 00	E7273242
2-120 ml	VOA	01 02	D7254021
1-16 oz	metal/cyanide	03	E7273242

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION R-1

SAMPLING DATE 4/14/88 SAMPLING TIME 1315

ORGANIC TRAFFIC NUMBER EW 140

INORGANIC TRAFFIC NUMBER ME W 951

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3-1l amber	Organics	5-077583, 84, 85	H8015034
2-40ml	VOA	86 87	B727406
2-1l plastic	Metal / CN	88 89	C8048034

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION R-1 Dup

SAMPLING DATE 4/14/88 SAMPLING TIME 1315

ORGANIC TRAFFIC NUMBER EW

INORGANIC TRAFFIC NUMBER MEW

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3-1l amber	Organics	5-077590, 91, 92	H8015034
2-40ml	VOA	93 94	B727406
2-1l plastic	Metal / CN	95 96	C8048034

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION R-2 + MSD

SAMPLING DATE 4/14/88 SAMPLING TIME 1350

ORGANIC TRAFFIC NUMBER EW 141

INORGANIC TRAFFIC NUMBER ME W 952

	BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
	3-1l amber	Organics	5-077597, 98, 99	H8015034
	2-40ml	VOA	5-077600, 01, 02	B7274061
	2-1l plastic	Metal / CN	03 04	C8048034
MSD	3-1l amber	Organics	05 06	H8015034
MSD	2-40ml	VOA	07 08	B7274061

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION R-3

SAMPLING DATE 4/14/88 SAMPLING TIME 1420

ORGANIC TRAFFIC NUMBER EW 142

INORGANIC TRAFFIC NUMBER ME W 953

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3-1l amber	Organics	5-077609, 10, 11	H8020064
2-40ml	VOA	12 13	B7274061
2-1l plastic	Metal / CN	14 15	C8048034

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION BLANK

SAMPLING DATE 4/14/88 SAMPLING TIME 11:00

ORGANIC TRAFFIC NUMBER EW 145

INORGANIC TRAFFIC NUMBER MEW 956

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3-1l amber	Organics	5-077630, 31, 32	H8020064
2-40ml	VOA	33 34	B7274061
2-1l plastic	Metal / CN	35 36	C8048034

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION WS-1

SAMPLING DATE 4/13/88 SAMPLING TIME 1750

ORGANIC TRAFFIC NUMBER EW 146

INORGANIC TRAFFIC NUMBER MEW 957

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
2-80z	organics	5-077637- 38	A8049054
2-40ml	VOA	39 40	B7274061
2-1l plastic	metals/CN	41 42	C8067174

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION WS-1 Dup

SAMPLING DATE 4/13/88 SAMPLING TIME 1750

ORGANIC TRAFFIC NUMBER EW 147

INORGANIC TRAFFIC NUMBER MEW 958

BOTTLE	ANALYSIS	TAG NUMBERS		LOT NUMBER
2-80oz	Organics	5-077643	44	A8049054
2-40ml	VOA	45	46	B7274061
2-1l plastic	metals/CN	47	48	C8067174

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION WS-2 + MSD

SAMPLING DATE 4/13/88 SAMPLING TIME 1720

ORGANIC TRAFFIC NUMBER EW 148

INORGANIC TRAFFIC NUMBER MEW 959

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
2-80oz	Organics	5-077649-50	A8049054
2-40ml	VOA	51 52	B7274061
2-1l plastic	metals/CN	53 54	C8067174
MSD 2-80oz	"	55 56	A8049054
MSD 2-40ml	VOA	57 58	B7274061

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION WS-3

SAMPLING DATE 4/13/88 SAMPLING TIME 17:00

ORGANIC TRAFFIC NUMBER EW 149

INORGANIC TRAFFIC NUMBER MEW 960

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
2-80oz	organics	5-077659-60	A8049054
2-40ml	VOA	61 62	B7274061
2-1l plastic	metals/CN	63, 5-174180	C8067174

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION WS-4

SAMPLING DATE 4/13/88 SAMPLING TIME 1625

ORGANIC TRAFFIC NUMBER EW 150

INORGANIC TRAFFIC NUMBER MEW 961

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
2-80oz	Organics	5-077664-65	A8049054
2-40ml	VOA	66 67	B7274061
2-1l plastic	metals/CN	68 69	C8067174

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION S-1

SAMPLING DATE 4/13/88 SAMPLING TIME 1750

ORGANIC TRAFFIC NUMBER EW 154

INORGANIC TRAFFIC NUMBER MEW 965

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
1-16 oz	extractables	5-077688	E7273242
2-120 ml	VOA	89 90	D7254021
1-16 oz	metal/cyanide	91	E7273242

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION S-2

SAMPLING DATE 4/13/88 SAMPLING TIME 1720

ORGANIC TRAFFIC NUMBER EW 155

INORGANIC TRAFFIC NUMBER MEW 9166

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
1-16 oz	extractables	5-077692	E7273242
2-120 ml	VOA	93 94	D7254021
1-16 oz	metal/cyanide	95	E7273242

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION S-3

SAMPLING DATE 4/13/88 SAMPLING TIME 1700

ORGANIC TRAFFIC NUMBER EW 156

INORGANIC TRAFFIC NUMBER MEW 967

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
1-16 oz	extractables	5-077696	E7273242
2-120 ml	VOA	97, 98	D7254021
1-16 oz	metal/cyanide	99	E7273242

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# SCA Barton L.F.

CASE NUMBER 9346

SAMPLE #/STATION LOCATION S-4

SAMPLING DATE 4/13/88 SAMPLING TIME 16:25

ORGANIC TRAFFIC NUMBER EW 157

INORGANIC TRAFFIC NUMBER MEW 968

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
1-16 oz	extractables	5-077000	E7273242
2-120 ml	VOA	01 02	D7254021
1-16 oz	metal/cyanide	03	E7273242

PHYSICAL DESCRIPTION AT TIME OF COLLECTION:

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT:

INSTRUMENT READINGS

pH

CONDUCTIVITY

TEMPERATURE

To request information on the status of your property contact the gentleman listed BELOW. You will need to give him the ID# listed below so he can reference your property. If we have taken samples from your property, wait about 2 months before you contact him because the lab analyses take a while to process.

Robert Hartian
Freedom of Information Officer
Office of Public Affairs (SPA-14)
U.S. EPA
230 S. Dearborn
Chicago, IL 60604
(312) 886-6686

ID# ILD006 70935

PLERS (Signature): Katherine Neswick

Name of Facility: SCA Barton Landfill

Samples Offered (X) Accepted ( ) Declined

Facility Location: Bolivia, Il

NO.	DATE	TIME	COMP.	GRAB	SPLIT SAMPLES	TAG NUMBERS	STATION DESCRIPTION	NO. OF CONTAINERS	REMARKS
WS1	4/13/88			X	✓	5077637-42	WS1	6	
WS2				X	✓	" 49-54	WS2	6	
WS3				X	✓	" 59-63 5174180	WS3	6	
WS4				X	✓	" 64-69	WS4	6	
KN ~~WS5~~				X	✓	~~" 70-75~~	~~WS5~~	~~6~~	
KN ~~WS6~~				X	✓	~~76-81~~	~~WS6~~	~~6~~	

Delivered by: (Signature) Katherine Neswick 11:48 Time

Received by: (Signature) Christopher [illegible] Title Date Time

Telephone

To request information on the status of your property contact the gentleman listed BELOW You will need to give him the ID# listed below so he can reference your property. If we have taken samples from your property, wait about 2 months before you contact him because the lab analyses take a while to process.

Robert Hartian
Freedom of Information Officer
Office of Public Affairs (SPA-14)
U.S. EPA
230 S. Dearborn
Chicago, IL 60604
(312) 886-6686

ID# ILD000670935

SAMPLERS: (Signature) Katherine Nesvorch	Name of Facility SCA Barton Landfill
Samples Offered (X) Accepted ( ) Declined	Facility Location Robinson, Il.

NO.	DATE	TIME	COMP.	GRAB	SPLIT SAMPLES	TAG NUMBERS	STATION DESCRIPTION	NO. OF CONTAINERS	REMARKS
S1	4/13/88			✓	✓	5-077088,89,90,91	S1	4	
S2	"			✓	✓	92,93,94,95	S2	4	
S3	"			✓	✓	96,97,98,99	S3	4	
S4	"			✓	✓	5-077700,01,02,03	S4	4	
S5	"			✓	✓	04,05,06,07	S5	4	
S6	"			✓	✓	08,09,10,11	S6	4	
S7	"			✓	✓	12,13,14,15	S7	4	
S8	"			✓	✓	16,17,18,19	S8	4	
S9	"			✓	✓	20,21,22,23	S9	4	
S10	"			✓	✓	24,25,26,27	S10	4	

Relinquished by: (Signature) Katherine Nesvorch	Received by: (Signature) [illegible]	Telephone
Time 1149	Title	Date / Time

1110410001
CHERYL — MADISON CO.
ROXANNA/SCA
BARTON

SCA SERVICES, INC.
1838 N. BROADWAY
ST. LOUIS, MO. 63102
314-241-3710

SCA SERVICES

April 11, 1983

Illinois Environmental Protection Agency
Division of Land Pollution Control
2200 Churchill road
Springfield, Illinois 62706

Attention: Mark Haney - Groundwater
Monitering Section

Re: SCA - Milam, Barton and Chouteau Island
Landfills

Dear Mr. Haney,

Please find enclosed the results of the Quarterly Sampling for the above referenced sites.

The following are the Manhole and Well Point Depths at the SCA - Chouteau Landfill.

Manhole	Depth of Leachate
1	7.1'
2	6.4'
3	5.0'

Well Point	Depth of Water
1	5.2'
2	4.8'
3	9.5'

Whould you have any questions or comments, please do not hesitate to call me (314/241-3710).

Verty truly yours,

Richard T. Kogler
Environmental Landfill Manager

RTK/1
encl.

RECEIVED
APR 12 1983
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

RECYCLED PAPER

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECEIVED
APR 12 1983
I.E.P.A. - D.L.P.C.
STATE OF ILLINOIS

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name: B-1 (North Central Area) (Private Well, Stream, Spring, Impounded Water only)

LPCSM010 (1)–(8) SITE INVENTORY NUMBER 1 1 9 0 9 0 0 1 (9)–(16)

MONITOR POINT NUMBER G 1 0 1 (17)–(20) DATE COLLECTED 0 3 0 7 8 3 (21)–(26)

Madison Co. - LPC REGION S (27)

Roxana (Location) / SCA - Barton (Responsible Party)

Legal (1); Illegal (2); Indicate One: 1 (28) Board Order (X) (29)

Time Collected 10:30 a.m. #### Unable to collect sample (X) (30)

Stick-up 1.3 ft. (31)(33) Depth to water 13.9 ft. (from T.O.C.) (34)(36)

Sample temp. 56 °F (37)(39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) 1 (41)

Sample Appearance: Murky - no odor

Collector comments: well depth 34.0'
fast recharge

W. T. Fitzgerald — Collected by
LACLEDE GAS LABORATORY — Div. or Company
W. T. Fitzgerald — Transported by
LACLEDE GAS LABORATORY — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 3.7.83

Rec'd by ARM Time 4:00 p.m. ####

Sample temp. acceptable YES ###
Sample properly preserved YES ###
Date completed 3/18/83
Date forwarded 3/30/83

Supervisor Signature

Name LACLEDE GAS LAB
Address of lab 4118 Shrewsbury St. Louis, MO. 63119

LPCSM020
Lab Comments:

(27)–(36)
(37)–(46)
(47)–(56)
(57)–(66)
(67)–(76)

Private Lab (X) X (77)
IEPA Lab (X) (78)

LPCSM030

		PARAMETERS*	PPM*
27		Alkalinity[1]	
31		Ammonia as N	
37		Arsenic As	
34		Barium Ba	
49		BOD -5	
53	X	Boron B	4.4
58		Cadmium Cd	
64		Calcium Ca	
69		COD	
73		Chloride Cl	

LPCSM040

27		Chromium Cr (tot)	
33		Chromium Cr^{+6}	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (#/100 ml)	
56		Fluoride F	
61	X	Hardness $CaCO_3$	917
65		Iron Fe	
70		Lead Pb	

LPCSM050

27		Magnesium Mg	
32		Manganese Mn	
38		Mercury Hg	
46		Nickel Ni	
51		Nitrate-nitrite N	
56		Oil and Grease	
60		pH (Units)	
63		Phenolics	
70		Phosphorus P	
76		Potassium K	

LPCSM060

27	X	R.O.E. (180°C)	1659
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (umhos/cm)	
53	X	Sulfate SO_4	210
58		Zinc Zn	
63			

*Analyses are to be performed on filtered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm $CaCO_3$ at pH 4.5.

DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECEIVED
APR 12 1983
EPA — D.L.P.C.
STATE OF ILLINOIS

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0 (1)–(8) SITE INVENTORY NUMBER 1 1 9 0 9 0 0 1 (9)–(16)

MONITOR POINT NUMBER G 1 0 7 (17)–(20) DATE COLLECTED 0 3 0 7 8 3 (21)–(26)

Madison Co. - LPC REGION S (27)

Roxana (Location) / SCA - Barton (Responsible Party)

Legal (1); Illegal (2); Indicate One: 1 (28) Board Order (X) (29)

Time Collected 11:45 a.m. p.m. Unable to collect sample (X) (30)

Stick-up 0.4 ft. (31)(33) Depth to water 2 1.0 ft. (from T.O.C.) (34)(36)

Sample temp. 5 6 °F (37)(39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) 1 (41)

Sample Appearance: turbid - no odor

Collector comments: well depth 38.5'
fast recharge

W. T. Fitzgerald — Collected by — LACLEDE GAS LABORATORY — Div. or Company
W. T. Fitzgerald — Transported by — LACLEDE GAS LABORATORY — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 3/7/83

Rec'd by ARM Time 4:00 a.m. p.m.

Sample temp. acceptable YES NO
Sample properly preserved YES NO

Date completed 3/18/83
Date forwarded 3/30/83

Supervisor Signature

Name Laclede Gas Lab
Address of lab 4118 Shrewsbury St. Louis, Mo. 63119

LPCSM020
Lab Comments:

(27)–(36)
(37)–(46)
(47)–(56)
(57)–(66)
(67)–(76)

Private Lab (X) X (77)
IEPA Lab (X) (78)

		PARAMETERS	PPM*
		LPCSM030	
27		Alkalinity[1]	
31	X	Ammonia as N	0.07
37		Arsenic As	
46		Barium Ba	
49		BOD -5	
53	X	Boron B	0.9
58		Cadmium Cd	
64		Calcium Ca	
69	X	COD	109
73		Chloride Cl	
		LPCSM040	
27		Chromium Cr (tot)	
33		Chromium Cr^{+6}	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (#/100 ml)	
56		Fluoride F	
61		Hardness $CaCO_3$	
65	X	Iron Fe	1.0
70		Lead Pb	
		LPCSM050	
27		Magnesium Mg	
32		Manganese Mn	
38		Mercury Hg	
46		Nickel Ni	
51		Nitrate-nitrite N	
56		Oil and Grease	
60		pH (Units)	
63		Phenolics	
70		Phosphorus P	
76		Potassium K	
		LPCSM060	
27	X	R.O.E. (180°C)	594
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (umhos/cm)	
53		Sulfate SO_4	
58	X	Zinc Zn	0.1
63			

*Analyses are to be performed on filtered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

IL 532-0313
LPC 8 3/77

DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(P) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

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Name (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 1 (16)

MONITOR POINT NUMBER (17) G 1 0 8 (20) DATE COLLECTED (21) 0 3 0 7 8 3 (26)

Madison Co. - LPC REGION (27) S

Roxana (Location) / SCA - Barton (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected 12:15 ~~a.m.~~ p.m. Unable to collect sample (X) (30)

Stick-up (31) 1 (33) .3 ft. Depth to water (from T.O.C.) (34) 7 (36) .0 ft.

Sample temp. (37) 5 2 (39) o F Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) (41) 1

Sample Appearance: turbid - no odor

Collector comments: well depth 15.5'

fast recharge

WTF — Collected by — LACLEDE GAS LABORATORY — Div. or Company

WTF — Transported by — LACLEDE GAS LABORATORY — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 3/7/83

Rec'd by ARM Time 4:00 ~~a.m.~~ p.m.

Sample temp. acceptable YES ~~NO~~

Sample properly preserved YES ~~NO~~

Date completed 3/18/83

Date forwarded 3/30/83

ARHauer
Supervisor Signature

Name Laclede Gas Lab
Address of Lab 4118 Shrewsbury St. Louis, Mo 63119

LPCSM020 Lab Comments:

(27) — (36)
(37) — (46)
(47) — (56)
(57) — (66)
(67) — (76)

Private Lab (X) X (77)
IEPA Lab (X) (78)

LPCSM030

		PARAMETERS*	PPM*
27		Alkalinity[1]	
31	X	Ammonia as N	0.11
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	X	Boron B	1.7
58		Cadmium Cd	
64		Calcium Ca	
69	X	COD	127
73		Chloride Cl	

LPCSM040

27		Chromium Cr (tot)	
33		Chromium Cr^{+6}	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (#/100 ml)	
56		Fluoride F	
61		Hardness $CaCO_3$	
65	X	Iron Fe	0.5
70		Lead Pb	

LPCSM050

27		Magnesium Mg	
32		Manganese Mn	
38		Mercury Hg	
46		Nickel Ni	
51		Nitrate-nitrite N	
56		Oil and Grease	
60		pH (Units)	
63		Phenolics	
70		Phosphorus P	
76		Potassium K	

LPCSM060

27	X	R.O.E. (180°C)	405
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (µmhos/cm)	
53		Sulfate SO_4	
58	X	Zinc Zn	0.1
63			

*Analyses are to be performed on filtered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

IL 532-0313
LPC 8 3/77

CHEMICAL ANALYSIS FORM

RECEIVED
APR 12 1983
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0* (1) (8) SITE INVENTORY NUMBER 1 1 9 0 9 0 0 1 (9) (16)

MONITOR POINT NUMBER G 1 0 9 (17) (20) DATE COLLECTED 0 3 0 7 8 3 (21) (26)

Madison Co. - LPC REGION S (27)

Roxana (Location) / SCA - Barton (Responsible Party)

Legal (1); Illegal (2); Indicate One: 1 (28) Board Order (X) (29)

Time Collected 12:40 ##### p.m. Unable to collect sample (X) (30)

Stick-up 1 . 0 ft. (31) (33) Depth to water 1 5 . 0 ft. (from T.O.C.) (34) (36)

Sample temp. 5 4 ° F (37) (39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) 1 (41)

Sample Appearance: turbid - no odor

Collector comments: well depth 38.0'
fast recharge

WTF Collected by — LACLEDE GAS LABORATORY Div. or Company

WTF Transported by — LACLEDE GAS LABORATORY Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 3/7/83

Rec'd by ARM Time 4:00 ##### p.m.

Sample temp. acceptable YES NO

Sample properly preserved YES NO

Date completed 3/18/83

Date forwarded 3/30/83

ARMauer
Supervisor Signature

Name Laclede Gas Lab

Address of Lab 4118 Shrewsbury St. Louis, Mo. 63119

LPCSM020
Lab Comments:

F e l e s s t h (27) (36)

an cp (37) (46)

(47) (56)

(57) (66)

(67) (76)

Private Lab (X) X (77)

IEPA Lab (X) (78)

*Analyses are to be performed on filtered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

IL 532-0313
LPC 8 3/77

LPCSM030

		PARAMETERS*	PPM*
27		Alkalinity[1]	
31	X	Ammonia as N	0.14
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	X	Boron B	0.8
58		Cadmium Cd	
64		Calcium Ca	
69	X	COD	88
73		Chloride Cl	

LPCSM040

27		Chromium Cr (tot)	
33		Chromium Cr^{+6}	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (#/100 ml)	
56		Fluoride F	
61		Hardness $CaCO_3$	
65	X	Iron Fe	0.1
70		Lead Pb	

LPCSM050

27		Magnesium Mg	
32		Manganese Mn	
38		Mercury Hg	
46		Nickel Ni	
51		Nitrate-nitrite N	
56		Oil and Grease	
60		pH (Units)	
63		Phenolics	
70		Phosphorus P	
76		Potassium K	

LPCSM060

27	X	R.O.E. (180°C)	529
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (umhos/cm)	
53		Sulfate SO_4	
56	X	Zinc Zn	0.1
63			

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECEIVED
APR 12 1983
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(A) Stream
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Cahokia Creek - Point A Upstream (North Boundary)
Name (Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0 (1)–(8) SITE INVENTORY NUMBER 1 1 9 0 9 0 0 1 (9)–(16)

MONITOR POINT NUMBER S 1 0 1 (17)–(20) DATE COLLECTED 0 3 0 7 8 3 (21)–(26)

Madison Co. - LPC REGION S (27)

Roxana (Location) / SCA - Barton (Responsible Party)

Legal (1); Illegal (2); Indicate One: 1 (28) Board Order (X) (29)

Time Collected 10:40 a.m. #### Unable to collect sample (X) (30)

Stick-up (31) . (33) ft. Depth to water (from T.O.C.) (34) . (36) ft.

Sample temp. 48° F (37) (39) Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ (41)

Sample Appearance: turbid - no odor

Collector comments:

WTF — Collected by
WTF — Transported by

LACLEDE GAS LABORATORY — Div. or Company
LACLEDE GAS LABORATORY — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 3/7/83

Rec'd by ARM Time 4:00 ##:## p.m.

Sample temp. acceptable YES ##
Sample properly preserved YES ##
Date completed 3/18/83
Date forwarded 3/30/83

Supervisor Signature

Name Laclede Gas Lab
Address of Lab 4118 Shrewsbury St. Louis, Mo. 63119

LPCSM020
Lab Comments:

(27) — (36)
(37) — (46)
(47) — (56)
(57) — (66)
(67) — (76)

Private lab (X) X (77)
IEPA Lab (X) (78)

LPCSM030

		PARAMETERS*	PPM*
27		Alkalinity[1]	
31		Ammonia as N	
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	XX	Boron B	1.1
58		Cadmium Cd	
64		Calcium Ca	
69		COD	
73		Chloride Cl	

LPCSM040

27		Chromium Cr (tot)	
33		Chromium Cr+6	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (#/100 ml)	
56		Fluoride F	
61	X	Hardness $CaCO_3$	389
65		Iron Fe	
70		Lead Pb	

LPCSM050

27		Magnesium Mg	
32		Manganese Mn	
38		Mercury Hg	
46		Nickel Ni	
51		Nitrate-nitrite N	
56		Oil and Grease	
60		pH (Units)	
63		Phenolics	
70		Phosphorus P	
76		Potassium K	

LPCSM060

27	X	R.O.E. (180°C)	494
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (umhos/cm)	
53	X	Sulfate SO_4	340.0
58		Zinc Zn	
63			

*Analyses are to be performed on filtered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

DIVISION OF CON

CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

RECEI

APR 12 198

E.P.A. — D.L.

STATE OF ILLI

(S) Surface Water	(G) Ground Water	(L) Leachate	( ) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name: Cahokia Creek - Point B, downstream (South Boundary (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 1 (16) CP

MONITOR POINT NUMBER (17) S 3 0 1 (20) DATE COLLECTED (21) 0 3 0 7 8 3 (26)

Madison Co. - LPC REGION (27) S

Roxana (location) / SCA - Barton (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 CP Board Order (X) (29)

Time Collected 12:10 p.m. Unable to collect sample (X) (30)

Stick-up (31) . (33) ft. Depth to water (from T.O.C.) (34) . (36) ft.

Sample temp. (37) 5 4 (39) o F Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) _____ (41)

Sample Appearance: turbid - no odor

Collector comments:

WTF Collected by — LACLEDE GAS LABORATORY Div. or Company

WTF Transported by — LACLEDE GAS LABORATORY Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 3/7/83

Rec'd by ARM Time 4:00 p.m.

Sample temp. acceptable YES NO

Sample properly preserved YES NO

Date completed 3/18/83

Date forwarded 3/30/83

Supervisor Signature

Name Laclede Gas Lab

Address of Lab 4118 Shrewsbury St. Louis, MO 63119

LPCSM020 Lab Comments:

(27) — (36)

(37) — (46)

(47) — (56)

(57) — (66)

(67) — (76)

Private Lab (X) X (77)

IEPA Lab (X) (78)

*Analyses are to be performed on filtered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

IL 532-0313

LPCSM030

		PARAMETERS*	PPM
27		Alkalinity[1]	
31		Ammonia as N	
37		Arsenic As	
43		Barium Ba	
49		BOD -5	
53	X	Boron B	1 3
58		Cadmium Cd	
64		Calcium Ca	
69		COD	
73		Chloride Cl	

LPCSM040

27		Chromium Cr (tot)	
33		Chromium Cr^{+6}	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (#/100 ml)	
56		Fluoride F	
61	X	Hardness $CaCO_3$	3 4 5
65		Iron Fe	
70		Lead Pb	

LPCSM050

27		Magnesium Mg	
32		Manganese Mn	
38		Mercury Hg	
46		Nickel Ni	
51		Nitrate-nitrite N	
56		Oil and Grease	
60		pH (Units)	
63		Phenolics	
70		Phosphorus P	
76		Potassium K	

LPCSM060

27	X	R.O.E. (180°C)	4 5 7
31		Selenium Se	
36		Silver Ag	
44		Sodium Na	
49		SC (umhos/cm)	
53	X	Sulfate SO_4	4 0 0 0
58		Zinc Zn	
63			

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECEIVED
APR 12 1983
I.E.P.A. - D.L.P.C.
STATE OF ILLINOIS

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name B-2 (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M O 1 (8) G

SITE INVENTORY NUMBER (9) 1 1 9 0 9 0 0 1 (16)

MONITOR POINT NUMBER (17) G 1 0 2 (20)

DATE COLLECTED (21) 0 3 0 7 8 3 (26)

Madison Co. - LPC

REGION (27) S

Roxana (Location) / SCA - Barton (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1

Board Order (X) (29)

Time Collected 11:00 a.m. ###

Unable to collect sample (X) (30)

Stick-up (31) 1.7 (33) ft.

Depth to water (from T.O.C.) (34) 2 6 . 9 (36) ft.

Sample temp. (37) 5 4 (39) °F

Background (X). . . . (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) (41) 1

Sample Appearance: turbid - no odor

Collector comments: Well depth 38.5'

fast recharge

W. T. Fitzgerald — Collected by
LACLEDE GAS LABORATORY — Div. or Company

W. T. Fitzgerald — Transported by
LACLEDE GAS LABORATORY — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 3/7/83

Rec'd by ARM Time 4:00 p.m. ###

Sample temp. acceptable YES ### NO

Sample properly preserved YES ### NO

Date completed 3/18/83

Date forwarded 3/30/83

Supervisor Signature

Name Laclede Gas Lab

Address of Lab 4118 Shrewsbury St. Louis, MO 63119

LPCSM020 Lab Comments:

(27) (36)

(37) (46)

(47) (56)

(57) (66)

(67) (76)

Private lab (X) X (77) CP

IEPA Lab (X) (78)

LPCSM030

		PARAMETERS*	PPM*
27		Alkalinity[1]	
31		Ammonia as N	
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	X	Boron B	0.5
58		Cadmium Cd	
64		Calcium Ca	
69		COD	
73		Chloride Cl	

LPCSM040

27		Chromium Cr (tot)	
33		Chromium Cr^{+6}	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (#/100 ml)	
56		Fluoride F	
61	X	Hardness $CaCO_3$	612
65		Iron Fe	
70		Lead Pb	

LPCSM050

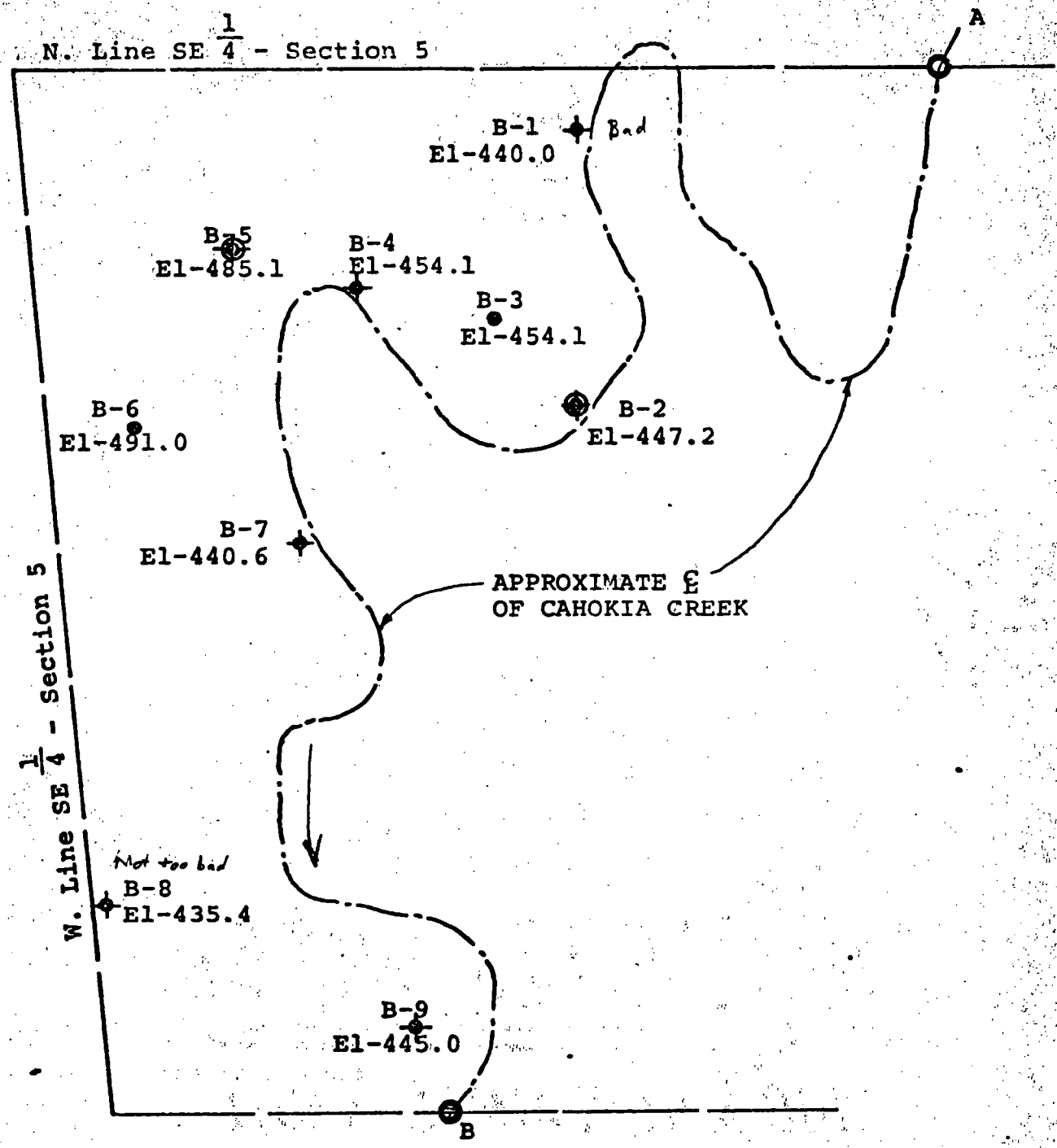
27		Magnesium Mg	
32		Manganese Mn	
38		Mercury Hg	
46		Nickel Ni	
51		Nitrate-nitrite N	
56		Oil and Grease	
60		pH (Units)	
63		Phenolics	
70		Phosphorus P	
76		Potassium K	

LPCSM060

27	X	R.O.E. (180°C)	648
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (umhos/cm)	
53	X	Sulfate SO_4	120
58		Zinc Zn	
63			

*Analyses are to be performed on filtered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm $CaCO_3$ at pH 4.5.



● BORING SITES

✦ BORING SITES & PIEZOMETERS

○ WATER SAMPLE

SCALE 1" = 400'

BORING LOCATION SKETCH

BARTON LANDFILL
N.W. EDWARDSVILLE, ILL.

FIGURE II

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

CRL Receipt Date 6/3 FIT Receipt Date 6/28 Review Completed 7/5/88

TO: Gary Cobb
FROM: Zena Gold-Kaufman ZGK
SUBJECT: SCA serv/Barton
PAN: IL0599SA (1 hour charged for review) Case # 9346

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# 4	Low Soil	#	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

_____ Incomplete, awaiting _____

FIT Data Review Findings:
X Beta BHC detected in EW15H

Check Data Sheets for Transcription Errors

✓ Compounds were detected in sample(s); see enclosed sheet.

Book No. 8 Page No. 15 Date Sampled 4/13/88

0759:2

recycled paper

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Metals

FOOTNOTE	DEFINITION	INTERPRETATION
NEW E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	Analysis by Method of Standard Additions.	Value may be quantitative.
N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
	DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
	Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	Compound was analyzed for but not detected.	Compound was not detected.
M	Duplicate injection precision not met.	Value may be semi-quantitative.
W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not calculated since chemical is not a carcinogen.
) Estimated value.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

6/28/88
16 pages

DATE: 6/23/88

SUBJECT: Review of Region V CLP Data
Received for Review on 6-3-88

FROM: Curtis Ross, Director (5SCRL) Patrick J. Chmielle for
Central Regional Laboratory

TO: Data User: FIT

We have reviewed the data for the following case(s).

SITE NAME: SCA SERV/BARTON LANDFILL (IL) SMO Case No. 9346

EPA Data Set No. SF 5049 (2) No. of Samples: 4 D.U./Activity Numbers Y905/C72IZZ

CRL No. 88FC18S20 - S23

SMO Traffic No. EW154 -157

CLP Laboratory: RMAL Hrs. Required for Review: 4

Following are our findings:

THIS DATA REVIEW COVERS THE ANALYSIS OF FOUR SAMPLES FOR PESTICIDES/PCB ONLY. THERE WERE NO MAJOR PROBLEMS WHICH WOULD CAUSE THE DATA TO BE UNUSABLE. HOWEVER, THERE ARE SEVERAL POINTS WHICH ARE OF IMPORTANCE TO BE DISCUSSED IN THE FOLLOWING SECTION.

Robert Katzen
WESTON/ESAT 6/17/88.

( ) Data are acceptable for use.
(✓) Data are acceptable for use with qualifications referenced above.
See Data Qualifier sheets and Calibration Outlier forms for flags and additional comments.
( ) Data are preliminary - pending verification by Contractor Laboratory.
See Case Summary above.
( ) Data are unacceptable.

cc: Carla Dempsey, CLP Quality Assurance Officer, Analytical Operations Branch
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

DATA QUALIFIERS

Contractor: RMAL

Case 9346

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

① HOLDING TIME

HOLDING TIME WAS SATISFACTORY FOR ALL SAMPLES.

② GC INSTRUMENT PERFORMANCE

ENDRIN EXCEEDED THE PERMISSABLE 20% BREAKDOWN FOR EVALUATION MIX B ON 5/11/88 (12:23), 5/11/88 (23:34) AND 5/12/88 (5:31); THE % BREAKDOWN WAS 52.2, 53.9 AND 83.6 RESPECTIVELY. NIETHER ENDRIN NOR ENDRIN KETONE WAS PRESENT IN ANY OF THE SAMPLES SO NO ACTION WAS TAKEN.

③ CALIBRATION

THE GC CALIBRATION FOR PESTICIDES/PCB WAS SATISFACTORY.

④ METHOD BLANKS

NO PESTICIDES WERE FOUND IN THE PESTICIDE BLANK.

Reviewed by: Robert Katzen

Phone: 312-353-2917

Date: 6/17/88.

DATA QUALIFIERS

Contractor: RMAL

Case 9346

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

(5) SURROGATE RECOVERIES

DBC RECOVERY WAS SATISFACTORY FOR THE SAMPLES BEING INVESTIGATED.

(6) MATRIX SPIKE/MATRIX SPIKE DUPLICATE

LINDANE HAD A % REC. FOR THE LOW SOIL PESTICIDE EW154 WHICH WAS BELOW THE REQUIRED QC LIMIT IN THE MS AS WELL AS THE MSD. ALL RPD'S ARE SATISFACTORY.

(7) FIELD DUPLICATES

NO FIELD DUPLICATES WERE INCLUDED WITH THE CASE.

(8) COMPOUND IDENTIFICATION

GC COMPOUND IDENTIFICATION WAS SATISFACTORY.

(9) COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS.

COMPOUND QUANTITATION WAS CARRIED OUT PROPERLY. NO DETECTION LIMITS WERE PRESENT.

Reviewed by: Robert Katzen

Phone: 312-353-2917

Date: 6/17/88.

DATA QUALIFIERS

Contractor: RMAL

Case 9346

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

(10) SYSTEM PERFORMANCE

GC PESTICIDE INSTRUMENT PERFORMANCE WAS SATISFACTORY.

(11) ADDITIONAL CASE SPECIFIC PROBLEMS.
THE CASE WAS WELL RAN AND ANALYSIS OF THE DATA WAS SATISFACTORY. FORM X WAS INCLUDED WITH THE DATA FOR THE IDENTIFICATION OF BETA-BHC IN SAMPLE EW154.

Reviewer by: Robert Katzer
Phone: 312-353-2917
Date: 6/17/88.

Case: RMAL

Contractor: 9346

TENTATIVELY IDENTIFIED COMPOUNDS MATCH ASSESSMENT

NOTE: Reviewer should note directly on Organic Analysis Data Sheet (OADS) those matches that in his opinion (based on contract criteria) are unreasonable.

CRITERIA

(1) Relative intensities of major ions (>10%) reference spectrum should be present in the sample spectrum.

(2) Relative intensities of major ions in sample spectrum should agree to within ± 20% of reference spectrum intensities.

(3) Molecular ions present in reference spectrum should be present in sample spectrum.

(4) Ions present in sample spectrum, but not in reference spectrum should be reviewed for possible background contamination or presence of coeluting interferences.

(5) Ions present in reference spectrum, but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting interferences.

(6) If, in the reviewer's opinion, no valid identification can be made the compound should be labelled as "unknown" and the initials and date of the reviewer placed on the OADS.

Rocky Mountain
Analytical Laboratory

Enseco

RECEIVED
JUN 03 1988
U.S. EPA CENTRAL
REGIONAL LAB

June 2, 1988

Curtis Ross
USEPA Region V
536 South Clark Street
Central Regional Laboratory
10th Floor
Chicago, IL 60605

Dear Mr. Ross:

Four soil samples were received at Rocky Mountain Analytical Laboratory on April 15, 1988 under EPA Case Number 9346. The pesticide analyses for the soil samples of the SDG number EW154 have been completed and the results are enclosed. Specifically, this data package includes samples which have the following organic traffic report numbers: EW154, EW155, EW156, and EW157.

Release of the data contained in this hardcopy data package and in the computer-readable data submitted on the floppy diskette has been verified by me. The volatile and base/neutral acid analysis data package and diskette have been delivered May 24, 1988.

Please call if you have any questions.

Sincerely,

Julieann L. Kramer

Julieann L. Kramer
Customer Service Rep

JLK/brm
Enclosures

cc: Leslie Braun - SMO
Mike Homsher - LEMSCO

RMAL #70014

Enseco Incorporated
4955 Yarrow Street
Arvada, Colorado 80002
303/421-6611 Fax: 303/431-7171

CASE NARRATIVE
FOR
USEPA - RMAL PROJECT 70014

Analytical Results

The samples in this project have been extracted and analyzed according to EPA methodology for low level soils. No HSL pesticides or PCBs were detected in any of the samples or blanks.

Quality Control

The percent recovery of the six spiking compounds were within QC limits for EW154MS and EW154MSD with the exception of lindane which had recoveries of 10% and 25%. The relative percent differences were all within QC limits.

USEPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA, VA 22313
703/557-2490 FTS-557-2490

CASE NO: 9346

SAS NO: (IF APPLICABLE)

ORGANIC TRAFFIC REPORT

(FOR CLP USE ONLY)

TYPE OF ACTIVITY (CIRCLE ONE) ①
SUPERFUND—PA SI ESI RIFS RD RA ER
NPLD O&M OTHER
NON-SUPERFUND— PROGRAM

SAMPLE DESCRIPTION
(ENTER IN BOX A)
1. SURFACE WATER 5. SEDIMENT
2. GROUND WATER 6. OIL (SAS)
3. LEACHATE 7. WASTE (SAS)
4. SOIL

REGION NO: V SAMPLING COMPANY ② FIT
SAMPLER: (NAME) Kathleen Neswick

SHIP TO: ③ RMAL 4955 Yarrow St. Arvada CO 80002
ATTN: Kathy Hutchinson

SAMPLING DATE: 4/14/88 ④
BEGIN: END:

DATE SHIPPED: 4/14/88 CARRIER: F ⑤
AIRBILL NO: 5716817105

DATE REC'D: 4-15-88 SDG NO: ⑥ EW154
REC'D BY: Trish DellaCore 888.00
LABORATORY CONTRACT NO. UNIT PRICE
68-01 0069

TRANSFER TO: DATE REC'D: ⑦
REC'D BY: CONTRACT NO./PRICE:

Shipment is complete

CLP SAMPLE NUMBER (FROM LABELS)	Ⓐ SAMPLE DESCRIPTION (FROM BOX 1) 1 2 3 4 5 6 7	Ⓑ CONCENTRATION L = LOW/MED. H = HIGH (SAS)	Ⓒ RAS ANALYSIS: VOLATILE	BASE/NEUT /ACID	PESTICIDE /PCB's		Ⓓ SPECIAL HANDLING	Ⓔ STATION LOCATION	Ⓕ SAMPLE CONDITION ON RECEIPT	Ⓖ HIGH CONC. PHASES (CHECK): SOLID	WATER—MIS LIQUID	NON WATER—MIS LIQUID
EW 146 154	5	L	/	/	/			S1	OK			
EW 155	5	L	/	/	/			S2	↓			
EW 156	5	L	/	/	/			S3	↓			
EW 157	5	L	/	/	/		SDG-Final Sample	S4	↓			

EPA Form 2075-7 (8-87)

WHITE — SMO COPY PINK — CLIENT COPY WHITE — LAB COPY FOR RETURN TO SMO YELLOW — LAB COPY

2F

SOIL PESTICIDE SURROGATE RECOVERY

00002

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (DBC)#	OTHER
01	EW154	30	0
02	EW155	68	0
03	EW156	54	0
04	EW157	46	0
05	EW154MS	75	0
06	EW154MSD	83	0
07	PBLK01	63	0

ADVISORY QC LIMITS

S1 (DBC) = Dibutlychlorendate (20-150)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

FORM II PEST-2 1/87 Rev.

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix Spike - EPA Sample No.: EW154 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	63.9	0	14.1	22 *	46-127
Heptachlor	63.9	0	61.5	96	35-130
Aldrin	63.9	0	60.5	95	34-132
Dieldrin	160	0	118	74	31-134
Endrin	160	0	160	100	42-139
4,4'-DDT	160	0	101	63	23-134

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	64.9	18.1	28 *	-24	50	46-127
Heptachlor	64.9	59.3	91	5	31	35-130
Aldrin	64.9	61.5	95	0	43	34-132
Dieldrin	162	105	65	13	38	31-134
Endrin	162	160	99	1	45	42-139
4,4'-DDT	162	111	69	-9	50	23-134

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

* Values outside of QC limits

RPD: 0 out of 6 outside limits
Spike Recovery: 2 out of 12 outside limits

COMMENTS: SAMPLE USED DURING MS AND MSD

4C

PESTICIDE METHOD BLANK SUMMARY

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Lab Sample ID: 70014_BL Lab File ID:

Matrix:(soil/water) SOIL Level:(low/med) LOW

Date Extracted: 04/19/88 Extraction:(SepF/Cont/Sonc) SONC

Date Analyzed (1): 05/11/88 Date Analyzed (2): 05/11/88

Time Analyzed (1): 2253 Time Analyzed (2): 2255

Instrument ID (1): B-5880 Instrument ID (2): B-5880

GC Column ID (1): 3_SP2100 GC Column ID (2): SP2250_1

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	EW154	70014_EW154	05/11/88	05/11/88
02	EW155	70014_EW155	05/11/88	05/11/88
03	EW156	70014_EW156	05/12/88	05/12/88
04	EW157	70014_EW157	05/12/88	05/12/88
05	EW154MS	70014_EW154MS	05/11/88	05/11/88
06	EW154MSD	70014EW154MSD	05/11/88	05/11/88

COMMENTS:

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

00122 EPA SAMPLE NO.

PBLK01

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014_BL

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. dec. Date Extracted: 04/19/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/11/88

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	16	U
319-85-7	beta-BHC	16	U
319-86-8	delta-BHC	16	U
58-89-9	gamma-BHC (Lindane)	16	U
76-44-8	Heptachlor	16	U
309-00-2	Aldrin	16	U
1024-57-3	Heptachlor epoxide	16	U
959-98-8	Endosulfan I	16	U
60-57-1	Dieldrin	32	U
72-55-9	4,4'-DDE	32	U
72-20-8	Endrin	32	U
33213-65-9	Endosulfan II	32	U
72-54-8	4,4'-DDD	32	U
1031-07-8	Endosulfan sulfate	32	U
50-29-3	4,4'-DDT	32	U
72-43-5	Methoxychlor	160	U
53494-70-5	Endrin ketone	32	U
5103-71-9	alpha-Chlordane	160	U
5103-74-2	gamma-Chlordane	160	U
8001-35-2	Toxaphene	320	U
12674-11-2	Aroclor-1016	160	U
11104-28-2	Aroclor-1221	160	U
11141-16-5	Aroclor-1232	160	U
53469-21-9	Aroclor-1242	160	U
12672-29-6	Aroclor-1248	160	U
11097-69-1	Aroclor-1254	320	U
11096-82-5	Aroclor-1260	320	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET 00006

EPA SAMPLE NO.

EW154

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014_EW154

Sample wt/vol: 29.4 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 17 dec. Date Extracted: 04/19/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/11/88

GPC Cleanup: (Y/N) Y pH: 7.2 Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	20	U
319-85-7	beta-BHC	22	
319-86-8	delta-BHC	20	U
58-89-9	gamma-BHC (Lindane)	20	U
76-44-8	Heptachlor	20	U
309-00-2	Aldrin	20	U
1024-57-3	Heptachlor epoxide	20	U
959-98-8	Endosulfan I	20	U
60-57-1	Dieldrin	39	U
72-55-9	4,4'-DDE	39	U
72-20-8	Endrin	39	U
33213-65-9	Endosulfan II	39	U
72-54-8	4,4'-DDD	39	U
1031-07-8	Endosulfan sulfate	39	U
50-29-3	4,4'-DDT	39	U
72-43-5	Methoxychlor	200	U
53494-70-5	Endrin ketone	39	U
5103-71-9	alpha-Chlordane	200	U
5103-74-2	gamma-Chlordane	200	U
8001-35-2	Toxaphene	390	U
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	200	U
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	390	U
11096-82-5	Aroclor-1260	390	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
EW155

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014_EW155

Sample wt/vol: 29.4 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 20 dec. Date Extracted: 04/19/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/11/88

GPC Cleanup: (Y/N) Y pH: 7.8 Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	20	U
319-85-7	beta-BHC	20	U
319-86-8	delta-BHC	20	U
58-89-9	gamma-BHC (Lindane)	20	U
76-44-8	Heptachlor	20	U
309-00-2	Aldrin	20	U
1024-57-3	Heptachlor epoxide	20	U
959-98-8	Endosulfan I	20	U
60-57-1	Dieldrin	41	U
72-55-9	4,4'-DDE	41	U
72-20-8	Endrin	41	U
33213-65-9	Endosulfan II	41	U
72-54-8	4,4'-DDD	41	U
1031-07-8	Endosulfan sulfate	41	U
50-29-3	4,4'-DDT	41	U
72-43-5	Methoxychlor	200	U
53494-70-5	Endrin ketone	41	U
5103-71-9	alpha-Chlordane	200	U
5103-74-2	gamma-Chlordane	200	U
8001-35-2	Toxaphene	410	U
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	200	U
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	410	U
11096-82-5	Aroclor-1260	410	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
EW156

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014_EW156

Sample wt/vol: 29.4 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 18 dec. Date Extracted: 04/19/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/12/88

GPC Cleanup: (Y/N) Y pH: 7.2 Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	20	U
319-85-7	beta-BHC	20	U
319-86-8	delta-BHC	20	U
58-89-9	gamma-BHC (Lindane)	20	U
76-44-8	Heptachlor	20	U
309-00-2	Aldrin	20	U
1024-57-3	Heptachlor epoxide	20	U
959-98-8	Endosulfan I	20	U
60-57-1	Dieldrin	40	U
72-55-9	4,4'-DDE	40	U
72-20-8	Endrin	40	U
33213-65-9	Endosulfan II	40	U
72-54-8	4,4'-DDD	40	U
1031-07-8	Endosulfan sulfate	40	U
50-29-3	4,4'-DDT	40	U
72-43-5	Methoxychlor	200	U
53494-70-5	Endrin ketone	40	U
5103-71-9	alpha-Chlordane	200	U
5103-74-2	gamma-Chlordane	200	U
8001-35-2	Toxaphene	400	U
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	200	U
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	400	U
11096-82-5	Aroclor-1260	400	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW157

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014_EW157

Sample wt/vol: 29.4 (g/mL) G Lab File ID:

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 16 dec. Date Extracted: 04/19/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/12/88

GPC Cleanup: (Y/N) Y pH: 7.4 Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	19	U
319-85-7	beta-BHC	19	U
319-86-8	delta-BHC	19	U
58-89-9	gamma-BHC (Lindane)	19	U
76-44-8	Heptachlor	19	U
309-00-2	Aldrin	19	U
1024-57-3	Heptachlor epoxide	19	U
959-98-8	Endosulfan I	19	U
60-57-1	Dieldrin	39	U
72-55-9	4,4'-DDE	39	U
72-20-8	Endrin	39	U
33213-65-9	Endosulfan II	39	U
72-54-8	4,4'-DDD	39	U
1031-07-8	Endosulfan sulfate	39	U
50-29-3	4,4'-DDT	39	U
72-43-5	Methoxychlor	190	U
53494-70-5	Endrin ketone	39	U
5103-71-9	alpha-Chlordane	190	U
5103-74-2	gamma-Chlordane	190	U
8001-35-2	Toxaphene	390	U
12674-11-2	Aroclor-1016	190	U
11104-28-2	Aroclor-1221	190	U
11141-16-5	Aroclor-1232	190	U
53469-21-9	Aroclor-1242	190	U
12672-29-6	Aroclor-1248	190	U
11097-69-1	Aroclor-1254	390	U
11096-82-5	Aroclor-1260	390	U

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

CRL Receipt Date 5/25/88 FIT Receipt Date 7/15/88 Review Completed 7/18/88

TO: Gary Cobb

FROM: Zena Gold-Kaufman ZGK

SUBJECT: SCA/Barton Lndfl

PAN: 1L0599SA (1 hour charged for review) Case # 9346

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# 4	Low Soil	#	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

_____ Incomplete, awaiting _____

FIT Data Review Findings:

Compounds detected; values are all qualified

Check Data Sheets for Transcription Errors

_____ Compounds were detected in sample(s); see enclosed sheet.

Book No. 8 Page No. 13 Date Sampled 4/13

0759:2

recycled paper

REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

OOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscop
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Metals

TNOTE	DEFINITION	INTERPRETATION
NEW E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	Analysis by Method of Standard Additions.	Value may be quantitative.
M	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
	DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
	Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	Compound was analyzed for but not detected.	Compound was not detected.
N	Duplicate injection precision not met.	Value may be semi-quantitative.
W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
VR Value not calculated since chemical is not a carcinogen.
) Estimated value.

7/15/88

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 7/11/88

SUBJECT: Review of Region V CLP Data
Received for Review on 5-25-88

FROM. Curtis Ross, Director (5SCRL) Midia Feliciano for
Central Regional Laboratory

TO: Data User: FIT

We have reviewed the data for the following case(s).

SITE NAME: SCA/Barton Landfill (IL) SMO Case No. 9346

EPA Data Set No. SF 5049 No. of Samples: 4 D.U./Activity Numbers Y905/C721ZZ

CRL No. 88FC18520-S23

SMO Traffic No. EW154-157

CLP Laboratory: RMAL Hrs. Required for Review: 8

Following are our findings:

The data for this case is acceptable for use with qualifications noted in this report. Positive sample results indicated that no TCL VOA or BNA compounds were detected above the CRDL.

Randy Perks 6-29-88

( ) Data are acceptable for use.
(✓) Data are acceptable for use with qualifications referenced above. See Data Qualifier sheets and Calibration Outlier forms for flags and additional comments.
( ) Data are preliminary - pending verification by Contractor Laboratory. See Case Summary above.
( ) Data are unacceptable.

cc: Carla Dempsey, CLP Quality Assurance Officer, Analytical Operations Branch
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

SCA/Barton Landfill (IL)
Case #9346

This case covers four low sediment samples for CLP VOA and BNA TCL analysis.

A. Holding Times: VOA and BNA holding times are acceptable.

B. Surrogates: Low Sediments - Acceptable
0 of 30 VOAs were outside QC limits.
8 of 42 BNAs were outside QC limits.

C. Matrix Spike/MSD: Low Sediments - Acceptable
0 of 5 RPDs VOAs were outside QC limits.
0 of 11 RPDs BNAs were outside QC limits.

0 of 10 % recoveries were outside QC limits.
14 of 22 % recoveries were outside QC limits.
Positive results should be considered estimated for associated samples.

D. Method Blanks: Soils - Acceptable
VOAs - MeCl & Acetone detected.
BNAs - Phenol & bis(2-ethylhexly)phthalate were detected but below CRDL.

E. Calibrations: Acceptable
Outliers were noted in report.

F. GC/MS Tuning: Acceptable

G. Pesticides: Not Analyzed

H. Samples: No samples indicated positive sample results above the CRDL for VOAs & BNAs. However many TICs were detected.

Reviewer [signature] Date 6-27-88

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS # 9346 CONTRACTOR RMAL

Instrument # 5100-W	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	3-28-88			4-23-88 1149											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone															
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone	.04		R	.04		R									
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether															
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone															
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

EW 154	EW 154
EW 155	EW 155
EW 156	EW 156
EW 157	EW 157

Reviewer's Initials/Date: Rup 6-29-88

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 9346 CONTRACTOR RMAL

Instrument # 4500-R	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/16/88			5-18-88 2316											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether															
2-Chlorophenol															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid															
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline															
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol					33	J									
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline															
Acenaphthene															
2,4-Dinitrophenol															
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

EW 154	EW 154
EW 155	EW 155
EW 156	EW 156
EW 157	EW 157

Reviewer Initials/Date: Rup 6-29-88

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 9346 CONTRACTOR RMAL

Instrument # 4500-R	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/16/88			5-18-88 2316											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline															
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															
3,3'-Dichlorobenzidine					52	J									

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

Reviewer's Initials/Date: Rup 6-29-88

Case: 9346

Contractor: BMAL

TENTATIVELY IDENTIFIED COMPOUNDS
WATCH ASSESSMENT

NOTE: Reviewer should note directly on Organic Analysis Data Sheet (OADS) those matches that in his opinion (based on contract criteria) are unreasonable.

CRITERIA

(1) Relative intensities of major ions (>10%) reference spectrum should be present in the sample spectrum.

(2) Relative intensities of major ions in sample spectrum should agree to within ± 20% of reference spectrum intensities.

(3) Molecular ions present in reference spectrum should be present in sample spectrum.

(4) Ions present in sample spectrum, but not in reference spectrum should be reviewed for possible background contamination or presence of coeluting interferences.

(5) Ions present in reference spectrum, but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting interferences.

(6) If, in the reviewer's opinion, no valid identification can be made the compound should be labelled as "unknown" and the initials and date of the reviewer placed on the OADS.

Reviewer's Initials/Date: Rey 6-29-88

Rocky Mountain
Analytical Laboratory

5049

Enseco Incorporated

Enseco

05/24/88

Curtis Ross
USEPA Region V
536 South Clark Street
Central Regional Laboratory
10th Floor
Chicago, IL 60605

Dear Mr. Ross,

Four soil samples were received at RMAL on April 15, 1988 under EPA case number 9346. The volatile and base/neutral acid analyses for the soil samples or the SDG number EW154 have been completed and the results are enclosed. Specifically, this data package includes samples which have the following organics traffic report numbers; EW154, EW155, EW156, and EW157.

Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floopy diskette has been verified by myself. The pesticide data package and diskette will be delivered at a later date.

Please call if you have any questions.

Sincerely,

Jeffrey C. Lowry
Manager
Mass Spectrometry

cc Leslie Braun, SMO
Mike Homsher, SMO

4955 Yarrow Street
Arvada, Colorado 80002
303/421-6611 Facsimile: 303/431-7171

Analytical Results

The volatile analyses were free of any significant organic contamination. The semivolatile fractions contained a few aliphatic hydrocarbons in the tentatively identified compound (TIC) list. Two analyses are submitted for the volatile analysis of sample EW155. Due to an error in taping of the first analysis, the sample data was lost before TICs could be pulled from the data system. A reanalysis was performed for the TICs only.

Quality Control

All surrogate compound recoveries for the volatile fraction were within specified QC limits. Spike compound recoveries and their respective relative percent differences (RPD) in the volatile fraction were also within QC limits. A few samples had high recoveries of the surrogate compounds in the semivolatile fraction, but within contract compliance. In the semivolatile spike samples, several compounds were recoveried above their QC limits. RMAL is investigating the cause of the high surrogate and spike compound recoveries in the semivolatile fractions.

2B
SOIL VOLATILE SURROGATE RECOVERY

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (TOL) #	S2 (BFB) #	S3 (DCE) #	OTHER	TOT OUT
01	EW154	107	100	96		0
02	EW155	107	93	100		0
03	EW155RE	101	96	93		0
04	EW156	100	106	102		0
05	EW157	104	102	93		0
06	EW154MS	108	96	97		0
07	EW154MSD	109	98	96		0
08	VBLK	105	99	95		0
09	VBLK	104	109	98		0
10	VBLK	101	96	94		0

		QC LIMITS
S1 (TOL)	= Toluene-d8	(81-117)
S2 (BFB)	= Bromofluorobenzene	(74-121)
S3 (DCE)	= 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

FORM II VOA-2

00274

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	OTHER	TOT OUT
01	EW154	116	116*	128	114*	109	76		2
02	EW155	114	116*	128	114*	113	86		2
03	EW156	113	114	119	111	107	70		
04	EW157	116	116*	125	115*	111	63		2
05	SBLK	114	113	122	112	105	81		
06	EW154MS	111	113	125	118*	106	96		1
07	EW154MSD	110	109	123	114*	104	84		1

		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(23-120)
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)
S3 (TPH)	= Terphenyl	(18-137)
S4 (PHL)	= Phenol-d5	(24-113)
S5 (2FP)	= 2-Fluorophenol	(25-121)
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)

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

FORM II SV-2 1/87 Rev.

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix Spike - EPA Sample No.: EW154 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	60.2	0	63.3	105	59-172
Trichloroethene	60.2	0	64.8	108	62-137
Benzene	60.2	0	62.4	104	66-142
Toluene	60.2	0	67.6	112	59-139
Chlorobenzene	60.2	0	69.9	116	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	60.2	65.2	108	-3	22	59-172
Trichloroethene	60.2	65.3	109	-1	24	62-137
Benzene	60.2	63.4	105	-1	21	66-142
Toluene	60.2	69.5	115	-3	21	59-139
Chlorobenzene	60.2	70.1	116	0	21	60-133

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

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: CASE 9346 OTR#EW154 VOA SOIL 5.0G/5ML(70014-01)
GC DESC V3

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix Spike - EPA Sample No.: EW154 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	15800	0	17300	110 *	26- 90
2-Chlorophenol	15800	0	21200	134 *	25-102
1,4-Dichlorobenzene	7890	0	9470	120 *	28 104
N-Nitroso-di-n-prop.(1)	7890	0	9630	122	41 126
1,2,4-Trichlorobenzene	7890	0	9710	123 *	38 107
4-Chloro-3-methylphenol	15800	0	21900	139 *	26 103
Acenaphthene	7890	0	11400	145 *	31-137
4-Nitrophenol	15800	0	14600	92	11-114
2,4-Dinitrotoluene	7890	0	10500	133 *	28- 89
Pentachlorophenol	15800	131	12200	76	17-109
Pyrene	7890	0	11100	141	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	16100	16500	103 *	7	35	26- 90
2-Chlorophenol	16100	20600	128 *	5	50	25-102
1,4-Dichlorobenzene	8050	9500	118 *	2	27	28 104
N-Nitroso-di-n-prop.(1)	8050	9500	118	3	38	41 126
1,2,4-Trichlorobenzene	8050	9900	123 *	0	23	38 107
4-Chloro-3-methylphenol	16100	22500	140 *	-1	33	26 103
Acenaphthene	8050	11300	140 *	4	19	31-137
4-Nitrophenol	16100	14200	88	4	50	11-114
2,4-Dinitrotoluene	8050	10600	132 *	1	47	28- 89
Pentachlorophenol	16100	12200	75	1	47	17-109
Pyrene	8050	10100	126	11	36	35-142

(1) N-Nitroso-di-n-propylamine

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

RPD: 0 out of 11 outside limits
Spike Recovery: 14 out of 22 outside limits

COMMENTS: CLP,70014,,EW154,LOW,SOIL,01,BNA,EPA
100%/1ML

4A
VOLATILE METHOD BLANK SUMMARY

00004

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Lab File ID: BLW812 Lab Sample ID: VB042388

Date Analyzed: 04/23/88 Time Analyzed: 1401

Matrix: (soil/water) SOIL Level:(low/med) LOW

Instrument ID: 5100-W

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EW154	70014-01	S70014W813	1451
02	EW155	70014-02	S70014W816	1717
03	EW157	70014-04	S70014W818	1920
04	EW154MS	70014-01MS	S70014W814	1537
05	EW154MSD	70014-01MSD	S70014W815	1623

COMMENTS: CASE 9346 OTR#VB042388 VOA SOIL 5.0MLS
GC DESC V3

FORM IV VOA 1/87 Rev.

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Lab File ID: BLW830 Lab Sample ID: VB042588

Date Analyzed: 04/25/88 Time Analyzed: 1204

Matrix: (soil/water) SOIL Level:(low/med) LOW

Instrument ID: 5100-W

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EW156	70014-03	S70014W831	1302

COMMENTS: CASE 9346 OTR#VB042588 VOA SOIL 5.0MLS
GC DESC V3

4A
VOLATILE METHOD BLANK SUMMARY

00006

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Lab File ID: BLW939B Lab Sample ID: VB050188

Date Analyzed: 05/01/88 Time Analyzed: 1204

Matrix: (soil/water) SOIL Level:(low/med) LOW

Instrument ID: 5100-W

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EW155RE	70014-02RR	S70014W940	2152

COMMENTS: CASE 9346 OTR#VB050188 VOA SOIL 5.0MLS
GC DESC V3

FORM IV VOA 1/87 Rev.

4B
SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Lab File ID: S70014R822 Lab Sample ID: BLANK

Date Extracted: Extraction:(SepF/Cont/Sonc) SONC

Date Analyzed: 05/19/88 Time Analyzed: 0236

Matrix: (soil/water) SOIL Level:(low/med) LOW

Instrument ID: 4500-R

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	EW154	70014-01	S70014R823	05/19/88
02	EW155	70014-02	S70014R826	05/19/88
03	EW156	70014-03	S70014R827	05/19/88
04	EW157	70014-04	S70014R828	05/19/88
05	EW154MS	70014-01MS	S70014R824	05/19/88
06	EW154MSD	70014-01MSD	S70014R825	05/19/88

COMMENTS: CLP,70014,,SBLK,LOW,SOIL,BL041988,BNA,BLANK
100%/1ML

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET 00011

EPA SAMPLE NO.

EW154

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: S70014W813

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 17 Date Analyzed: 04/23/88

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	9	B
67-64-1	Acetone	8	BJ
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-35-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	6	J
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	12	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW154

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: S70014W813

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 17 Date Analyzed: 04/23/88

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

00280 EPA SAMPLE NO.

EW154

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-01

Sample wt/vol: 29.9 (g/mL) G Lab File ID: S70014R823

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. 17 dec. Date Extracted: 04/19/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/19/88

GPC Cleanup: (Y/N) Y pH: 7.2 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	800	U
111-44-4	bis(2-Chloroethyl)Ether	800	U
95-57-8	2-Chlorophenol	800	U
541-73-1	1,3-Dichlorobenzene	800	U
106-46-7	1,4-Dichlorobenzene	800	U
100-51-6	Benzyl Alcohol	800	U
95-50-1	1,2-Dichlorobenzene	800	U
95-48-7	2-Methylphenol	800	U
39638-32-9	bis(2-Chloroisopropyl)Ether	800	U
106-44-5	4-Methylphenol	800	U
621-64-7	N-Nitroso-Di-n-Propylamine	800	U
67-72-1	Hexachloroethane	800	U
98-95-3	Nitrobenzene	800	U
78-59-1	Isophorone	800	U
88-75-5	2-Nitrophenol	800	U
105-67-9	2,4-Dimethylphenol	800	U
65-85-0	Benzoic Acid	3900	U
111-91-1	bis(2-Chloroethoxy)Methane	800	U
120-83-2	2,4-Dichlorophenol	800	U
120-82-1	1,2,4-Trichlorobenzene	800	U
91-20-3	Naphthalene	800	U
106-47-8	4-Chloroaniline	800	U
87-68-3	Hexachlorobutadiene	800	U
59-50-7	4-Chloro-3-Methylphenol	800	U
91-57-6	2-Methylnaphthalene	800	U
77-47-4	Hexachlorocyclopentadiene	800	U
88-06-2	2,4,6-Trichlorophenol	800	U
95-95-4	2,4,5-Trichlorophenol	3900	UJ
91-58-7	2-Chloronaphthalene	800	U
88-74-4	2-Nitroaniline	3900	U
131-11-3	Dimethyl Phthalate	800	U
208-96-8	Acenaphthylene	800	U
606-20-2	2,6-Dinitrotoluene	800	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW154

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-01

Sample wt/vol: 29.9 (g/mL) G Lab File ID: S70014R823

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. 17 dec. Date Extracted: 04/19/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/19/88

GPC Cleanup: (Y/N) Y pH: 7.2 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3900	U
83-32-9	Acenaphthene	800	U
51-28-5	2,4-Dinitrophenol	3900	U
100-02-7	4-Nitrophenol	3900	U
132-64-9	Dibenzofuran	800	U
121-14-2	2,4-Dinitrotoluene	800	U
84-66-2	Diethylphthalate	800	U
7005-72-3	4-Chlorophenyl-phenylether	800	U
86-73-7	Fluorene	800	U
100-10-6	4-Nitroaniline	3900	U
534-52-1	4,6-Dinitro-2-Methylphenol	3900	U
86-30-6	N-Nitrosodiphenylamine (1)	800	U
101-55-3	4-Bromophenyl-phenylether	800	U
118-74-1	Hexachlorobenzene	800	U
87-86-5	Pentachlorophenol	130	J
85-01-8	Phenanthrene	800	U
120-12-7	Anthracene	800	U
84-74-2	Di-n-Butylphthalate	800	U
206-44-0	Fluoranthene	800	U
129-00-0	Pyrene	800	U
85-68-7	Butylbenzylphthalate	800	U
91-94-1	3,3'-Dichlorobenzidine	1600	U J
56-55-3	Benzo(a)Anthracene	800	U
218-01-9	Chrysene	800	U
117-81-7	bis(2-Ethylhexyl)Phthalate	150	BJ
117-84-0	Di-n-Octyl Phthalate	800	U
205-99-2	Benzo(b)Fluoranthene	800	U
207-08-9	Benzo(k)Fluoranthene	800	U
50-32-8	Benzo(a)Pyrene	800	U
193-39-5	Indeno(1,2,3-cd)Pyrene	800	U
53-70-3	Dibenz(a,h)Anthracene	800	U
191-24-2	Benzo(g,h,i)Perylene	800	U

(1) - Cannot be separated from Diphenylamine

00282
EPA SAMPLE NO.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EW154

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-01

Sample wt/vol: 29.9 (g/mL) G Lab File ID: S70014R823

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. 17 dec. Date Extracted: 04/19/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/19/88

GPC Cleanup: (Y/N) Y pH: 7.2 Dilution Factor: 2.0

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN OXYGENATED HYDROCARB	6.92	210	J
2.	UNKNOWN OXYGENATED HYDROCARB	7.57	3100	J
3. 100-52-7	BENZALDEHYDE	8.39	660	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

00029 EPA SAMPLE NO.

EW155RE

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-02RR

Sample wt/vol: 5.0 (g/mL) G Lab File ID: S70014W940

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 20 Date Analyzed: 05/01/88

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	10	B
67-64-1	Acetone	16	B
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-35-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	5	J
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	13	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

CCC30

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW155RE

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-02RR

Sample wt/vol: 5.0 (g/mL) G Lab File ID: S70014W940

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 20 Date Analyzed: 05/01/88

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	2.20	190	J
2.	BUTANOIC ACID ESTER	18.20	4	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET 00305

EPA SAMPLE NO.

EW155

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-02

Sample wt/vol: 29.7 (g/mL) G Lab File ID: S70014R826

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 20 dec. Date Extracted: 04/19/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/19/88

GPC Cleanup: (Y/N) Y pH: 7.2 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	830	U
111-44-4	bis(2-Chloroethyl)Ether	830	U
95-57-8	2-Chlorophenol	830	U
541-73-1	1,3-Dichlorobenzene	830	U
106-46-7	1,4-Dichlorobenzene	830	U
100-51-6	Benzyl Alcohol	830	U
95-50-1	1,2-Dichlorobenzene	830	U
95-48-7	2-Methylphenol	830	U
39638-32-9	bis(2-Chloroisopropyl)Ether	830	U
106-44-5	4-Methylphenol	830	U
621-64-7	N-Nitroso-Di-n-Propylamine	830	U
67-72-1	Hexachloroethane	830	U
98-95-3	Nitrobenzene	830	U
78-59-1	Isophorone	830	U
88-75-5	2-Nitrophenol	830	U
105-67-9	2,4-Dimethylphenol	830	U
65-85-0	Benzoic Acid	4000	U
111-91-1	bis(2-Chloroethoxy)Methane	830	U
120-83-2	2,4-Dichlorophenol	830	U
120-82-1	1,2,4-Trichlorobenzene	830	U
91-20-3	Naphthalene	830	U
106-47-8	4-Chloroaniline	830	U
87-68-3	Hexachlorobutadiene	830	U
59-50-7	4-Chloro-3-Methylphenol	830	U
91-57-6	2-Methylnaphthalene	830	U
77-47-4	Hexachlorocyclopentadiene	830	U
88-06-2	2,4,6-Trichlorophenol	830	U
95-95-4	2,4,5-Trichlorophenol	4000	UJ
91-58-7	2-Chloronaphthalene	830	U
88-74-4	2-Nitroaniline	4000	U
131-11-3	Dimethyl Phthalate	830	U
208-96-8	Acenaphthylene	830	U
606-20-2	2,6-Dinitrotoluene	830	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

00306 EPA SAMPLE NO.

EW155

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-02

Sample wt/vol: 29.7 (g/mL) G Lab File ID: S70014R826

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 20 dec. Date Extracted: 04/19/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/19/88

GPC Cleanup: (Y/N) Y pH: 7.2 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	4000	U
83-32-9	Acenaphthene	830	U
51-28-5	2,4-Dinitrophenol	4000	U
100-02-7	4-Nitrophenol	190	J
132-64-9	Dibenzofuran	830	U
121-14-2	2,4-Dinitrotoluene	830	U
84-66-2	Diethylphthalate	830	U
7005-72-3	4-Chlorophenyl-phenylether	830	U
86-73-7	Fluorene	830	U
100-10-6	4-Nitroaniline	4000	U
534-52-1	4,6-Dinitro-2-Methylphenol	4000	U
86-30-6	N-Nitrosodiphenylamine (1)	830	U
101-55-3	4-Bromophenyl-phenylether	830	U
118-74-1	Hexachlorobenzene	830	U
87-86-5	Pentachlorophenol	200	J
85-01-8	Phenanthrene	830	U
120-12-7	Anthracene	830	U
84-74-2	Di-n-Butylphthalate	830	U
206-44-0	Fluoranthene	130	J
129-00-0	Pyrene	170	J
85-68-7	Butylbenzylphthalate	830	U
91-94-1	3,3'-Dichlorobenzidine	1700	UJ
56-55-3	Benzo(a)Anthracene	830	U
218-01-9	Chrysene	91	J
117-81-7	bis(2-Ethylhexyl)Phthalate	220	BJ
117-84-0	Di-n-Octyl Phthalate	830	U
205-99-2	Benzo(b)Fluoranthene	120	J
207-08-9	Benzo(k)Fluoranthene	130	J
50-32-8	Benzo(a)Pyrene	830	U
193-39-5	Indeno(1,2,3-cd)Pyrene	830	U
53-70-3	Dibenz(a,h)Anthracene	830	U
191-24-2	Benzo(g,h,i)Perylene	830	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

00307

EPA SAMPLE NO.

EW155

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-02

Sample wt/vol: 29.7 (g/mL) G Lab File ID: S70014R826

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 20 dec. Date Extracted: 04/19/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/19/88

GPC Cleanup: (Y/N) Y pH: 7.2 Dilution Factor: 2.0

Number TICs found: 14

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN OXYGENATED HYDROCARB	6.92	240	J
2.	UNKNOWN OXYGENATED HYDROCARB	7.55	3300	J
3. 100-52-7	BENZALDEHYDE	8.39	1100	J
4.	OXYGENATED HYDROCARBON	9.17	400	J
5. 544-63-8	TETRADECANOIC ACID	19.92	400	J
6.	OXYGENATED HYDROCARBON	21.99	350	J
7. 57-10-3	HEXADECANOIC ACID	22.17	340	J
8.	UNSATURATED HYDROCARBON	23.12	230	J
9.	SATURATED HYDROCARBON	27.27	290	J
10.	SATURATED HYDROCARBON	28.92	270	J
11.	UNKNOWN HYDROCARBON	30.07	230	J
12.	SATURATED HYDROCARBON	30.47	730	J
13.	SATURATED HYDROCARBON	32.24	620	J
14.	UNKNOWN	37.04	2300	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET 00066

EPA SAMPLE NO.

EW156

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: S70014W831

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 18 Date Analyzed: 04/25/88

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	9	B
67-64-1	Acetone	4	BJ
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-35-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	12	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

00067

EPA SAMPLE NO.

EW156

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-03

Sample wt/vol: 5.0 (g/mL) G Lab File ID: S70014W831

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 18 Date Analyzed: 04/25/88

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET 00352

EPA SAMPLE NO.

EW156

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-03

Sample wt/vol: 30.4 (g/mL) G Lab File ID: S70014R827

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 18 dec. Date Extracted: 04/19/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/19/88

GPC Cleanup: (Y/N) Y pH: 7.2 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	790	U
111-44-4	bis(2-Chloroethyl)Ether	790	U
95-57-8	2-Chlorophenol	790	U
541-73-1	1,3-Dichlorobenzene	790	U
106-46-7	1,4-Dichlorobenzene	790	U
100-51-6	Benzyl Alcohol	790	U
95-50-1	1,2-Dichlorobenzene	790	U
95-48-7	2-Methylphenol	790	U
39638-32-9	bis(2-Chloroisopropyl)Ether	790	U
106-44-5	4-Methylphenol	790	U
621-64-7	N-Nitroso-Di-n-Propylamine	790	U
67-72-1	Hexachloroethane	790	U
98-95-3	Nitrobenzene	790	U
78-59-1	Isophorone	790	U
88-75-5	2-Nitrophenol	790	U
105-67-9	2,4-Dimethylphenol	790	U
65-85-0	Benzoic Acid	3800	U
111-91-1	bis(2-Chloroethoxy)Methane	790	U
120-83-2	2,4-Dichlorophenol	790	U
120-82-1	1,2,4-Trichlorobenzene	790	U
91-20-3	Naphthalene	790	U
106-47-8	4-Chloroaniline	790	U
87-68-3	Hexachlorobutadiene	790	U
59-50-7	4-Chloro-3-Methylphenol	790	U
91-57-6	2-Methylnaphthalene	790	U
77-47-4	Hexachlorocyclopentadiene	790	U
88-06-2	2,4,6-Trichlorophenol	790	U
95-95-4	2,4,5-Trichlorophenol	3800	U J
91-58-7	2-Chloronaphthalene	790	U
88-74-4	2-Nitroaniline	3800	U
131-11-3	Dimethyl Phthalate	790	U
208-96-8	Acenaphthylene	790	U
606-20-2	2,6-Dinitrotoluene	790	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW156

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-03

Sample wt/vol: 30.4 (g/mL) G Lab File ID: S70014R827

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 18 dec. Date Extracted: 04/19/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/19/88

GPC Cleanup: (Y/N) Y pH: 7.2 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3800	U
83-32-9	Acenaphthene	790	U
51-28-5	2,4-Dinitrophenol	3800	U
100-02-7	4-Nitrophenol	3800	U
132-64-9	Dibenzofuran	790	U
121-14-2	2,4-Dinitrotoluene	790	U
84-66-2	Diethylphthalate	790	U
7005-72-3	4-Chlorophenyl-phenylether	790	U
86-73-7	Fluorene	790	U
100-10-6	4-Nitroaniline	3800	U
534-52-1	4,6-Dinitro-2-Methylphenol	3800	U
86-30-6	N-Nitrosodiphenylamine (1)	790	U
101-55-3	4-Bromophenyl-phenylether	790	U
118-74-1	Hexachlorobenzene	790	U
87-86-5	Pentachlorophenol	3800	U
85-01-8	Phenanthrene	790	U
120-12-7	Anthracene	790	U
84-74-2	Di-n-Butylphthalate	790	U
206-44-0	Fluoranthene	790	U
129-00-0	Pyrene	790	U
85-68-7	Butylbenzylphthalate	790	U
91-94-1	3,3'-Dichlorobenzidine	1600	UJ
56-55-3	Benzo(a)Anthracene	790	U
218-01-9	Chrysene	790	U
117-81-7	bis(2-Ethylhexyl)Phthalate	94	BJ
117-84-0	Di-n-Octyl Phthalate	790	U
205-99-2	Benzo(b)Fluoranthene	790	U
207-08-9	Benzo(k)Fluoranthene	790	U
50-32-8	Benzo(a)Pyrene	790	U
193-39-5	Indeno(1,2,3-cd)Pyrene	790	U
53-70-3	Dibenz(a,h)Anthracene	790	U
191-24-2	Benzo(g,h,i)Perylene	790	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

00354 EPA SAMPLE NO.

EW156

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-03

Sample wt/vol: 30.4 (g/mL) G Lab File ID: S70014R827

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 18 dec. Date Extracted: 04/19/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/19/88

GPC Cleanup: (Y/N) Y pH: 7.2 Dilution Factor: 2.0

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN OXYGENATED HYDROCARB	6.93	230	J
2.	UNKNOWN OXYGENATED HYDROCARB	7.57	3100	J
3. 100-52-7	BENZALDEHYDE	8.39	450	J

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET 00082

EPA SAMPLE NO.

EW157

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: S70014W818

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 16 Date Analyzed: 04/23/88

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	8	B
67-64-1	Acetone	6	BJ
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-35-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	5	J
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	12	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

00083

EPA SAMPLE NO.

EW157

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: S70014W818

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 16 Date Analyzed: 04/23/88

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

00375 EPA SAMPLE NO.

EW157

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-04

Sample wt/vol: 29.8 (g/mL) G Lab File ID: S70014R828

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 16 dec. Date Extracted: 04/19/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/19/88

GPC Cleanup: (Y/N) Y pH: 7.4 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	790	U
111-44-4	bis(2-Chloroethyl)Ether	790	U
95-57-8	2-Chlorophenol	790	U
541-73-1	1,3-Dichlorobenzene	790	U
106-46-7	1,4-Dichlorobenzene	790	U
100-51-6	Benzyl Alcohol	790	U
95-50-1	1,2-Dichlorobenzene	790	U
95-48-7	2-Methylphenol	790	U
39638-32-9	bis(2-Chloroisopropyl)Ether	790	U
106-44-5	4-Methylphenol	790	U
621-64-7	N-Nitroso-Di-n-Propylamine	790	U
67-72-1	Hexachloroethane	790	U
98-95-3	Nitrobenzene	790	U
78-59-1	Isophorone	790	U
88-75-5	2-Nitrophenol	790	U
105-67-9	2,4-Dimethylphenol	790	U
65-85-0	Benzoic Acid	3800	U
111-91-1	bis(2-Chloroethoxy)Methane	790	U
120-83-2	2,4-Dichlorophenol	790	U
120-82-1	1,2,4-Trichlorobenzene	790	U
91-20-3	Naphthalene	790	U
106-47-8	4-Chloroaniline	790	U
87-68-3	Hexachlorobutadiene	790	U
59-50-7	4-Chloro-3-Methylphenol	790	U
91-57-6	2-Methylnaphthalene	790	U
77-47-4	Hexachlorocyclopentadiene	790	U
88-06-2	2,4,6-Trichlorophenol	790	U
95-95-4	2,4,5-Trichlorophenol	3800	U J
91-58-7	2-Chloronaphthalene	790	U
88-74-4	2-Nitroaniline	3800	U
131-11-3	Dimethyl Phthalate	790	U
208-96-8	Acenaphthylene	790	U
606-20-2	2,6-Dinitrotoluene	790	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

00376

EPA SAMPLE NO.

EW157

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-04

Sample wt/vol: 29.8 (g/mL) G Lab File ID: S70014R828

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 16 dec. Date Extracted: 04/19/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/19/88

GPC Cleanup: (Y/N) Y pH: 7.4 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3800	U
83-32-9	Acenaphthene	790	U
51-28-5	2,4-Dinitrophenol	3800	U
100-02-7	4-Nitrophenol	3800	U
132-64-9	Dibenzofuran	790	U
121-14-2	2,4-Dinitrotoluene	790	U
84-66-2	Diethylphthalate	790	U
7005-72-3	4-Chlorophenyl-phenylether	790	U
86-73-7	Fluorene	790	U
100-10-6	4-Nitroaniline	3800	U
534-52-1	4,6-Dinitro-2-Methylphenol	3800	U
86-30-6	N-Nitrosodiphenylamine (1)	790	U
101-55-3	4-Bromophenyl-phenylether	790	U
118-74-1	Hexachlorobenzene	790	U
87-86-5	Pentachlorophenol	3800	U
85-01-8	Phenanthrene	790	U
120-12-7	Anthracene	790	U
84-74-2	Di-n-Butylphthalate	790	U
206-44-0	Fluoranthene	790	U
129-00-0	Pyrene	790	U
85-68-7	Butylbenzylphthalate	790	U
91-94-1	3,3'-Dichlorobenzidine	1600	U J
56-55-3	Benzo(a)Anthracene	790	U
218-01-9	Chrysene	790	U
117-81-7	bis(2-Ethylhexyl)Phthalate	87	BJ
117-84-0	Di-n-Octyl Phthalate	790	U
205-99-2	Benzo(b)Fluoranthene	790	U
207-08-9	Benzo(k)Fluoranthene	790	U
50-32-8	Benzo(a)Pyrene	790	U
193-39-5	Indeno(1,2,3-cd)Pyrene	790	U
53-70-3	Dibenz(a,h)Anthracene	790	U
191-24-2	Benzo(g,h,i)Perylene	790	U

(1) - Cannot be separated from Diphenylamine

00377 EPA SAMPLE NO.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EW157

Lab Name: RMAL Contract: 68-W8-0069

Lab Code: ENSECO Case No.: 9346 SAS No.: SDG No.: EW154

Matrix: (soil/water) SOIL Lab Sample ID: 70014-04

Sample wt/vol: 29.8 (g/mL) G Lab File ID: S70014R828

Level: (low/med) LOW Date Received: 04/15/88

% Moisture: not dec. 16 dec. Date Extracted: 04/19/88

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/19/88

GPC Cleanup: (Y/N) Y pH: 7.4 Dilution Factor: 2.0

Number TICs found: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN OXYGENATED HYDROCARB	6.92	220	J
2.	UNKNOWN OXYGENATED HYDROCARB	7.55	3000	J
3. 100-52-7	BENZALDEHYDE	8.39	370	J
4.	UNKNOWN HYDROCARBON	29.72	200	J
5.	SATURATED HYDROCARBON	30.47	150	J

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

CRL Receipt Date 3/19/89 FIT Receipt Date 5/31/88 Review Completed 6/14/88

TO: G. COBB

FROM: Mary Gzyra

SUBJECT: SCA / BARTON LF

PAN: IL0599 SA (1 hour charged for review) Case # 9346

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
#	Low Soil	# 4	Low Soil
	Low Water	6	Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status ✓ Completed!!

✓ Incomplete, awaiting organics low soils

FIT Data Review Findings:
Mn detected in MEW 957-961 water + MEW 965-968 soil
As detected in MEW 966 - soil
Cr detected in all soil samples
Pb " " " " "
Cr detected in MEW 968 - soil
Check Data Sheets for Transcription Errors

_____ Compounds were detected in sample(s); see enclosed sheet.

Book No. 8 Page No. 14 Date Sampled 4/13/88

0759:2

recycled paper

5/31/88

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 5.26.88

SUBJECT: Review of Region V CLP Data
Received for Review on 5-10-88

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory

TO: Data User: [illegible]

We have reviewed the data for the following case(s).

SITE NAME: SCA / Barton Landfill (IL) SMO Case No. 9346

EPA Data Set No. SF5049 No. of Samples: 10 D.U./Activity Numbers 1905/C72122

CRL No. 88FC18 S16-S23, D16, B03

SMO Traffic No. MFLU 957-968

CLP Laboratory: RMAL Hrs. Required for Review: 6.5 hrs + 0.5 hr

Following are our findings:

The laboratory's portion of this case included 6 low level water samples(QC#87760) and 4 low level soil samples(QC#87761) analyzed for total metals and total cyanide.

SOIL SAMPLES (QC#87761)

The matrix spike recovery for Ag(54.7%) indicates that the detection limits may be elevated. All Ag data are estimated(UJ). The duplicate % RPD for Fe(35.4%) indicates poor precision and all Fe data are estimated(J).

All Hg and CN data are acceptable.

WATER SAMPLES (QC#87760)

The matrix spike recoveries for As(71.3%), Ag(66.4%) and Tl(58%) indicates the detection limits may be elevated. All As, Ag and Tl data are estimated(UJ). The spike recovery for Se(72%) indicates that the detection limits may be elevated for samples MEW958-61 and 964 and the data are estimated(UJ). The Se result on sample MEW957 is biased low and is estimated(J).

(Next Page) DK Rose

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications referenced above. See Data Qualifier sheets and Calibration Outlier forms for flags and additional comments.
( ) Data are preliminary - pending verification by Contractor Laboratory. See Case Summary above.
( ) Data are unacceptable.

Table 4- Cont.

Sample Collection Information and Parameters	Sample Number											
	> 1	> 2	> 3	> 4	> 5	> 6	> 7	> 8	> 9	> 10	> 11	> 12
Pesticides/PCBs Cont.												
Aroclor 1232												
Aroclor 1242												
Aroclor 1248												
Aroclor 1254	WATERS							SOILS				
Aroclor 1260												
Analyte Detected (values in ug/ [ppm])	NEW 957	958	959	960	961	964		NEW 965	966	967	968	
aluminum	214	192 B	160 B	172 B	183 B			660	2650	648	745	
antimony												
arsenic								0.77 B	3.3	1.2 B	1 B	
barium	70.3 B	71.1 B	70.2 B	72.4 B	71.7 B			20.1 B	58.1	19 B	18.2 B	
beryllium												
cadmium		5.0										
calcium	79300	80600	79200	80800	81800	173 B		2990	6010	3470	3860	
chromium								3.5	7.4	4	3.4	
cobalt								3.2 B	5.1 B	6.5 B	2.2 B	
copper						65.2 J		3.2 B	8.6	2.4 B	2.1 B	
iron	518	528	476	555	498			4060 J,*	7660 J,*	3700 J,*	4040 J,*	
lead					2.1 J,B,W			2.6	9.8	3.3	3.2	
magnesium	35200	35400	35100	35300	36100	93.8 B		1400	2670	1700	1850	
manganese	113	120	102	110	114			260	502	358	265	
mercury												
nickel								5.4 B	10 B	3.7 B	3.8 B	
potassium	2640 B	2680 B	2660 B	2710 B	2690 B			82.4 B	326 B	66.2 B	76.3 B	
selenium	1.1 J,B,W,N											
silver												
sodium	26000	25900	25200	26300	26600							
thallium												
vanadium								5.9 B	11.5 B	5.4 B	5.5 B	
zinc	9.6 B	12.7 B	11.3 B	13.6 B	27.7	7 B		12		10.9	11.3	
cyanide											13.9	

-- Not detected.

COMPOUND FOOTNOTES	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

ANALYTE FOOTNOTES		DEFINITION	INTERPRETATION
OLD	NEW		
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.
NA		Value not available due to insufficient data.	
NR		Value not recommended to be calculated, since chemical has proven to be a human carcinogen.	
( )		Estimated value.	

Source: Ecology and Environment, Inc. 1988.

DATA QUALIFIERS

Laboratory: Rocky Mountain Analytical **Case: 9346**

Sample MEW964 is a field blank and was found to contain Cu(65.2 ug/l). This exceeds the CRDL and all Cu data are estimated(J). Samples MEW957 and 958 are field duplicates. All %RPDs were less than 20%.

Pb results on samples MEW960-1 and 964 were flagged W indicating interference. These Pb results are estimated(J). Se results for samples MEW957-61 were flagged W and the data are estimated as stated above.

All Hg and CN data are acceptable.

Reviewed by: Duane Kruse
Date: 5/24/88

D Kruse

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW957

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	214			P
7440-36-0	Antimony	29.0	U		P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	70.3	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	79300			P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	6.0	U		P
7439-89-6	Iron	518			P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	35200			P
7439-96-5	Manganese	113			P
7439-97-6	Mercury	0.2	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	2640	B		P
7482-49-2	Selenium	1.1	B	WN	F
7440-22-4	Silver	4.0	U	N	P
7440-23-5	Sodium	26000			P
7440-28-0	Thallium	20.0	U	N	F
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	9.6	B		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
THALLIUM VALUE REPORTED AT AN ADDITIONAL 10X DILUTION

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW958

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	192	B		P
7440-36-0	Antimony	29.0	U		P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	71.1	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0			P
7440-70-2	Calcium	80000			P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	6.0	U		P
7439-89-6	Iron	528			P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	35400			P
7439-96-5	Manganese	120			P
7439-97-6	Mercury	0.2	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	2690	B		P
7482-49-2	Selenium	1.0	U	WN	F
7440-22-4	Silver	4.0	U	N	P
7440-23-5	Sodium	25900			P
7440-28-0	Thallium	20.0	U	N	F
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	12.7	B		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
THALLIUM VALUE REPORTED AT AN ADDITIONAL 10X DILUTION

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW959

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	160	B		P
7440-36-0	Antimony	29.0	U		P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	70.2	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	79200			P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	6.0	U		P
7439-89-6	Iron	476			P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	35100			P
7439-96-5	Manganese	102			P
7439-97-6	Mercury	0.2	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	2660	B		P
7482-49-2	Selenium	1.0	U	WN	F
7440-22-4	Silver	4.0	U	N	P
7440-23-5	Sodium	25200			P
7440-28-0	Thallium	20.0	U	N	F
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	11.3	B		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
THALLIUM VALUE REPORTED AT AN ADDITIONAL 10X DILUTION

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW960

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1172	B		P
7440-36-0	Antimony	29.0	U		P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	72.4	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	80800			P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	6.0	U		P
7439-89-6	Iron	555			P
7439-92-1	Lead	2.0	U	W	F
7439-95-4	Magnesium	35800			P
7439-96-5	Manganese	110			P
7439-97-6	Mercury	0.2	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	2710	B		P
7482-49-2	Selenium	1.0	U	WN	F
7440-22-4	Silver	4.0	U	N	P
7440-23-5	Sodium	26300			P
7440-28-0	Thallium	20.0	U	N	F
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	13.6	B		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
THALLIUM VALUE REPORTED AT AN ADDITIONAL 10X DILUTION

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW961

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	183	B		P
7440-36-0	Antimony	29.0	U		P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	71.7	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	81800			P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	6.0	U		P
7439-89-6	Iron	498			P
7439-92-1	Lead	2.1	B	W	F
7439-95-4	Magnesium	36100			P
7439-96-5	Manganese	114			P
7439-97-6	Mercury	0.2	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	2690	B		P
7482-49-2	Selenium	1.0	U	WN	F
7440-22-4	Silver	4.0	U	N	P
7440-23-5	Sodium	26600			P
7440-28-0	Thallium	20.0	U	N	F
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	27.7			P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

THALLIUM VALUE REPORTED AT AN ADDITIONAL 10X DILUTION

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW964

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	35.0	U		P
7440-36-0	Antimony	29.0	U		P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	2.0	U		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	173	B		P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	65.2			P
7439-89-6	Iron	56.0	U		P
7439-92-1	Lead	2.0	U	W	F
7439-95-4	Magnesium	93.8	B		P
7439-96-5	Manganese	7.0	U		P
7439-97-6	Mercury	0.2	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	126	U		P
7482-49-2	Selenium	1.0	U	N	F
7440-22-4	Silver	4.0	U	N	P
7440-23-5	Sodium	2000	U		P
7440-28-0	Thallium	2.0	U	N	F
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	7.0	B		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
Sample is Blank

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW965

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 78.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	660			P
7440-36-0	Antimony	7.4	U		P
7440-38-2	Arsenic	0.77	B		F
7440-39-3	Barium	20.1	B		P
7440-41-7	Beryllium	0.26	U		P
7440-43-9	Cadmium	1.3	U		P
7440-70-2	Calcium	2990			P
7440-47-3	Chromium	3.5			P
7440-48-4	Cobalt	3.2	B		P
7440-50-8	Copper	3.2	B		P
7439-89-6	Iron	4060		*	P
7439-92-1	Lead	2.6			F
7439-95-4	Magnesium	1400			P
7439-96-5	Manganese	260			P
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	5.4	B		P
7440-09-7	Potassium	82.4	B		P
7482-49-2	Selenium	0.26	U		F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	511	U		P
7440-28-0	Thallium	0.51	U		F
7440-62-2	Vanadium	5.9	B		P
7440-66-6	Zinc	12.0			P
	Cyanide	0.64	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM
Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

000003

EPA SAMPLE NO.

MEW966

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 73.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2650			P
7440-36-0	Antimony	7.9	U		P
7440-38-2	Arsenic	3.3		S	F
7440-39-3	Barium	58.1			P
7440-41-7	Beryllium	0.27	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	6010			P
7440-47-3	Chromium	7.4			P
7440-48-4	Cobalt	5.1	B		P
7440-50-8	Copper	8.6			P
7439-89-6	Iron	7660		*	P
7439-92-1	Lead	9.8			F
7439-95-4	Magnesium	2670			P
7439-96-5	Manganese	502			P
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	10.0	B		P
7440-09-7	Potassium	326	B		P
7482-49-2	Selenium	0.27	U		F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	547	U		P
7440-28-0	Thallium	0.55	U		F
7440-62-2	Vanadium	11.5	B		P
7440-66-6	Zinc	30.7			P
	Cyanide	20.1			AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW967

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 76.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	648			P
7440-36-0	Antimony	7.6	U		P
7440-38-2	Arsenic	1.2	B		F
7440-39-3	Barium	19.0	B		P
7440-41-7	Beryllium	0.26	U		P
7440-43-9	Cadmium	1.3	U		P
7440-70-2	Calcium	3450			P
7440-47-3	Chromium	4.0			P
7440-48-4	Cobalt	6.5	B		P
7440-50-8	Copper	2.4	B		P
7439-89-6	Iron	3700		*	P
7439-92-1	Lead	3.3			F
7439-95-4	Magnesium	1700			P
7439-96-5	Manganese	358			P
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	3.7	B		P
7440-09-7	Potassium	66.8	B		P
7482-49-2	Selenium	0.26	U		F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	521	U		P
7440-28-0	Thallium	0.52	U		F
7440-62-2	Vanadium	5.4	B		P
7440-66-6	Zinc	10.9			P
	Cyanide	0.65	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM
Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

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1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW968

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 80.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	745			P
7440-36-0	Antimony	7.2	U		P
7440-38-2	Arsenic	1.0	B		F
7440-39-3	Barium	18.2	B		P
7440-41-7	Beryllium	0.25	U		P
7440-43-9	Cadmium	1.2	U		P
7440-70-2	Calcium	3860			P
7440-47-3	Chromium	3.4			P
7440-48-4	Cobalt	2.8	B		P
7440-50-8	Copper	2.1	B		P
7439-89-6	Iron	14040		*	P
7439-92-1	Lead	3.2			F
7439-95-4	Magnesium	1850			P
7439-96-5	Manganese	265			P
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	3.8	B		P
7440-09-7	Potassium	76.3	B		P
7482-49-2	Selenium	0.25	U		F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	498	U		P
7440-28-0	Thallium	0.50	U		F
7440-62-2	Vanadium	5.5	B		P
7440-66-6	Zinc	11.3			P
	Cyanide	12.9			AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM
Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

SOW No.: 7/87

EPA Sample No.	Lab Sample ID.
MEW965	
MEW965D	
MEW965S	
MEW966	
MEW967	
MEW968	

RECEIVED
MAY 19 1988
U.S. EPA CENTRAL REGIONAL LAB

Were ICP interelement corrections applied? Yes/No YES

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

Comments:
4 LOW SOILS FOR TOTAL METALS AND CYANIDE ANALYSIS
RMA QC# 87761
35 DAY TURNAROUND

Release of the data contained in this hardcopy data package and in the computer readable data submitted on floppy diskette have been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Lab Manager: [signature]

Date: 05/18/88

U.S. EPA - CLP

00001

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

SOW No.: 7/87

EPA Sample No.	Lab Sample ID.
MEW957	
MEW958	
MEW959	
MEW959D	
MEW959S	
MEW960	
MEW961	
MEW964	

RECEIVED
MAY 19 1988
U.S. EPA CENTRAL
REGIONAL LAB

Were ICP interelement corrections applied? Yes/No YES

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

Comments:
6 LOW WATERS FOR TOTAL METALS AND CYANIDE ANALYSIS
RMA QC# 87760
35 DAY TURNAROUND

Release of the data contained in this hardcopy data package and in the computer readable data submitted on floppy diskette have been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Lab Manager: JCV

Date: 05/13/88

QC EXCEPTION SUMMARY REPORT

CASE # 93216
DATA SET # _____
LAB Q.C.# 87260
DATE: _____

SITE SCA Burlington Landfill
LAB KMAL
REVIEWED BY D. Krause

MATRIX: water
CONC. : low
MATRIX: _____
CONC. : _____

WATER SAMPLE SPK. _____
WATER SAMPLE DUP. _____
SOIL SAMPLE SPK. _____
SOIL SAMPLE DUP. _____

	OVERALL CASE QC									MATRIX SPECIFIC QC						SAMPLE SPECIFIC QC		FIELD QC			REGIONAL QC			OTHER/ COMMENTS
	Holding Time	Cal Blanks	Init Calver	Contin Calver	Prep Blk AQ	Prep Blk SOL	ICS %R	LCS % AQ	LCS % SOL	Sol Dup RPD	Sol Spk %R	AQ Dup RPD	AQ Spk %R	Ser Dilu AQ	Ser Dilu SOL	GFAA Dup	GFAA Spike	Blank	Dup RPD	Spike %R	Blind Blank	Blind Spike %R	Split Sample RPD	
Aluminum																								
Antimony																								
Arsenic													71.3											
Barium																								
Beryllium																								
Cadmium																								
Calcium																								
Chromium																								
Cobalt																								
Copper																								
Iron																								
Lead																								
Magnesium																								
Manganese																								
Mercury																								
Nickel																								
Potassium																								
Selenium													72											
Silver													106.4											
Sodium																								
Thallium													58											
Tin																								
Vanadium																								
Zinc																								
Cyanide																								

Field Dups 957 + 958 all OK
Field Blank 964 high Cu 65.2 mg/l

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3
BLANKS

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	35.0	U	35.0	U	35.0	U	35.0	U	35.0	U	P
Antimony	29.0	U	29.0	U	29.0	U	29.0	U	29.0	U	P
Arsenic											
Barium	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	P
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	P
Calcium	64.0	U	64.0	U	64.0	U	64.0	U	64.0	U	P
Chromium	6.0	U	6.0	U	6.0	U	6.0	U	6.0	U	P
Cobalt	6.0	U	6.0	U	6.0	U	6.0	U	6.0	U	P
Copper	6.0	U	6.0	U	6.0	U	6.0	U	6.0	U	P
Iron	56.0	U	56.0	U	56.0	U	56.0	U	56.0	U	P
Lead											
Magnesium	70.0	U	70.0	U	70.0	U	70.0	U	70.0	U	P
Manganese	7.0	U	7.0	U	7.0	U	7.0	U	7.0	U	P
Mercury											
Nickel	8.0	U	8.0	U	8.0	U	8.0	U	8.0	U	P
Potassium	126	U	126	U	126	U	126	U	126	U	P
Selenium											
Silver	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	P
Sodium	2000	U	2000	U	2000	U	2000	U	2000	U	P
Thallium											
Vanadium	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	P
Zinc	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	P
Cyanide											

QC EXCEPTION SUMMARY REPORT

CASE # 9346
DATA SET #
LAB Q.C.# 87761
DATE: 5/24/88

SITE
LAB RMAL
REVIEWED BY D Kruse

MATRIX: Soil
CONC. : Low
MATRIX:
CONC. :

WATER SAMPLE SPK.
WATER SAMPLE DUP.
SOIL SAMPLE SPK.
SOIL SAMPLE DUP.

	OVERALL CASE QC									MATRIX SPECIFIC QC						SAMPLE SPECIFIC QC		FIELD QC			REGIONAL QC			OTHER/ COMMENTS
	Holding Time	Cal Blanks	Init Calver	Contin Calver	Prep Blk AQ	Prep Blk SOL	ICS %R	LCS % AQ	LCS % SOL	Sol Dup RPD	Sol Spk %R	AQ Dup RPD	AQ Spk %R	Ser Dilu AQ	Ser Dilu SOL	GFAA Dup	GFAA Spike	Blank	Dup RPD	Spike %R	Blind Blank	Blind Spike %R	Split Sample RPD	
Aluminum																								
Antimony																								
Arsenic																								
Barium																								
Beryllium																								
Cadmium																								
Calcium																								
Chromium																								
Cobalt																								
Copper																								
Iron										35.4														
Lead																								
Magnesium																								
Manganese																								
Mercury																								
Nickel																								
Potassium																								
Selenium																								
Silver											54.7													
Sodium																								
Thallium																								
Tin																								
Vanadium																								
Zinc																								
Cyanide																								

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3
BLANKS

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U	0.40	U	F
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead	2.0	U	2.0	U	2.0	U	2.0	U	0.40	U	F
Magnesium											
Manganese											
Mercury	0.2	U	0.2	U	0.2	U			0.1	U	CV
Nickel											
Potassium											
Selenium	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	F
Silver											
Sodium											
Thallium	2.0	U	2.0	U	2.0	U	2.0	U	0.40	U	F
Vanadium											
Zinc											
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	0.50	U	AS

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5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEW965S

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		707		660					NR
Antimony	75-125	103		7.4	U	128	80.5		P
Arsenic	75-125	8.9		0.77	B	10.2	79.7		F
Barium	75-125	531		20.1	B	511	100.0		P
Beryllium	75-125	12.9		0.26	U	12.8	100.8		P
Cadmium	75-125	12.3		1.3	U	12.8	96.1		P
Calcium		2810		2990					NR
Chromium	75-125	56.1		3.5		51.1	102.9		P
Cobalt	75-125	135		3.2	B	128	103.0		P
Copper	75-125	69.6		3.2	B	63.9	103.9		P
Iron		2790		4060					NR
Lead	75-125	7.5		2.6		5.1	96.1		F
Magnesium		1240	B	1400					NR
Manganese	75-125	368		260		128	84.4		P
Mercury	75-125	0.6		0.1	U	0.6	106.7		CV
Nickel	75-125	136		5.4	B	128	102.0		P
Potassium		75.8	B	82.4	B				NR
Selenium	75-125	2.3		0.26	U	2.6	88.5		F
Silver	75-125	7.0		1.0	U	12.8	54.7	N	P
Sodium		511	U	511	U				NR
Thallium	75-125	13.3		0.51	U	12.8	103.9		F
Vanadium	75-125	131		5.9	B	128	97.7		P
Zinc	75-125	142		12.0		128	101.6		P
Cyanide	75-125	5.7		0.64	U	6.4	89.1		AS

Comments:

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6
DUPLICATES

EPA SAMPLE NO.

MEW965D

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 78.3 % Solids for Duplicate: 78.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		660		589		11.4		P
Antimony		7.4	U	7.4	U			P
Arsenic		0.77	B	1.1	B	35.3		F
Barium		20.1	B	15.0	B	29.1		P
Beryllium		0.26	U	0.26	U			P
Cadmium		1.3	U	1.3	U			P
Calcium	1277	2990		2670		11.3		P
Chromium	2.6	3.5		2.4	B	37.3		P
Cobalt		3.2	B	2.2	B	37.0		P
Copper		3.2	B	4.2	B	27.0		P
Iron		4060		2840		35.4	*	P
Lead	1.3	2.6		3.8		37.5		F
Magnesium	1277	1400		1260	B	10.5		P
Manganese		260		257		1.2		P
Mercury		0.1	U	0.1	U			CV
Nickel		5.4	B	2.9	B	60.2		P
Potassium		82.4	B	62.3	B	27.8		P
Selenium		0.26	U	0.26	U			F
Silver		1.0	U	1.0	U			P
Sodium		511	U	511	U			P
Thallium		0.51	U	0.51	U			F
Vanadium		5.9	B	4.1	B	36.0		P
Zinc	5.1	12.0		10.2		16.2		P
Cyanide		0.64	U	0.64	U			AS

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7

LABORATORY CONTROL SAMPLE

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

Solid LCS Source: EMSL-LV

Aqueous LCS Source: EMSL-LV

Analyte	Aqueous (ug/L) True	Found	%R(1)	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum				325	260		225	424	80.0
Antimony				211	255		127	294	121
Arsenic									
Barium				4.8	6.3	B	0.0	40.0	131
Beryllium				19.4	19.0		16.5	22.3	97.9
Cadmium				45.4	51.7		35.7	55.1	114
Calcium				196200	196000		166800	225600	99.9
Chromium				99.6	103		79.2	120	103
Cobalt				144	151		125	162	105
Copper				6910	6920		6006	7820	100
Iron				22430	22600		17770	27080	101
Lead									
Magnesium				118100	119000		100400	129900	101
Manganese				208	222		177	239	107
Mercury									
Nickel				60.9	61.6		49.2	72.6	101
Potassium				50.0	51.2	B	0.0	1000	102
Selenium									
Silver				22.2	23.2		15.5	29.0	105
Sodium				50.0	800	U	0.0	1000	0.0
Thallium									
Vanadium				65.8	68.4		51.7	79.9	104
Zinc				187	191		138	236	102
Cyanide									

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000016

7

LABORATORY CONTROL SAMPLE

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

Solid LCS Source: EMSL-LV

Aqueous LCS Source: EMSL-LV

Analyte	Aqueous (ug/L) True	Found	%R(1)	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic				917	674		635	1199	73.5
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead				236	214		188	285	90.7
Magnesium									
Manganese									
Mercury				12.7	15.0		8.5	17.0	118
Nickel									
Potassium									
Selenium				39.2	23.6		19.1	59.4	60.2
Silver									
Sodium									
Thallium				39.0	28.2		24.6	53.5	72.3
Vanadium									
Zinc									
Cyanide									

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3
BLANKS

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	F
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	F
Magnesium											
Manganese											
Mercury	0.2	U	0.2	U	0.2	U			0.2	U	CV
Nickel											
Potassium											
Selenium	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	F
Silver											
Sodium											
Thallium	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	F
Vanadium											
Zinc											
Cyanide	10.0	U	10.0	U	10.0	U			10.0	U	AS

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3
BLANKS

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic											
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead			2.0	U							F
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium			1.0	U							F
Silver											
Sodium											
Thallium			2.0	U	2.0	U					F
Vanadium											
Zinc											
Cyanide											

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEW959S

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

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

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	2210		160	B	2000	102.5		P
Antimony	75-125	549		29.0	U	500	109.8		P
Arsenic	75-125	28.5		2.0	U	40.0	71.3	N	F
Barium	75-125	2040		70.2	B	2000	98.5		P
Beryllium	75-125	49.6		1.0	U	50.0	99.2		P
Cadmium	75-125	53.4		5.0	U	50.0	106.8		P
Calcium		82000		79200					NR
Chromium	75-125	202		6.0	U	200	101.0		P
Cobalt	75-125	507		6.0	U	500	101.4		P
Copper	75-125	259		6.0	U	250	103.6		P
Iron	75-125	1520		476		1000	104.4		P
Lead	75-125	18.9		2.0	U	20.0	94.5		F
Magnesium		36400		35100					NR
Manganese	75-125	606		102		500	100.8		P
Mercury	75-125	1.2		0.2	U	1.0	120.0		CV
Nickel	75-125	506		8.0	U	500	101.2		P
Potassium		2760	B	2660	B				NR
Selenium	75-125	7.2		1.0	U	10.0	72.0	N	F
Silver	75-125	33.2		4.0	U	50.0	66.4	N	P
Sodium		26100		25200					NR
Thallium	75-125	29.0		20.0	U	50.0	58.0	N	F
Vanadium	75-125	483		5.0	U	500	96.6		P
Zinc	75-125	533		11.3	B	500	104.3		P
Cyanide	75-125	101		10.0	U	100	101.0		AS

Comments:

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6
DUPLICATES

EPA SAMPLE NO.

MEW959D

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

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

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		160	B	175	B	9.0		P
Antimony		29.0	U	29.0	U			P
Arsenic		2.0	U	2.0	U			F
Barium		70.2	B	72.4	B	3.1		P
Beryllium		1.0	U	1.0	U			P
Cadmium		5.0	U	5.0	U			P
Calcium		79200		80600		1.8		P
Chromium		6.0	U	6.0	U			P
Cobalt		6.0	U	6.0	U			P
Copper		6.0	U	6.0	U			P
Iron	100	476		470		1.3		P
Lead		2.0	U	2.0	U			F
Magnesium		35100		35600		1.4		P
Manganese		102		104		1.9		P
Mercury		0.2	U	0.2	U			CV
Nickel		8.0	U	8.0	U			P
Potassium		2660	B	2680	B	0.7		P
Selenium		1.0	U	1.0	U			F
Silver		4.0	U	4.0	U			P
Sodium		25200		26400		4.7		P
Thallium		20.0	U	20.0	U			F
Vanadium		5.0	U	5.0	U			P
Zinc		11.3	B	9.4	B	18.4		P
Cyanide		10.0	U	10.0	U			AS

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7

LABORATORY CONTROL SAMPLE

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

Solid LCS Source: EMSL-LV

Aqueous LCS Source: EMSL-LV

Analyte	Aqueous (ug/L) True	Found	%R(1)	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum	1980	2020	102						
Antimony	1010	1110	110						
Arsenic									
Barium	1980	1950	98.5						
Beryllium	481	498	104						
Cadmium	489	509	104						
Calcium	49800	50800	102						
Chromium	506	496	98.0						
Cobalt	474	503	106						
Copper	542	548	101						
Iron	1990	2010	101						
Lead									
Magnesium	25000	24600	98.4						
Manganese	513	513	100						
Mercury									
Nickel	496	491	99.0						
Potassium	50200	49800	99.2						
Selenium									
Silver	509	476	93.5						
Sodium	50700	50500	99.6						
Thallium									
Vanadium	511	493	96.5						
Zinc	3100	3160	102						
Cyanide									

7

LABORATORY CONTROL SAMPLE

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

Solid LCS Source: EMSL-LV

Aqueous LCS Source: EMSL-LV

Analyte	Aqueous (ug/L) True	Found	%R(1)	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic	47.0	40.4	86.0						
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead	97.9	88.8	90.7						
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium	104	87.4	84.0						
Silver									
Sodium									
Thallium	97.3	91.8	94.3						
Vanadium									
Zinc									
Cyanide									

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3
BLANKS

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	35.0	U	35.0	U	35.0	U			7.0	U	P
Antimony	29.0	U	29.0	U	29.0	U			5.8	U	P
Arsenic											
Barium	2.0	U	2.0	U	2.0	U			0.40	U	P
Beryllium	1.0	U	1.0	U	1.0	U			0.20	U	P
Cadmium	5.0	U	5.0	U	5.0	U			1.0	U	P
Calcium	64.0	U	64.0	U	64.0	U			12.8	U	P
Chromium	6.0	U	6.0	U	6.0	U			1.2	U	P
Cobalt	6.0	U	6.0	U	6.0	U			1.2	U	P
Copper	6.0	U	6.0	U	6.0	U			1.2	U	P
Iron	56.0	U	56.0	U	56.0	U			11.2	U	P
Lead											
Magnesium	70.0	U	70.0	U	70.0	U			14.0	U	P
Manganese	7.0	U	7.0	U	7.0	U			1.4	U	P
Mercury											
Nickel	8.0	U	8.0	U	8.0	U			1.6	U	P
Potassium	126	U	126	U	126	U			25.2	U	P
Selenium											
Silver	4.0	U	4.0	U	4.0	U			0.80	U	P
Sodium	2000	U	2000	U	2000	U			400	U	P
Thallium											
Vanadium	5.0	U	5.0	U	5.0	U			1.0	U	P
Zinc	2.0	U	2.0	U	2.0	U			1.4	B	P
Cyanide											

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

CRL Receipt Date 3/19/88 FIT Receipt Date 5/31/88 Review Completed 6/14/88

TO: G. COBB

FROM: Mary Gzyra

SUBJECT: SCA / BARTON LF

PAN: IL0599 SA (1 hour charged for review) Case # 9346

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
#	Low Soil	# 4	Low Soil
	Low Water	6	Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status ✓ Completed!!

✓ Incomplete, awaiting organics low soils

FIT Data Review Findings:
Mn detected in MEW 957-961 (water) + MEW 965-968 (soil)
As detected in MEW 966 - soil
Cr detected in all soil samples
Pb " " " " "
Cu detected in MEW 968 - soil
Check Data Sheets for Transcription Errors

_____ Compounds were detected in sample(s); see enclosed sheet.

Book No. 8 Page No. 14 Date Sampled 4/13/88

0759:2

recycled paper

5/31/88

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 5.26.88

SUBJECT: Review of Region V CLP Data
Received for Review on 5-10-88

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory

TO: Data User: File

We have reviewed the data for the following case(s).

SITE NAME: SCA (Barton Landfill (TL) SMO Case No. 9346

EPA Data Set No. SF5049 No. of Samples: 10 D.U./Activity Numbers 4905/C72122

CRL No. 88FC18 516-523, 516, 203

SMO Traffic No. MFW 957-968

CLP Laboratory: RMAL Hrs. Required for Review: 6.5 hrs + 0.5hr

Following are our findings:

The laboratory's portion of this case included 6 low level water samples(QC#87760) and 4 low level soil samples(QC#87761) analyzed for total metals and total cyanide.

SOIL SAMPLES (QC#87761)

The matrix spike recovery for Ag(54.7%) indicates that the detection limits may be elevated. All Ag data are estimated(UJ). The duplicate % RPD for Fe(35.4%) indicates poor precision and all Fe data are estimated(J).

All Hg and CN data are acceptable.

WATER SAMPLES (QC#87760)

The matrix spike recoveries for As(71.3%), Ag(66.4%) and Tl(58%) indicates the detection limits may be elevated. All As, Ag and Tl data are estimated(UJ). The spike recovery for Se(72%) indicates that the detection limits may be elevated for samples MEW958-61 and 964 and the data are estimated(UJ). The Se result on sample MEW957 is biased low and is estimated(J).

(Next Page) DK Rose

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications referenced above. See Data Qualifier sheets and Calibration Outlier forms for flags and additional comments.
( ) Data are preliminary - pending verification by Contractor Laboratory. See Case Summary above.
( ) Data are unacceptable.

cc: Carla Dempsey, CLP Quality Assurance Officer Analytical Operations Branch

Table 4- Cont.

Sample Collection Information and Parameters	Sample Number											
	>_1	>_2	>_3	>_4	>_5	>_6	>_7	>_8	>_9	>_10	>_11	>_12
Pesticides/PCBs Cont.												
Aroclor 1232												
Aroclor 1242												
Aroclor 1248												
Aroclor 1254	WATERS							20/CS				
Aroclor 1260												
Analyte Detected (values in ug/. (ppm))	NEW 957	958	959	960	961	964		NEW 965	966	967	968	
aluminum	214	192 B	160 B	172 B	183 B			660	2650	648	745	
antimony												
arsenic								0.77 B	3.3	1.2 B	1 B	
barium	70.3 B	71.1 B	70.2 B	72.4 B	71.7 B			20.1 B	58.1	19 B	18.2 B	
beryllium												
cadmium		5.0										
calcium	79300	80000	79200	80800	81800	173 B		2990	6010	3450	3860	
chromium								3.5	7.4	4	3.4	
cobalt								3.2 B	5.1 B	6.5 B	2.2 B	
copper						65.2 J		3.2 B	8.6	2.4 B	2.1 B	
iron	518	528	476	555	498			4060 J,*	7660 J,*	3700 J,*	4040 J,*	
lead					2.1 J,B,W			2.6	9.8	3.3	3.2	
magnesium	35200	35400	35100	35800	36100	93.8 B		1400	2670	1700	1850	
manganese	113	120	102	110	114			260	502	358	265	
mercury												
nickel								5.4 B	10 B	3.7 B	3.8 B	
potassium	2640 B	2690 B	2660 B	2710 B	2690 B			82.4 B	326 B	66.8 B	76.3 B	
selenium	1.1 J,B,W,N											
silver												
sodium	26000	25900	25700	26300	26600							
thallium												
vanadium								5.9 B	11.5 B	5.4 B	5.5 B	
zinc	9.6 B	12.7 B	11.3 B	13.6 B	27.7	7 B		12		10.9	11.3	
cyanide											13.9	

-- Not detected.

COMPOUND FOOTNOTES	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

ANALYTE FOOTNOTES		DEFINITION	INTERPRETATION
OLD	NEW		
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.
NA		Value not available due to insufficient data.	
NR		Value not recommended to be calculated, since chemical has proven to be a human carcinogen.	
( )		Estimated value.	

Source: Ecology and Environment, Inc. 1988.

DATA QUALIFIERS

Laboratory: Rocky Mountain Analytical **Case: 9346**

Sample MEW964 is a field blank and was found to contain Cu(65.2 ug/l). This exceeds the CRDL and all Cu data are estimated(J). Samples MEW957 and 958 are field duplicates. All %RPDs were less than 20%.

Pb results on samples MEW960-1 and 964 were flagged W indicating interference. These Pb results are estimated(J). Se results for samples MEW957-61 were flagged W and the data are estimated as stated above.

All Hg and CN data are acceptable.

Reviewed by: Duane Kruse
Date: 5/24/88

D Kruse

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW957

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	214			P
7440-36-0	Antimony	29.0	U		P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	70.3	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	79300			P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	6.0	U		P
7439-89-6	Iron	518			P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	35200			P
7439-96-5	Manganese	113			P
7439-97-6	Mercury	0.2	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	2640	B		P
7482-49-2	Selenium	1.1	B	WN	F
7440-22-4	Silver	4.0	U	N	P
7440-23-5	Sodium	26000			P
7440-28-0	Thallium	20.0	U	N	F
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	9.6	B		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

THALLIUM VALUE REPORTED AT AN ADDITIONAL 10X DILUTION

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1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW958

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	192	B		P
7440-36-0	Antimony	29.0	U		P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	71.1	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0			P
7440-70-2	Calcium	80000			P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	6.0	U		P
7439-89-6	Iron	528			P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	35400			P
7439-96-5	Manganese	120			P
7439-97-6	Mercury	0.2	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	2690	B		P
7482-49-2	Selenium	1.0	U	WN	F
7440-22-4	Silver	4.0	U	N	P
7440-23-5	Sodium	25900			P
7440-28-0	Thallium	20.0	U	N	F
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	12.7	B		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
THALLIUM VALUE REPORTED AT AN ADDITIONAL 10X DILUTION

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW959

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	160	B		P
7440-36-0	Antimony	29.0	U		P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	70.2	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	79200			P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	6.0	U		P
7439-89-6	Iron	476			P
7439-92-1	Lead	2.0	U		F
7439-95-4	Magnesium	35100			P
7439-96-5	Manganese	102			P
7439-97-6	Mercury	0.2	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	2660	B		P
7482-49-2	Selenium	1.0	U	WN	F
7440-22-4	Silver	4.0	U	N	P
7440-23-5	Sodium	25200			P
7440-28-0	Thallium	20.0	U	N	F
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	11.3	B		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

THALLIUM VALUE REPORTED AT AN ADDITIONAL 10X DILUTION

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1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW960

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	172	B		P
7440-36-0	Antimony	29.0	U		P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	72.4	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	80800			P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	6.0	U		P
7439-89-6	Iron	555			P
7439-92-1	Lead	2.0	U	W	F
7439-95-4	Magnesium	35800			P
7439-96-5	Manganese	110			P
7439-97-6	Mercury	0.2	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	2710	B		P
7482-49-2	Selenium	1.0	U	WN	F
7440-22-4	Silver	4.0	U	N	P
7440-23-5	Sodium	26300			P
7440-28-0	Thallium	20.0	U	N	F
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	13.6	B		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
THALLIUM VALUE REPORTED AT AN ADDITIONAL 10X DILUTION

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW961

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	183	B		P
7440-36-0	Antimony	29.0	U		P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	71.7	B		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	81800			P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	6.0	U		P
7439-89-6	Iron	498			P
7439-92-1	Lead	2.1	B	W	F
7439-95-4	Magnesium	36100			P
7439-96-5	Manganese	114			P
7439-97-6	Mercury	0.2	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	2690	B		P
7482-49-2	Selenium	1.0	U	WN	F
7440-22-4	Silver	4.0	U	N	P
7440-23-5	Sodium	26600			P
7440-28-0	Thallium	20.0	U	N	F
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	27.7			P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:
THALLIUM VALUE REPORTED AT AN ADDITIONAL 10X DILUTION

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW964

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 0.0

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	35.0	U		P
7440-36-0	Antimony	29.0	U		P
7440-38-2	Arsenic	2.0	U	N	F
7440-39-3	Barium	2.0	U		P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-70-2	Calcium	173	B		P
7440-47-3	Chromium	6.0	U		P
7440-48-4	Cobalt	6.0	U		P
7440-50-8	Copper	65.2			P
7439-89-6	Iron	56.0	U		P
7439-92-1	Lead	2.0	U	W	F
7439-95-4	Magnesium	93.8	B		P
7439-96-5	Manganese	7.0	U		P
7439-97-6	Mercury	0.2	U		CV
7440-02-0	Nickel	8.0	U		P
7440-09-7	Potassium	126	U		P
7482-49-2	Selenium	1.0	U	N	F
7440-22-4	Silver	4.0	U	N	P
7440-23-5	Sodium	2000	U		P
7440-28-0	Thallium	2.0	U	N	F
7440-62-2	Vanadium	5.0	U		P
7440-66-6	Zinc	7.0	B		P
	Cyanide	10.0	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____

Color After: COLORLESS Clarity After: CLEAR Artifacts: _____

Comments:

Sample (2) Blank

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW965

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 78.3

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	660			P
7440-36-0	Antimony	7.4	U		P
7440-38-2	Arsenic	0.77	B		F
7440-39-3	Barium	20.1	B		P
7440-41-7	Beryllium	0.26	U		P
7440-43-9	Cadmium	1.3	U		P
7440-70-2	Calcium	2990			P
7440-47-3	Chromium	3.5			P
7440-48-4	Cobalt	3.2	B		P
7440-50-8	Copper	3.2	B		P
7439-89-6	Iron	4060		*	P
7439-92-1	Lead	2.6			F
7439-95-4	Magnesium	1400			P
7439-96-5	Manganese	260			P
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	5.4	B		P
7440-09-7	Potassium	82.4	B		P
7482-49-2	Selenium	0.26	U		F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	511	U		P
7440-28-0	Thallium	0.51	U		F
7440-62-2	Vanadium	5.9	B		P
7440-66-6	Zinc	12.0			P
	Cyanide	0.64	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

000003

EPA SAMPLE NO.

MEW966

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 73.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2650			P
7440-36-0	Antimony	7.9	U		P
7440-38-2	Arsenic	3.3		S	F
7440-39-3	Barium	58.1			P
7440-41-7	Beryllium	0.27	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	6010			P
7440-47-3	Chromium	7.4			P
7440-48-4	Cobalt	5.1	B		P
7440-50-8	Copper	8.6			P
7439-89-6	Iron	7660		*	P
7439-92-1	Lead	9.8			F
7439-95-4	Magnesium	2670			P
7439-96-5	Manganese	502			P
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	10.0	B		P
7440-09-7	Potassium	326	B		P
7482-49-2	Selenium	0.27	U		F
7440-22-4	Silver	1.1	U	N	P
7440-23-5	Sodium	547	U		P
7440-28-0	Thallium	0.55	U		F
7440-62-2	Vanadium	11.5	B		P
7440-66-6	Zinc	30.7			P
	Cyanide	20.1			AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: BROWN Clarity After: _____ Artifacts: _____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW967

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 76.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	648			P
7440-36-0	Antimony	7.6	U		P
7440-38-2	Arsenic	1.2	B		F
7440-39-3	Barium	19.0	B		P
7440-41-7	Beryllium	0.26	U		P
7440-43-9	Cadmium	1.3	U		P
7440-70-2	Calcium	3450			P
7440-47-3	Chromium	4.0			P
7440-48-4	Cobalt	6.5	B		P
7440-50-8	Copper	2.4	B		P
7439-89-6	Iron	3700		*	P
7439-92-1	Lead	3.3			F
7439-95-4	Magnesium	1700			P
7439-96-5	Manganese	358			P
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	3.7	B		P
7440-09-7	Potassium	66.8	B		P
7482-49-2	Selenium	0.26	U		F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	521	U		P
7440-28-0	Thallium	0.52	U		F
7440-62-2	Vanadium	5.4	B		P
7440-66-6	Zinc	10.9			P
	Cyanide	0.65	U		AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEW968

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

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

Level (low/med): LOW Date Recieved: 04/14/88

% Solids: 80.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	745			P
7440-36-0	Antimony	7.2	U		P
7440-38-2	Arsenic	1.0	B		F
7440-39-3	Barium	18.2	B		P
7440-41-7	Beryllium	0.25	U		P
7440-43-9	Cadmium	1.2	U		P
7440-70-2	Calcium	3860			P
7440-47-3	Chromium	3.4			P
7440-48-4	Cobalt	2.8	B		P
7440-50-8	Copper	2.1	B		P
7439-89-6	Iron	4040		*	P
7439-92-1	Lead	3.2			F
7439-95-4	Magnesium	1850			P
7439-96-5	Manganese	265			P
7439-97-6	Mercury	0.1	U		CV
7440-02-0	Nickel	3.8	B		P
7440-09-7	Potassium	76.3	B		P
7482-49-2	Selenium	0.25	U		F
7440-22-4	Silver	1.0	U	N	P
7440-23-5	Sodium	498	U		P
7440-28-0	Thallium	0.50	U		F
7440-62-2	Vanadium	5.5	B		P
7440-66-6	Zinc	11.3			P
	Cyanide	12.9			AS

Color Before: BROWN Clarity Before: _____ Texture: MEDIUM

Color After: COLORLESS Clarity After: _____ Artifacts: _____

Comments:

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

SOW No.: 7/87

EPA Sample No.	Lab Sample ID.
MEW965	
MEW965D	
MEW965S	
MEW966	
MEW967	
MEW968	

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MAY 19 1988
U.S. EPA CENTRAL REGIONAL LAB

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

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

Comments:
4 LOW SOILS FOR TOTAL METALS AND CYANIDE ANALYSIS
RMA QC# 87761
35 DAY TURNAROUND

Release of the data contained in this hardcopy data package and in the computer readable data submitted on floppy diskette have been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Lab Manager: [signature]

Date: 05/18/88

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00001

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

SOW No.: 7/87

EPA Sample No.	Lab Sample ID.
MEW957	
MEW958	
MEW959	
MEW959D	
MEW959S	
MEW960	
MEW961	
MEW964	

RECEIVED
MAY 19 1988
U.S. EPA CENTRAL
REGIONAL LAB

Were ICP interelement corrections applied? Yes/No YES

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

Comments:
6 LOW WATERS FOR TOTAL METALS AND CYANIDE ANALYSIS
RMA QC# 87760
35 DAY TURNAROUND

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Lab Manager: _____

Date: 05/13/88

QC EXCEPTION SUMMARY REPORT

CASE # 93246
DATA SET #
LAB Q.C.# 87740
DATE:

SITE SCA Bay Landfill
LAB RMAL
REVIEWED BY D. Krause

MATRIX: Water
CONC. : low
MATRIX:
CONC. :

WATER SAMPLE SPK.
WATER SAMPLE DUP.
SOIL SAMPLE SPK.
SOIL SAMPLE DUP.

	OVERALL CASE QC									MATRIX SPECIFIC QC						SAMPLE SPECIFIC QC		FIELD QC			REGIONAL QC			OTHER/ COMMENTS
	Holding Time	Cal Blanks	Init Calver	Contin Calver	Prep Blk AQ	Prep Blk SOL	ICS %R	LCS % AQ	LCS % SOL	Sol Dup RPD	Sol Spk %R	AQ Dup RPD	AQ Spk %R	Ser Dilu AQ	Ser Dilu SOL	GFAA Dup	GFAA Spike	Blank	Dup RPD	Spike %R	Blind Blank	Blind Spike %R	Split Sample RPD	
Aluminum																								
Antimony																								
Arsenic													71.3											
Barium																								
Beryllium																								
Cadmium																								
Calcium																								
Chromium																								
Cobalt																								
Copper																								
Iron																								
Lead																								
Magnesium																								
Manganese																								
Mercury																								
Nickel																								
Potassium																								
Selenium													72											
Silver													66.7											
Sodium																								
Thallium													58											
Tin																								
Vanadium																								
Zinc																								
Cyanide																								

Field Dups 957 + 958 all OK

Field Blank 924 high Cu 65.2 mg/l

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3
BLANKS

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	35.0	U	35.0	U	35.0	U	35.0	U	35.0	U	P
Antimony	29.0	U	29.0	U	29.0	U	29.0	U	29.0	U	P
Arsenic											
Barium	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	P
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	P
Calcium	64.0	U	64.0	U	64.0	U	64.0	U	64.0	U	P
Chromium	6.0	U	6.0	U	6.0	U	6.0	U	6.0	U	P
Cobalt	6.0	U	6.0	U	6.0	U	6.0	U	6.0	U	P
Copper	6.0	U	6.0	U	6.0	U	6.0	U	6.0	U	P
Iron	56.0	U	56.0	U	56.0	U	56.0	U	56.0	U	P
Lead											
Magnesium	70.0	U	70.0	U	70.0	U	70.0	U	70.0	U	P
Manganese	7.0	U	7.0	U	7.0	U	7.0	U	7.0	U	P
Mercury											
Nickel	8.0	U	8.0	U	8.0	U	8.0	U	8.0	U	P
Potassium	126	U	126	U	126	U	126	U	126	U	P
Selenium											
Silver	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	P
Sodium	2000	U	2000	U	2000	U	2000	U	2000	U	P
Thallium											
Vanadium	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	P
Zinc	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	P
Cyanide											

QC EXCEPTION SUMMARY REPORT

CASE # 9346
DATA SET #
LAB Q.C.# 87761
DATE: 5/24/88

SITE
LAB AMAL
REVIEWED BY D Bruce

MATRIX: Soil
CONC. : Low
MATRIX :
CONC. :

WATER SAMPLE SPK.
WATER SAMPLE DUP.
SOIL SAMPLE SPK.
SOIL SAMPLE DUP.

	OVERALL CASE QC									MATRIX SPECIFIC QC						SAMPLE SPECIFIC QC		FIELD QC			REGIONAL QC			OTHER/ COMMENTS
	Holding Time	Cal Blanks	Init Calver	Contin Calver	Prep Blk AQ	Prep Blk SOL	ICS %R	LCS % AQ	LCS % SOL	Sol Dup RPD	Sol Spk %R	AQ Dup RPD	AQ Spk %R	Ser Dilu AQ	Ser Dilu SOL	GFAA Dup	GFAA Spike	Blank	Dup RPD	Spike %R	Blind Blank	Blind Spike %R	Split Sample RPD	
Aluminum																								
Antimony																								
Arsenic																								
Barium																								
Beryllium																								
Cadmium																								
Calcium																								
Chromium																								
Cobalt																								
Copper																								
Iron										35.4														
Lead																								
Magnesium																								
Manganese																								
Mercury																								
Nickel																								
Potassium																								
Selenium																								
Silver											54.7													
Sodium																								
Thallium																								
Tin																								
Vanadium																								
Zinc																								
Cyanide																								

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3
BLANKS

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U	0.40	U	F
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead	2.0	U	2.0	U	2.0	U	2.0	U	0.40	U	F
Magnesium											
Manganese											
Mercury	0.2	U	0.2	U	0.2	U			0.1	U	CV
Nickel											
Potassium											
Selenium	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	F
Silver											
Sodium											
Thallium	2.0	U	2.0	U	2.0	U	2.0	U	0.40	U	F
Vanadium											
Zinc											
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	0.50	U	AS

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5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEW965S

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum		707		660					NR
Antimony	75-125	103		7.4	U	128	80.5		P
Arsenic	75-125	8.9		0.77	B	10.2	79.7		F
Barium	75-125	531		20.1	B	511	100.0		P
Beryllium	75-125	12.9		0.26	U	12.8	100.8		P
Cadmium	75-125	12.3		1.3	U	12.8	96.1		P
Calcium		2810		2990					NR
Chromium	75-125	56.1		3.5		51.1	102.9		P
Cobalt	75-125	135		3.2	B	128	103.0		P
Copper	75-125	69.6		3.2	B	63.9	103.9		P
Iron		2790		4060					NR
Lead	75-125	7.5		2.6		5.1	96.1		F
Magnesium		1240	B	1400					NR
Manganese	75-125	368		260		128	84.4		P
Mercury	75-125	0.6		0.1	U	0.6	106.7		CV
Nickel	75-125	136		5.4	B	128	102.0		P
Potassium		75.8	B	82.4	B				NR
Selenium	75-125	2.3		0.26	U	2.6	88.5		F
Silver	75-125	7.0		1.0	U	12.8	54.7	N	P
Sodium		511	U	511	U				NR
Thallium	75-125	13.3		0.51	U	12.8	103.9		F
Vanadium	75-125	131		5.9	B	128	97.7		P
Zinc	75-125	142		12.0		128	101.6		P
Cyanide	75-125	5.7		0.64	U	6.4	89.1		AS

Comments:

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6
DUPLICATES

EPA SAMPLE NO.

MEW965D

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 78.3 % Solids for Duplicate: 78.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		660		589		11.4		P
Antimony		7.4	U	7.4	U			P
Arsenic		0.77	B	1.1	B	35.3		F
Barium		20.1	B	15.0	B	29.1		P
Beryllium		0.26	U	0.26	U			P
Cadmium		1.3	U	1.3	U			P
Calcium	1277	2990		2670		11.3		P
Chromium	2.6	3.5		2.4	B	37.3		P
Cobalt		3.2	B	2.2	B	37.0		P
Copper		3.2	B	4.2	B	27.0		P
Iron		4060		2840		35.4	*	P
Lead	1.3	2.6		3.8		37.5		F
Magnesium	1277	1400		1260	B	10.5		P
Manganese		260		257		1.2		P
Mercury		0.1	U	0.1	U			CV
Nickel		5.4	B	2.9	B	60.2		P
Potassium		82.4	B	62.3	B	27.8		P
Selenium		0.26	U	0.26	U			F
Silver		1.0	U	1.0	U			P
Sodium		511	U	511	U			P
Thallium		0.51	U	0.51	U			F
Vanadium		5.9	B	4.1	B	36.0		P
Zinc	5.1	12.0		10.2		16.2		P
Cyanide		0.64	U	0.64	U			AS

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7
LABORATORY CONTROL SAMPLE

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

Solid LCS Source: EMSL-LV

Aqueous LCS Source: EMSL-LV

Analyte	Aqueous (ug/L) True	Found	%R(1)	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum				325	260		225	424	80.0
Antimony				211	255		127	294	121
Arsenic									
Barium				4.8	6.3	B	0.0	40.0	131
Beryllium				19.4	19.0		16.5	22.3	97.9
Cadmium				45.4	51.7		35.7	55.1	114
Calcium				196200	196000		166800	225600	99.9
Chromium				99.6	103		79.2	120	103
Cobalt				144	151		125	162	105
Copper				6910	6920		6006	7820	100
Iron				22430	22600		17770	27080	101
Lead									
Magnesium				118100	119000		100400	129900	101
Manganese				208	222		177	239	107
Mercury									
Nickel				60.9	61.6		49.2	72.6	101
Potassium				50.0	51.2	B	0.0	1000	102
Selenium									
Silver				22.2	23.2		15.5	29.0	105
Sodium				50.0	800	U	0.0	1000	0.0
Thallium									
Vanadium				65.8	68.4		51.7	79.9	104
Zinc				187	191		138	236	102
Cyanide									

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7

LABORATORY CONTROL SAMPLE

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

Solid LCS Source: EMSL-LV

Aqueous LCS Source: EMSL-LV

Analyte	Aqueous (ug/L) True	Found	%R(1)	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic				917	674		635	1199	73.5
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead				236	214		188	285	90.7
Magnesium									
Manganese									
Mercury				12.7	15.0		8.5	17.0	118
Nickel									
Potassium									
Selenium				39.2	23.6		19.1	59.4	60.2
Silver									
Sodium									
Thallium				39.0	28.2		24.6	53.5	72.3
Vanadium									
Zinc									
Cyanide									

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3
BLANKS

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	F
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	F
Magnesium											
Manganese											
Mercury	0.2	U	0.2	U	0.2	U			0.2	U	CV
Nickel											
Potassium											
Selenium	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	F
Silver											
Sodium											
Thallium	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	F
Vanadium											
Zinc											
Cyanide	10.0	U	10.0	U	10.0	U			10.0	U	AS

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3
BLANKS

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

Preparation Blank Matrix (soil/water): WATER

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

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic											
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead			2.0	U							F
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium			1.0	U							F
Silver											
Sodium											
Thallium			2.0	U	2.0	U					F
Vanadium											
Zinc											
Cyanide											

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5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

MEW959S

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

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

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	2210		160	B	2000	102.5		P
Antimony	75-125	549		29.0	U	500	109.8		P
Arsenic	75-125	28.5		2.0	U	40.0	71.3	N	F
Barium	75-125	2040		70.2	B	2000	98.5		P
Beryllium	75-125	49.6		1.0	U	50.0	99.2		P
Cadmium	75-125	53.4		5.0	U	50.0	106.8		P
Calcium		82000		79200					NR
Chromium	75-125	202		6.0	U	200	101.0		P
Cobalt	75-125	507		6.0	U	500	101.4		P
Copper	75-125	259		6.0	U	250	103.6		P
Iron	75-125	1520		476		1000	104.4		P
Lead	75-125	18.9		2.0	U	20.0	94.5		F
Magnesium		36400		35100					NR
Manganese	75-125	606		102		500	100.8		P
Mercury	75-125	1.2		0.2	U	1.0	120.0		CV
Nickel	75-125	506		8.0	U	500	101.2		P
Potassium		2760	B	2660	B				NR
Selenium	75-125	7.2		1.0	U	10.0	72.0	N	F
Silver	75-125	33.2		4.0	U	50.0	66.4	N	P
Sodium		26100		25200					NR
Thallium	75-125	29.0		20.0	U	50.0	58.0	N	F
Vanadium	75-125	483		5.0	U	500	96.6		P
Zinc	75-125	533		11.3	B	500	104.3		P
Cyanide	75-125	101		10.0	U	100	101.0		AS

Comments:

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6
DUPLICATES

EPA SAMPLE NO.

MEW959D

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

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

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		160	B	175	B	9.0		P
Antimony		29.0	U	29.0	U			P
Arsenic		2.0	U	2.0	U			F
Barium		70.2	B	72.4	B	3.1		P
Beryllium		1.0	U	1.0	U			P
Cadmium		5.0	U	5.0	U			P
Calcium		79200		80600		1.8		P
Chromium		6.0	U	6.0	U			P
Cobalt		6.0	U	6.0	U			P
Copper		6.0	U	6.0	U			P
Iron	100	476		470		1.3		P
Lead		2.0	U	2.0	U			F
Magnesium		35100		35600		1.4		P
Manganese		102		104		1.9		P
Mercury		0.2	U	0.2	U			CV
Nickel		8.0	U	8.0	U			P
Potassium		2660	B	2680	B	0.7		P
Selenium		1.0	U	1.0	U			F
Silver		4.0	U	4.0	U			P
Sodium		25200		26400		4.7		P
Thallium		20.0	U	20.0	U			F
Vanadium		5.0	U	5.0	U			P
Zinc		11.3	B	9.4	B	18.4		P
Cyanide		10.0	U	10.0	U			AS

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7

LABORATORY CONTROL SAMPLE

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

Solid LCS Source: EMSL-LV

Aqueous LCS Source: EMSL-LV

Analyte	Aqueous (ug/L) True	Found	%R(1)	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum	1980	2020	102						
Antimony	1010	1110	110						
Arsenic									
Barium	1980	1950	98.5						
Beryllium	481	498	104						
Cadmium	489	509	104						
Calcium	49800	50800	102						
Chromium	506	496	98.0						
Cobalt	474	503	106						
Copper	542	548	101						
Iron	1990	2010	101						
Lead									
Magnesium	25000	24600	98.4						
Manganese	513	513	100						
Mercury									
Nickel	496	491	99.0						
Potassium	50200	49800	99.2						
Selenium									
Silver	509	476	93.5						
Sodium	50700	50500	99.6						
Thallium									
Vanadium	511	493	96.5						
Zinc	3100	3160	102						
Cyanide									

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7

LABORATORY CONTROL SAMPLE

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW957

Solid LCS Source: EMSL-LV

Aqueous LCS Source: EMSL-LV

Analyte	Aqueous (ug/L) True	Found	%R(1)	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum									
Antimony									
Arsenic	47.0	40.4	86.0						
Barium									
Beryllium									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Iron									
Lead	97.9	88.8	90.7						
Magnesium									
Manganese									
Mercury									
Nickel									
Potassium									
Selenium	104	87.4	84.0						
Silver									
Sodium									
Thallium	97.3	91.8	94.3						
Vanadium									
Zinc									
Cyanide									

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3
BLANKS

Lab Name: ROCKY MOUNTAIN ANALYTICAL Contract: 68-01-0058

Lab Code: ENSECO Case No.: 9346 SAS No.: _____ SDG No.: MEW965

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	35.0	U	35.0	U	35.0	U			7.0	U	P
Antimony	29.0	U	29.0	U	29.0	U			5.8	U	P
Arsenic											
Barium	2.0	U	2.0	U	2.0	U			0.40	U	P
Beryllium	1.0	U	1.0	U	1.0	U			0.20	U	P
Cadmium	5.0	U	5.0	U	5.0	U			1.0	U	P
Calcium	64.0	U	64.0	U	64.0	U			12.8	U	P
Chromium	6.0	U	6.0	U	6.0	U			1.2	U	P
Cobalt	6.0	U	6.0	U	6.0	U			1.2	U	P
Copper	6.0	U	6.0	U	6.0	U			1.2	U	P
Iron	56.0	U	56.0	U	56.0	U			11.2	U	P
Lead											
Magnesium	70.0	U	70.0	U	70.0	U			14.0	U	P
Manganese	7.0	U	7.0	U	7.0	U			1.4	U	P
Mercury											
Nickel	8.0	U	8.0	U	8.0	U			1.6	U	P
Potassium	126	U	126	U	126	U			25.2	U	P
Selenium											
Silver	4.0	U	4.0	U	4.0	U			0.80	U	P
Sodium	2000	U	2000	U	2000	U			400	U	P
Thallium											
Vanadium	5.0	U	5.0	U	5.0	U			1.0	U	P
Zinc	2.0	U	2.0	U	2.0	U			1.4	B	P
Cyanide											

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

CRL Receipt Date 5/16 FIT Receipt Date 6/9 Review Completed 6/14

TO:

FROM: Zena Gold-Kaufman

SUBJECT: SCA Barton LND

PAN: IL059 9SA (1 hour charged for review) Case #9346

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
#	Low Soil	#	Low Soil
6	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

_____ Incomplete, awaiting Low soil organics. inorg: soil, water.

FIT Data Review Findings:
Samples are relatively clean : chloroform and phthalates detected

Check Data Sheets for Transcription Errors

_____ Compounds were detected in sample(s); see enclosed sheet.

Book No. 8 Page No. 12 Date Sampled 4/13/88

0759:2

recycled paper

QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscop
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Metals

FOOTNOTE		DEFINITION	INTERPRETATION
OLD	NEW		
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
J	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
J		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
J	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not calculated since chemical is not a carcinogen.
( ) Estimated value.

6/9/88

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 6/6/88

SUBJECT: Review of Region V CLP Data
Received for Review on 5-16-88

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory
Patrick J. Chunlle for

TO: Data User: FIT

We have reviewed the data for the following case(s).

SITE NAME: SCA/Barton Landfill (IL) SMO Case No. 9346

EPA Data Set No. SF 5049 No. of Samples: 6 D.U./Activity Numbers 4905/C72IZZ

CRL No. 88FC18S16-S19, D16, R03

SMO Traffic No. EW146-150, 153

CLP Laboratory: KEYSTONE Hrs. Required for Review: 5.5 hrs.

Following are our findings: This review covers the analyses of (6) six water samples for volatiles, semivolatiles, and pesticide/PCB's. There were no major problems prohibiting the use of the data. Qualifiers and Calibration Outliers are noted on the following pages of this narrative.

W. Ira Wilson
Weston/ESAT
1 June 88

( ) Data are acceptable for use.
(✓) Data are acceptable for use with qualifications referenced above. See Data Qualifier sheets and Calibration Outlier forms for flags and additional comments.
( ) Data are preliminary - pending verification by Contractor Laboratory. See Case Summary above.
( ) Data are unacceptable.

cc: Carla Dempsey, CLP Quality Assurance Officer, Analytical Operations Branch
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

DATA QUALIFIERS

Contractor: KEYSTONE

Case 9346

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

1. HOLDING TIME:

A holding time Criteria of 7-days from Sample Collection to extraction and/or analysis was employed.

For the Volatile Samples, EW146, EW147, EW149, and EW150 exceeded the 7-day analysis Criteria by 2-days. Samples EW148, EW148MS, EW148MSD, and EW153 exceeded the Criteria by 3-days. Therefore, the positive results on FORM I's for Aromatics Only Should be qualified as estimated and flagged "J", and quantitation limits estimated and flagged "UJ".

The holding time for semivolatiles and pesticide/PCB's was satisfactory for all samples.

2. GC/MS TUNING and GC INSTRUMENT PERFORMANCE:

The GC/MS TUNING for both BFB and DFTPP was very satisfactory. Instrument performance Criteria for pesticide/PCB fractions were met except for the RT shift of DBC on the GC Column (Mixphase) for IND-A and IND-B Mixed phase which were over 2% (2.1%). The two phases were analyzed on 4/29/88. In reviewing the data in the case, it was observed that there were no sample fractions analyzed after the above noted date. Therefore, all pesticide/PCB results should be considered acceptable.

Reviewed by: W. Ira Wilson

Phone: (312) 353-2947

Date: 1 June 88

DATA QUALIFIERS

Contractor: KEYSTONE

Case 9346

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

3. CALIBRATION:

Calibration outliers for the volatile and semivolatile fractions are noted on the Calibration outlier sheets included in this review.

For the pesticide fraction, the linearity Check was satisfactory; the % RSD was well less than 10%. The Evaluation Check for 4,4-DDT/Endrin breakdown also met Q.C. Criteria.

4. BLANKS:

The Common Contaminant, methylene Chloride was detected in the two Volatile blanks. This Common Contaminant was also detected in Samples EW 146, EW 147, EW 148, EW 148 MS/MSD, EW 149, and EW 153. The Contaminant was detected in each of the above noted Sample fractions at levels less than 10 times the blank level. Therefore, FORM I's of all Sample fractions associated with the blanks have been qualified; positive results are estimated and flagged "U5".

The Common Contaminant, bis(2-ethylhexyl) phthalate was detected in the semivolatile blank and in all of the associated samples (Listed on FORM IV SV) except Sample fraction EW 153. FORM I's, Semivol.

Reviewed by: W. Ira Wilson

Phone: (312) 353-2947

Date: 1 June 88

DATA QUALIFIERS

Contractor: KEYSTONE

Case 9346

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

"BLANKS Continues"
QRC ANAL. DATA SHEETS, have been flagged qualifying the results; positive as "UJ". The pesticide/PCB blank was free of contaminants.

5. SURROGATE RECOVERIES:
The surrogate recoveries for all sample fractions for the volatiles were satisfactory.
For the semivolatile fractions, sample EW148 had 2-Fluorobiphenyl low (39) outside the Q.C. limits. No qualification in this regard is needed.
The pesticide/PCB surrogate had a % recovery of zero (0) for DBC in sample fraction EW-149. The sample fraction was not re-analyzed. Therefore, the results of the noted compound in the sample fraction should be considered unusable and flagged "R". In sample fraction EW153, a high recovery for DBC was observed. However, no qualification is needed and the data for this sample fraction should be considered acceptable.

6. MATRIX SPIKE/MSD:
The recoveries for volatile and semivolatile fractions were acceptable. The % RPD was high outside the Q.C. limits in the following compounds: 1,4-Dichlorobenzene,

Reviewed by: W. Ira Wilson
Phone: (312) 353-2947
Date: 1 June 88

DATA QUALIFIERS

Contractor: KEYSTONE

Case 9346

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

"MATRIX SPIKE/MSD Continues"
1, 2, 4-Trichlorobenzene, and Acenaphthene. Therefore, the results for the noted Compounds in the Unspiked sample fraction EW148 should be Considered estimated and flagged "J" for positive and "UJ" for negative.

In the pesticide, MS/MSD recovery, Endrin was high 133/122 respectively. Positive results in the Unspiked sample should also be flagged "J" and negative results "UJ".

7. FIELD DUPLICATES & FIELD BLANKS:

Samples EW146 and EW147 are duplicates. The results of both samples Compared favorably and are acceptable. Sample EW153 was a field blank. Results ~~[illegible]~~ (Iw) Similar to the compounds found in the other samples indicate the Common source of methylene chloride Contamination.

8. INTERNAL STANDARDS PERFORMANCE:

The internal standard areas for all fractions were acceptable.

9. COMPOUND IDENTIFICATION:

All Compound identifications were acceptable.

Reviewed by: W. Ira Wilson
Phone: (312) 353-2947
Date: 1 June 88

DATA QUALIFIERS

Contractor: KEYSTONE

Case 9346

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

10. COMPOUND QUANTITATION & REPORTED DETECTION LIMITS:
Compound Quantitation was within Q.C. limits and carried out properly. The detection limits were not included in this case.

11. SYSTEM PERFORMANCE:
The GC/MS results were satisfactory as was G.C. pesticide results.

12. The samples in this case have been properly analyzed. Data were acceptable and noted problems will not affect the usability of the data.

Reviewed by: W. Ira Wilson

Phone: (312) 353-2947

Date: 1 June 88

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS # 9346 CONTRACTOR KEYSTONE

Instrument # 4000	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/22/88			4/23 - 1200											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone															
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone															
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether															
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone															
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

VBLK	VBLK
EW146	EW148
EW147	EW148MS
EW149	EW148MSD
EW150	EW153

Reviewer's Initials/Date: 1 June 88

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 9346 CONTRACTOR KEYSTONE

Instrument # 4510	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/25/88			5/2/88-1024			5/3/88-751								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether	1.36	32.0	J	2.21	62.7	J	2.24	65.0	J						
2-Chlorophenol	1.63			2.08	27.8	J									
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether															
4-Methylphenol	1.17			1.51	28.6	J	1.52	28.2	J						
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene	0.41			0.65	58.3	J	0.64	55.9	J						
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid	0.21						0.11	48.5	J						
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline	0.27	42.0	J	0.10	64.2	J	0.09	64.9	J						
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene	0.57			0.75	32.0	J	0.74	30.6	J						
Hexachlorocyclopentadiene	0.21			0.28	35.2	J									
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol	0.26			0.46	74.5	J	0.39	48.3	J						
2-Chloronaphthalene	1.13			1.50	33.3	J									
2-Nitroaniline															
Dimethyl Phthalate	1.05			1.35	28.5	J									
Acenaphthylene															
3-Nitroaniline	0.11	59.6	J	0.03	69.6	J	0.05	52.7	J						
Acenaphthene															
2,4-Dinitrophenol															
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

SBLK
EW148
EW148MS
EW148MSD
EW146
EW147
EW149
EW150
EW153

Reviewer Initials/Date: 1 June 88

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 9346 CONTRACTOR KEYSTONE

Instrument # 4510	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/25/88			5/2/88-1024			5/3/88-751								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene	.29			0.38	31.9	J									
2,6-Dinitrotoluene	0.26			0.34	34.5	J	0.32	26.7	J						
Diethylphthalate	1.03			1.30	26.2	J									
4-Chlorophenyl-phenylether															
Fluorene	1.09			1.37	26.1	J									
4-Nitroaniline															
4,6-Dinitro-2-Methylphenol	0.12			0.17	43.7	J									
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene	0.20			0.25	26.0	J									
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene	1.83			2.44	43.7	J	2.36	28.4	J						
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

Reviewer's Initials/Date: 1 June 88

Case: 9346

Contractor: KEYSTONE

TENTATIVELY IDENTIFIED COMPOUNDS
MATCH ASSESSMENT

NOTE: Reviewer should note directly on Organic Analysis Data Sheet (OADS) those matches that in his opinion (based on contract criteria) are unreasonable.

CRITERIA

(1) Relative intensities of major ions (>10%) reference spectrum should be present in the sample spectrum.

(2) Relative intensities of major ions in sample spectrum should agree to within ± 20% of reference spectrum intensities.

(3) Molecular ions present in reference spectrum should be present in sample spectrum.

(4) Ions present in sample spectrum, but not in reference spectrum should be reviewed for possible background contamination or presence of coeluting interferences.

(5) Ions present in reference spectrum, but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting interferences.

(6) If, in the reviewer's opinion, no valid identification can be made the compound should be labelled as "unknown" and the initials and date of the reviewer placed on the OADS.

CASE NARRATIVE

SECTION I

LABORATORY: KEYSTONE ENVIRONMENTAL RESOURCES, INC. DOC CONT NO: 9346-5 -21

CASE NO: 9346 SDG NO: EW146

LAB NO: 8804057 CONTRACT NO: 68-W8-0065

I. RECEIPT

A. DATE: April 14, 1988

B. NO. OF SAMPLES: Six (6) samples + QC

C. SMO NUMBERS IN SDG: EW146, EW147, EW148, EW149, EW150, EW153

D. SAMPLE TYPE: Water

E. ANALYSIS REQUESTED: Full Organic Analysis

F. SHIPPING PROBLEMS: None

G. DOCUMENTATION PROBLEMS: None

H. QC DISTRIBUTION:

LEVEL	MATRIX	VOA	SV	PEST
LOW	WATER	EW148	EW148	EW148
	SOIL			
MEDIUM	WATER			
	SOIL			

RECEIVED
U.S. EPA CENTRAL REGIONAL LAB

II. PREPARATION

A. ANALYTICAL LEVELS: All waters and soils were low level.

B. EXTRACTION PROBLEMS: None

DOC CONT NO: 9346-5-21

III. ANALYSIS

A. ANALYSIS PROBLEMS: None

B. SURROGATE RECOVERIES: Sample EW148 has a surrogate recovery of 2-Flurobiphenyl below contract limits but does not require re-analysis. Two pesticide samples, EW 149 and EW153, exhibit surrogate recoveries outside advisory QC limits.

IV. COMMENTS:

Where possible, generic names were given to tentatively identified compounds exhibiting purities between 750 and 900. CAS number 545783-80-8 was given to all of these compounds. As the QA formaster blank corrects the TICS by comparing the CAS numbers, some manual corrections were made to the form I-SV-TIC pages where generic compound names were assigned. Please keep in mind these changes when viewing the floppy diskette. Slight differences in values found on forms 1-10, and the sample and standard quantitation reports may exist due to variations in rounding off procedures in the computers used.

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

Nancy O Tutanjian

Thomas T. Osterman

Thomas T. Osterman, Project Manager

May 13, 1988

Date

USEPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA, VA 22313
703/557-2490 FTS-557-2490

CASE NO: 9346 | SAS NO: (IF APPLICABLE)

ORGANIC TRAFFIC REPORT

(FOR CLP USE ONLY)

TYPE OF ACTIVITY (CIRCLE ONE) ①
SUPERFUND—PA SI ESI RIFS RD RA ER NPLD O&M OTHER ____
NON-SUPERFUND—____ PROGRAM

SAMPLE DESCRIPTION
(ENTER IN BOX A)
1. SURFACE WATER
2. GROUND WATER
3. LEACHATE
4. SOIL
5. SEDIMENT
6. OIL (SAS)
7. WASTE (SAS)

REGION NO: 1 SAMPLING COMPANY ② FIT
SAMPLER: (NAME) [illegible]

SHIP TO: ③ KETX
3911 Fondren Suite 100
Houston TX 77063
ATTN: Mary Cruz

SAMPLING DATE: 4/13/88 ④
BEGIN: ____ END: ____

DATE SHIPPED: 4/13/88 CARRIER: F ⑤
AIRBILL NO: 4974339604

DATE REC'D: 4/14/88 SDG NO: EW 146 ⑥
REC'D BY: D. Massaudi
LABORATORY CONTRACT NO. 68-WR-0065 UNIT PRICE $8.49.00

TRANSFER TO: DATE REC'D: ⑦
REC'D BY: CONTRACT NO./PRICE:

Shown [illegible]

CLP SAMPLE NUMBER (FROM LABELS)	Ⓐ SAMPLE DESCRIPTION (FROM BOX 1) 1 2 3 4 5 6 7	Ⓑ CONCENTRATION L = LOW/MED. H = HIGH (SAS)	Ⓒ RAS ANALYSIS: VOLATILE	BASE/NEUT /ACID	PESTICIDE /PCB's		Ⓓ SPECIAL HANDLING	Ⓔ STATION LOCATION	Ⓕ SAMPLE CONDITION ON RECEIPT	Ⓖ HIGH CONC. PHASES (CHECK): SOLID	WATER—MIS LIQUID	NON WATER—MIS LIQUID
									SDG#EW146			
EW 146	1	L	✓	✓	✓			WS1	Intact			
EW 147	1	L	✓	✓	✓			Duplicate				
EW 148	1	L	✓	✓	✓		MSD	WS2				
EW 149	1	L	✓	✓	✓			WS3				
EW 150	1	L	✓	✓	✓			WS4				
~~EW 151~~	~~1~~	~~L~~	~~✓~~	~~✓~~	~~✓~~			~~WS5~~				
~~EW 152~~	~~1~~	~~L~~	~~✓~~	~~✓~~	~~✓~~			~~WS6~~				
EW 153	3	L	✓	✓	✓		Blank	Blank	FINAL SDG # SDG-FINAL SAMPLE			

Keystone Env. Res., Inc. DC# 9346-5-5

000003

EPA Form 2075-7 (8-87)

WHITE — SMO COPY PINK — CLIENT COPY WHITE — LAB COPY FOR RETURN TO SMO YELLOW — LAB COPY

SAMPLE DATES: 4/13-14/88
LOG IN DATE: 4/26/88
DUE DATE: 6/22/88

APR 19 1988

CENTRAL REGIONAL LABORATORY SAMPLE DATA REPORT
ORGANICS/INORGANICS

SUPERFUND 5049

THIS FORM IS TO BE USED FOR SAMPLES SENT TO CONTRACT ONLY

CASE NUMBER/SAS No. 9346 SITE NAME SCA/Barton Landfill LABORATORY Keystone - RMAL/RMAL DATE SHIPPED 4/13,14/88

SUPERFUND DU NUMBER Y905 EPA RPM or OSC (S.M.S.)/(CES) _____ CERCLIS NUMBER ILD00670935 PAGE 2 OF 2

ACTIVITY NUMBER C72100

CRL LOG NUMBER	ORGANIC TRAFFIC REPORT NUMBER or SAS Packing List No.	INORGANIC TRAFFIC REPORT NUMBER	WATER OR LIQUIDS: ACID-BASE NEUTRAL CPDS ORGANIC SCAN UG/L TOX17574	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN UG/L TOX17564	WATER POLYCHLORINATED BIPHENYLS UG/L PES 17144	WATER CHLORINATED PESTICIDES UG/L PES17134	TOTAL METALS IN WATER UG/L MET111	WATER CYANIDE UG/L MIN74919	NITRATE NITRITE MG/L MIN7284	AMMONIA MG/L MIN7294	RESIDUE, FILTERABLE TDS MG/L MIN7362	RESIDUE, NON-FILT TSS MG/L MIN7372			SEDIMENTS or SOILS: ACID-BASE NEUTRAL CPDS ORGANIC SCAN MG/KG TOX215722	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN MG/KG TOX215622	SEDIMENTS POLYCHLORINATED BIPHENYLS MG/KG PES211422	SEDIMENT CHLORINATED PESTICIDES MG/KG 211322	TOTAL METALS MG/KG MET413	CYANIDE MG/KG MIN44930	EP TOXICITY METALS MG/KG	AMMONIA MG/KG MIN42925				
88FC18S16	EW146	MEW957	✓	✓	✓	✓	✓	✓	✓	✓																
88FC18D16	EW147	MEW958	✓	✓	✓	✓	✓	✓	✓	✓																
88FC18S17	EW148	MEW959	✓	✓	✓	✓	✓	✓	✓	✓																
88FC18S18	EW149	MEW960	✓	✓	✓	✓	✓	✓	✓	✓																
88FC18S19	EW150	MEW961	✓	✓	✓	✓	✓	✓	✓	✓																
88FC18B03	EW153	MEW964	✓	✓	✓	✓	✓	✓	✓	✓																
88FC18S20	EW154	MEW965							CR	[illegible]					✓	✓	✓	✓	✓	✓						
88FC18S21	EW155	MEW966													✓	✓	✓	✓	✓	✓						
88FC18S22	EW156	MEW967													✓	✓	✓	✓	✓	✓						
88FC18S23	EW157	MEW968													✓	✓	✓	✓	✓	✓						
	data																									

2A

WATER VOLATILE SURROGATE RECOVERY

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
01	EW146	100	105	103		0
02	EW147	100	104	106		0
03	EW148	102	102	99		0
04	EW148MS	101	100	98		0
05	EW148MSD	101	100	98		0
06	EW149	102	103	107		0
07	EW150	99	105	105		0
08	EW153	103	101	100		0
09	VBLK	100	103	103		0
10	VBLK	101	98	100		0

	QC LIMITS
S1 (TOL) = Toluene-d8	(88-110)
S2 (BFB) = Bromofluorobenzene	(86-115)
S3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

000004

FORM II VOA-1

1/87 Rev.

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix Spike - EPA Sample No.: EW148

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.0	0	53.0	106	61-145
Trichloroethene	50.0	0	52.7	105	71-120
Benzene	50.0	0	52.1	104	76-127
Toluene	50.0	0	58.2	116	76-125
Chlorobenzene	50.0	0	59.6	119	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.0	53.2	106	0	14	61-145
Trichloroethene	50.0	54.5	109	-4	14	71-120
Benzene	50.0	54.0	108	-4	11	76-127
Toluene	50.0	59.7	119	-3	13	76-125
Chlorobenzene	50.0	60.8	122	-2	13	75-130

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

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

ab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Lab File ID: EB0422V03 Lab Sample ID: 880405701

Date Analyzed: 04/22/88 Time Analyzed: 1725

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

Instrument ID: 4000

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EW146	880405702	EU04057V02	1801
02	EW147	880405703	EU04057V03	1838
03	EW149	880405707	EU04057V07	1914
04	EW150	880405708	EU04057V08	1950

OMMENTS:

4A

VOLATILE METHOD BLANK SUMMARY

ab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Lab File ID: EB0423V01 Lab Sample ID: 880405701

Date Analyzed: 04/23/88 Time Analyzed: 1240

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

Instrument ID: 4000

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	EW148	880405704	EU04057V04	1331
02	EW148MS	880405705	EU04057V05	1406
03	EW148MSD	880405706	EU04057V06	1442
04	EW153	880405709	EU04057V09	1517

OMMENTS:

000007

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405701

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EB0423V01

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ Date Analyzed: 04/23/88

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	7	
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylenes(total)	5	U

Keystone Env. Res., Inc. DC# 9346-5-8

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405701

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EB0423V01

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ Date Analyzed: 04/23/88

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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Keystone Env. Res., Inc. DC# 9346-5- 8

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405701

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EB0422V03

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ Date Analyzed: 04/22/88

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	8	
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylenes(total)	5	U

Keystone Env. Res., Inc. DC# 9346-5-8

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405701

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EB0422V03

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ Date Analyzed: 04/22/88

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW146

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405702

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EU04057V02

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ Date Analyzed: 04/22/88

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	~~B~~ U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylenes(total)	5	U

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Keystone Env. Res., Inc. DC# 9346-5-8

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW146

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405702

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EU04057V02

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ Date Analyzed: 04/22/88

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW147

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405703

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EU04057V03

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ Date Analyzed: 04/22/88

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	~~B~~ U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylenes(total)	5	U

IW 31 MAY 88

Keystone Env. Res., Inc. DC# 9346-5-8

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW147

Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405703

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EU04057V03

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ Date Analyzed: 04/22/88

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW148

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405704

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EU04057V04

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ Date Analyzed: 04/23/88

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5 ~~4~~	~~BJ~~ U IW 31 may 88
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylenes(total)	5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW148

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405704

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EU04057V04

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ Date Analyzed: 04/23/88

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

Keystone Env. Res., Inc. DC# 9346-5-8

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW149

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405707

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EU04057V07

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ Date Analyzed: 04/22/88

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	7	~~B~~ U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylenes(total)	5	U

JW 31 may 8

Keystone Env. Res., Inc. DC# 9346-5-8

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW149

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405707

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EU04057V07

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ Date Analyzed: 04/22/88

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

Keystone Env. Res., Inc. DC# 9346-5-8

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW150

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405708

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EU04057V08

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ Date Analyzed: 04/22/88

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylenes(total)	5	U

Keystone Env. Res., Inc. DC# 9346-5-8

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW150

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405708

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EU04057V08

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ Date Analyzed: 04/22/88

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

000039

Keystone Env. Res., Inc. DC# 9346-5-8

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW153

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405709

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EU04057V09

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ Date Analyzed: 04/23/88

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	~~B~~ U
67-64-1	Acetone	8	J
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	3	J
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylenes(total)	5	U

JW 30 May 88

Keystone Env. Res., Inc. DC# 9346-5-8

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EW153

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405709

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: EU04057V09

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ Date Analyzed: 04/23/88

Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	OTHER	TOT OUT
01	EW146	70	65	89	65	53	83		0
02	EW147	42	43	81	64	53	81		0
03	EW148	35	39 *	70	51	49	50		1
04	EW149	72	68	107	64	54	89		0
05	EW150	78	68	79	58	48	63		0
06	EW153	70	75	100	63	51	73		0
07	EW148MS	52	49	59	54	51	50		0
08	EW148MSD	67	67	83	65	61	66		0
09	SBLK	53	50	83	52	49	49		0

		QC LIMITS
S1 (NBZ)	= Nitrobenzene-d5	(35-114)
S2 (FBP)	= 2-Fluorobiphenyl	(43-116)
S3 (TPH)	= Terphenyl	(33-141)
S4 (PHL)	= Phenol-d5	(10-94)
S5 (2FP)	= 2-Fluorophenol	(21-100)
S6 (TBP)	= 2,4,6-Tribromophenol	(10-123)

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

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix Spike - EPA Sample No.: EW148

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	100	0	41.4	41	12- 86
2-Chlorophenol	100	0	44.6	45	27-123
1,4-Dichlorobenzene	50.0	0	23.6	47	36 97
N-Nitroso-di-n-prop.(1)	50.0	0	22.6	45	41 116
1,2,4-Trichlorobenzene	50.0	0	22.5	45	39 98
4-Chloro-3-methylphenol	100	0	38.3	38	23 97
Acenaphthene	50.0	0	30.2	60	46-118
4-Nitrophenol	100	0	30.1	30	10- 80
2,4-Dinitrotoluene	50.0	0	24.5	49	24- 96
Pentachlorophenol	100	0	30.4	30	9-103
Pyrene	50.0	0	29.7	59	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	100	49.8	50	-20	42	12- 86
2-Chlorophenol	100	53.2	53	-16	40	27-123
1,4-Dichlorobenzene	50.0	31.5	63	-29 *	28	36 97
N-Nitroso-di-n-prop.(1)	50.0	29.2	58	-25	38	41 116
1,2,4-Trichlorobenzene	50.0	31.5	63	-33 *	28	39 98
4-Chloro-3-methylphenol	100	51.9	52	-31	42	23 97
Acenaphthene	50.0	42.6	85	-34 *	31	46-118
4-Nitrophenol	100	40.8	41	-31	50	10- 80
2,4-Dinitrotoluene	50.0	32.4	65	-28	38	24- 96
Pentachlorophenol	100	36.7	37	-21	50	9-103
Pyrene	50.0	37.2	74	-23	31	26-127

(1) N-Nitroso-di-n-propylamine

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

RPD: 3 out of 11 outside limits
Spike Recovery: 0 out of 22 outside limits

COMMENTS:

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Lab File ID: EB04057C01 Lab Sample ID: 880405701

Date Extracted: 04/14/88 Extraction:(SepF/Cont/Sonc) CONT

Date Analyzed: 05/02/88 Time Analyzed: 1128

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

Instrument ID: 4510

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	EW146	880405702	EU04057C02	05/02/88
02	EW147	880405703	EU04057C03	05/02/88
03	EW148	880405704	EU04057C04	05/02/88
04	EW149	880405707	EU04057C07	05/02/88
05	EW150	880405708	EU04057C08	05/03/88
06	EW153	880405709	EU04057C09A	05/03/88
07	EW148MS	880405705	EU04057C05	05/02/88
08	EW148MSD	880405706	EU04057C06	05/02/88

COMMENTS:

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405701

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EB04057C01

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/02/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405701

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EB04057C01

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/02/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	6	J
117-84-0	Di-n-octlyphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

Keystone Env. Res., Inc. DC# 9346-5-8

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405701

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EB04057C01

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/02/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 545783-80-8	KETONE	4.48	10	J
2. 545783-80-8	ESTER	28.71	48	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW146

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405702

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EU04057C02

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/02/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

Keystone Env. Res., Inc. DC# 9346-5- 8

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW146

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405702

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EU04057C02

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/02/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	11	~~B~~ U
117-84-0	Di-n-octlyphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

IW 31 mar 88

(1) - Cannot be separated from Diphenylamine

Keystone Env. Res., Inc. DC# 9346-5-8

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
EW146

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405702

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EU04057C02

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/02/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

Number TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 545783-80-8	KETONE	4.38	11	BJ
2.	UNKNOWN	14.99	24	J
3. 545783-80-8	ESTER	28.66	97	BJ
4.	UNKNOWN	32.51	14	J

Keystone Env. Res., Inc. DC# 9346-5-8

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW147

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405703

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EU04057C03

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/02/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

Keystone Env. Res., Inc. DC# 9346-5-8

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW147

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405703

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EU04057C03

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/02/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	93	B
117-84-0	Di-n-octlyphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

Keystone Env. Res., Inc. DC# 9346-5- 8

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
EW147

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405703

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EU04057C03

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/02/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 545783-80-8	KETONE	4.22	9	BJ
2. 545783-80-8	PHTHALATE	33.34	5	~~BJ~~ J

000116

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW148

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405704

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EU04057C04

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/02/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW148

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405704

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EU04057C04

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/02/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	2	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octlyphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

000127

Keystone Env. Res., Inc. DC# 9346-5-8

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
EW148

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405704

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EU04057C04

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/02/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 545783-80-8	KETONE	4.45	7	BJ

Keystone Env. Res., Inc. DC# 9346-5-8

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW149

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405707

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EU04057C07

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/02/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

Keystone Env. Res., Inc. DC# 9346-5-8

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW149

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405707

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EU04057C07

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/02/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	89	B
117-84-0	Di-n-octlyphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

Keystone Env. Res., Inc. DC# 9346-5-8

EPA SAMPLE NO.

EW149

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405707

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EU04057C07

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/02/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

Number TICs found: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 545783-80-8	KETONE	4.18	15	BJ
2. 109-43-3	DECANEDIOIC ACID, DIBUTYL ES	26.36	8	J
3. 545783-80-8	ESTER	28.74	930	BJ
4. 545783-80-8	PHTHALATE	30.46	10	~~BJ~~ J
5. 545783-80-8	PHTHALATE	30.81	8	~~BJ~~ J
6. 545783-80-8	PHTHALATE	30.96	22	~~BJ~~ J
7. 545783-80-8	PHTHALATE	33.36	13	~~BJ~~ J

Keystone Env. Res., Inc. DC# 9346-5-8

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW150

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405708

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EU04057C08

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/03/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

Keystone Env. Res., Inc. DC# 9346-5- 8

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW150

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405708

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EU04057C08

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/03/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	6	~~BJ~~ U
117-84-0	Di-n-octlyphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

IW 31 May 88

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
EW150

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405708

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EU04057C08

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/03/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 545783-80-8	KETONE	4.22	11	BJ
2. 545783-80-8	ESTER	28.59	10	BJ

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW153

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405709

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EU04057C09A

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/03/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

1C Keystone Env. Res., Inc. DC# 9346-5-8

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EW153

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405709

Sample wt/vol: 1000 (g/mL) ML Lab File ID: EU04057C09A

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/03/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octlyphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
EW153

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 880405709

Sample wt/vol: 1000 (g/mL) MSample wt/vol: 1000 (g/mL) ML
Lab File ID: EU04057C09A

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/14/88

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 05/03/88

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 545783-80-8	KETONE	4.10	13	BJ
2. 24070-77-7	CYCLOPENTANOL, 2-METHYL-	4.83	19	J

2E

WATER PESTICIDE SURROGATE RECOVERY

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: ——— SDG No.: EW146

	EPA SAMPLE NO.	S1 (DBC)#	OTHER
01	EW146	70	0
02	EW147	60	0
03	EW148	147	0
04	EW148MS	69	0
05	EW148MSD	63	0
06	EW149	0 *	0
07	EW150	119	0
08	EW153	174 *	0
09	PBLK	133	0

ADVISORY QC LIMITS

S1 (DBC) = Dibutylchlorendate (24-154)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogates diluted out

Keystone Env. Res., Inc. DC# 9346-5-8

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: ___ SDG No.: EW146

Matrix Spike - EPA Sample No.: EW148

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	0.200	0	0.238	119	56-123
Heptachlor	0.200	0	0.247	124	40-131
Aldrin	0.200	0	0.207	104	40-120
Dieldrin	0.500	0	0.598	120	52-126
Endrin	0.500	0	0.664	133 *	56-121
4,4'-DDT	0.500	0	0.543	109	38-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	0.200	0.220	110	8	15	56-123
Heptachlor	0.200	0.224	112	10	20	40-131
Aldrin	0.200	0.189	95	9	22	40-120
Dieldrin	0.500	0.542	108	10	18	52-126
Endrin	0.500	0.612	122 *	8	21	56-121
4,4'-DDT	0.500	0.497	99	9	17	38-127

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

* Values outside of QC limits

RPD: 0 out of 6 outside limits
Spike Recovery: 2 out of 12 outside limits

COMMENTS:

Keystone Env. Res., Inc. DC# 9346-5-8

PESTICIDE METHOD BLANK SUMMARY

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: — SDG No.: EW146

Lab Sample ID: 8804057 01A Lab File ID: _____

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

Date Extracted: 04/15/88 Extraction:(SepF/Cont/Sonc) SEPF

Date Analyzed (1): 04/28/88 Date Analyzed (2): —

Time Analyzed (1): 1901 Time Analyzed (2): —

Instrument ID (1): VA3400 Instrument ID (2): —

GC Column ID (1): MIXPHASE GC Column ID (2): —

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	EW146	8804057_02A	04/28/88	
02	EW147	8804057_03A	04/28/88	
03	EW148	8804057_04A	04/28/88	
04	EW148MS	8804057_05MS	04/28/88	
05	EW148MSD	8804057_06MSD	04/28/88	
06	EW149	8804057_07A	04/28/88	
07	EW150	8804057_08A	04/28/88	
08	EW153	8804057_09A	04/29/88	

COMMENTS:

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Keystone Env. Res., Inc. DC# 9346-5-8

EPA SAMPLE NO.

PBLK

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: — SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 8804057 01A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: —

Level: (low/med) LOW Date Received: 02/19/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/15/88

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 04/28/88

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 1.0

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

CAS NO.	COMPOUND	Q
319-84-6	alpha-BHC	0.050 U
319-85-7	beta-BHC	0.050 U
319-86-8	delta-BHC	0.050 U
58-89-9	gamma-BHC (Lindane)	0.050 U
76-44-8	Heptachlor	0.050 U
309-00-2	Aldrin	0.050 U
1024-57-3	Heptachlor epoxide	0.050 U
959-98-8	Endosulfan I	0.050 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
1031-07-8	Endosulfan sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
53494-70-5	Endrin ketone	0.10 U
5103-71-9	alpha-Chlordane	0.50 U
5103-74-2	gamma-Chlordane	0.50 U
8001-35-2	Toxaphene	1.0 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.0 U
11096-82-5	Aroclor-1260	1.0 U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Keystone Env. Res., Inc. DC# 9346-5-8

EPA SAMPLE NO.

EW146

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: / SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 8804057 02A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: /

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/15/88

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 04/28/88

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Keystone Env. Res., Inc. DC# 9346-5-8

EPA SAMPLE NO.

EW147

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: / SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 9804057 03A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: /

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/15/88

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 04/28/88

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Keystone Env. Res., Inc. DC# 9346-5-8

EPA SAMPLE NO.

EW148

Lab Name: KEYSTONE ENV. Contract: 68-W8-0063

Lab Code: KEYTX Case No.: 9346 SAS No.: / SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 9304057 04A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: /

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/15/88

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 04/28/88

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4' DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Keystone Env. Res., Inc. DC# 9346-5-C

EPA SAMPLE NO.

EW149

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: _____ SDG No.: EW149

Matrix: (soil/water) WATER Lab Sample ID: 8804057 07A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/15/88

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 04/28/88

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 1.0

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

CAS NO.	COMPOUND	C
319-84-6	alpha-BHC	0.050 U
319-85-7	beta-BHC	0.050 U
319-86-8	delta-BHC	0.050 U
58-89-9	gamma-BHC (Lindane)	0.050 U
76-44-8	Heptachlor	0.050 U
309-00-2	Aldrin	0.050 U
1024-57-3	Heptachlor epoxide	0.050 U
959-98-8	Endosulfan I	0.050 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
1031-07-8	Endosulfan sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
53494-70-5	Endrin ketone	0.10 U
5103-71-9	alpha-Chlordane	0.50 U
5103-74-2	gamma-Chlordane	0.50 U
8001-35-2	Toxaphene	1.0 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.0 U
11096-82-5	Aroclor-1260	1.0 U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Keystone Env. Res., Inc. DC# 9346-5-8

EPA SAMPLE NO.

EW150

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: / SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 9804057 08A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: /

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/15/88

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 04/29/88

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Keystone Env. Res., Inc. DC# 9346-5-8

EPA SAMPLE NO.

EW153

Lab Name: KEYSTONE ENV. Contract: 68-W8-0065

Lab Code: KEYTX Case No.: 9346 SAS No.: / SDG No.: EW146

Matrix: (soil/water) WATER Lab Sample ID: 8804057 09A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: /

Level: (low/med) LOW Date Received: 04/14/88

% Moisture: not dec. ____ dec. ____ Date Extracted: 04/15/88

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 04/29/88

GPC Cleanup: (Y/N) N pH: 5.0 Dilution Factor: 1.0

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

CAS NO.	COMPOUND	Q
319-84-6	alpha-BHC	0.050 U
319-85-7	beta-BHC	0.050 U
319-86-8	delta-BHC	0.050 U
58-89-9	gamma-BHC (Lindane)	0.050 U
76-44-8	Heptachlor	0.050 U
309-00-2	Aldrin	0.050 U
1024-57-3	Heptachlor epoxide	0.050 U
959-98-8	Endosulfan I	0.050 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
1031-07-8	Endosulfan sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
53494-70-5	Endrin ketone	0.10 U
5103-71-9	alpha-Chlordane	0.50 U
5103-74-2	gamma-Chlordane	0.50 U
8001-35-2	Toxaphene	1.0 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.0 U
11096-82-5	Aroclor-1260	1.0 U

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

CRL Receipt Date 5/6/88 FIT Receipt Date 6/3/88 Review Completed 6/6/88

TO: Gary Cobb
FROM: Zena Gold-Kaufman
SUBJECT: SCA Barton Landfl
PAN: IL0599 (1 hour charged for review) Case # 9346/37588

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
#	Low Soil	#	Low Soil
	Low Water		Low Water
5	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

_____ Incomplete, awaiting low soil / low water } organics

low water ✓ soils inorganics

FIT Data Review Findings:

Common lab artifacts detected. BLANK (distilled water) contains greatest # of detected compounds.

Check Data Sheets for Transcription Errors

✓ Compounds were detected in sample(s); see enclosed sheet.

Book No. 8 Page No. 12 Date Sampled 4/13/88

0759:2

recycled paper

SCA
Barton
LNDFI

COMPOUND	SAMPLE	DETECTION LIMITS	EEW 139	140	141	142	145					
chloromethane												
bromomethane												
vinyl chloride												
chloroethane												
methylene chloride												
acetone												
carbon disulfide												
1,1-dichloroethene												
1,1-dichloroethane												
trans-1,2,-dichloroethene												
chloroform							3					
1,2-dichloroethane												
2-butanone							1					
1,1,1-trichloroethane												
carbon tetrachloride												
vinyl acetate												
bromodichloromethane												
1,1,2,2-tetrachloroethane												
1,2-dichloropropane												
trans-1,3-dichloropropene												
trichloroethene												
dibromochloromethane												
1,1,2-trichloroethane												
benzene												
cis-1,3-dichloropropene												
2-chloroethylvinylether												
bromoform												
2-hexanone												
4-methyl-2-pentanone												
tetrachloroethene												
toluene						1	2					
chlorobenzene												
ethylbenzene												
styrene												
total xylenes												
N-nitrosodimethylamine												
phenol				3		3	6					
aniline												
bis(2-chloroethyl)ether												
2-chlorophenol												
1,3-dichlorobenzene												
1,4-dichlorobenzene												
benzyl alcohol												
1,2-dichlorobenzene												
2-methylphenol												
bis(2-chloroisopropyl)ether												
4-methylphenol												
N-nitroso-di-n-propylamine												
hexachloroethane												
nitrobenzene												
isophrone												
2-nitrophenol												
2,4-dimethylphenol												
benzoic acid												
bis(2-chloroethoxy)methane												
2,4-dichlorophenol												
1,2,4-trichlorobenzene												
napthalene												
4-chloroaniline												
hexachlorobutadiene												
4-chloro-3-methylphenol												
2-methylnapthalene												
hexachlorocyclopentadiene					1							
2,4,6-trichlorophenol												
2,4,5-trichlorophenol												
2-chloronaphthalene												
2-nitroaniline												
dimethyl phthalate												
acenapthylene												
3-nitroaniline												
acenaphthene												
2,4-dinitrophenol												
4-nitrophenol												
dibenzofuran												
2,4-dinitrotoluene												
2,6-dinitrotoluene												
diethylphthalate												
4-chlorophenyl-phenylether												
fluorene												
4-nitroaniline												
4,6-dinitro-2-methylphenol												
N-nitrosodiphenylamine												
4-bromophenyl-phenylether												
hexachlorobenzene												

STATE _____ SITE _____ TOD _____ PAGE 1 OF 2, SET # ____

SCA
Barton
Ind#1

		139	140	141	142	145				
SAMPLE	DETECTION LIMITS									
COMPOUND										
pentachlorophenol										
phenanthrene										
anthracene										
di-n-butylphthalate										
fluoranthene										
benzidine										
pyrene										
butylbenzylphthalate										
3,3'-dichlorobenzidine										
benzo(a)anthracene										
bis(2-ethylhexyl)phthalate										
chrysene										
di-n-octylphthalate										
benzo(b&k)fluoranthene										
benzo(a)pyrene										
indeno(1,2,3-cd)pyrene										
dibenzo(a,h)anthracene										
benzo(g,h,i)perylene										
alpha-BHC										
beta-BHC										
delta-BHC										
gamma-BHC(lindane)										
heptachlor										
aldrin										
heptachlor epoxide										
endosulfan I										
dieldrin										
4,4'-DDE										
endrin										
endosulfan II										
4,4'-DDD										
endrin aldehyde										
endosulfan sulfate										
4,4'-DDT										
methoxychlor										
endrin ketone										
chlordane										
toxaphene										
Aroclor-1016										
Aroclor-1221										
Aroclor-1232										
Aroclor-1242										
Aroclor-1248										
Aroclor-1254										
Aroclor-1260										
ELEMENT										
aluminum										
antimony										
arsenic										
barium										
beryllium										
cadmium										
calcium										
chromium										
cobalt										
copper										
iron										
lead										
magnesium										
manganese										
mercury										
nickel										
potassium										
selenium										
silver										
sodium										
thallium										
tin										
vanadium										
zinc										
cyanide CHECK IF ANALYZED ( )										
TENTATIVELY IDENTIFIED ORGANICS										

STATE_____ SITE_____ TDD_____

... QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscop
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Metals

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not calculated since chemical is not a carcinogen.
( ) Estimated value.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

6/3/88
48 pages

DATE: 6/2/88

SUBJECT: Review of Region V CLP Data Received for Review on 5-6-88

FROM: Curtis Ross, Director (5SCRL) Patrick J. Chuillo for
Central Regional Laboratory

TO: Data User: FIT

We have reviewed the data for the following case(s).

SITE NAME: SCA/Barton Landfill (IL) SMO Case No. 93465A53758E

EPA Data Set No. SF5049 No. of Samples: 5 D.U./Activity Numbers Y905/C72100

CRL No. 88FC18513-515, D13, R02

SMO Traffic No. EW 139-142, 145

CLP Laboratory: CAL Hrs. Required for Review: 5 hrs

Following are our findings:

THIS DATA REVIEW COVERS THE ANALYSIS OF FIVE WATER SAMPLES FOR VOLATILES, SEMI-VOLATILES AND PESTICIDE/PCB ACCORDING TO THE LOW DETECTION LIMIT SAS3758E. THERE WERE NO MAJOR PROBLEMS PROHIBITING USE OF THE DATA. HOWEVER, THERE ARE SEVERAL POINTS WHICH ARE OF IMPORTANCE TO BE DISCUSSED IN THE FOLLOWING SECTION.

Robert Katzen 5/24/88
WESTON/ESAT

( ) Data are acceptable for use.
(✓) Data are acceptable for use with qualifications referenced above. See Data Qualifier sheets and Calibration Outlier forms for flags and additional comments.
( ) Data are preliminary - pending verification by Contractor Laboratory. See Case Summary above.
( ) Data are unacceptable.

cc: Carla Dempsey, CLP Quality Assurance Officer, Analytical Operations Branch
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

DATA QUALIFIERS

Contractor: CAL

Case 9346 SAS 3758E

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

(1) HOLDING TIME

HOLDING TIME WAS SATISFACTORY FOR ALL SAMPLES.

(2) GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

GC/MS TUNING WAS VERY SATISFACTORY. PESTICIDE INSTRUMENT PERFORMANCE WAS GOOD. CALIBRATION OF 4/26/88 (0019, 3% SP 2100) HAD 4,4'-DDT RT OF 11.667 BUT THE CHROMATOGRAM WAS NOT EFFECTED.

(3) CALIBRATION

CALIBRATION OUTLIERS ARE LISTED IN THE CALIBRATION OUTLIER FORMS. SEMI-VOA INITIAL CALIBR. OF 4/20/88 LISTS INSTRUMENT ID OF F10 WHILE CONTINUOUS CALIBR. OF 4/22/88 (13:46) LISTS INSTRUMENT F15. THE CONTINUOUS SEMI-VOA CALIBRATIONS RAN THE FOLLOWING COMPOUNDS AT 50 ng: BENZOIC ACID; 2,4,5-TRICHLOROPHENOL; 2-NITROANILINE; 2,4-DINITROPHENOL; 4-NITROPHENOL; 3-NITROANILINE; 4-NITROANILINE; 4,6-DINITRO-2-METHYL PHENOL; PENTACHLOROPHENOL;

THE PESTICIDES CONTINUOUS CALIBRATIONS OF 4/27/88 (0838), 4/26/88 (2106) AND 4/27/88 (0919) HAD 4,4'-DDT, BETA-BHC AND ENDOSULFAN II RESPECTIVELY OUTSIDE OF THE 15% QC LIMIT FOR QUANT. HOWEVER, NO PESTICIDE POSITIVE RESULT WAS DETECTED IN THE SAMPLES.

Reviewed by: Robert Katzen

Phone: 312-353-2917

Date: 5/24/88

DATA QUALIFIERS

Contractor: CAL

Case 9346 SAS 3758F

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

(4) METHOD BLANKS

THE LOW WATER VOA BLK (4/19/88) CONTAINED ACETONE BELOW ITS CRQL.

THE LOW WATER BNA BLANK (4/25/88) CONTAINED BIS(2-ETHYL HEXYL) PHTHALATE THREE TIMES ITS CRQL. WHEN AN ASSOCIATED SAMPLE CONTAINED THE COMPOUND IN QUESTION, THE COMPOUND IS FLAGGED ESTIMATED IN THE SAMPLE.

NO PESTICIDES WERE FOUND IN THE LOW WATER PESTICIDE BLANK (4/26/88).

(5) SURROGATES

ALL VOA WATER SURROGATES PERCENT RECOVERIES ARE WITHIN QC LIMITS

ALL SEMI-VOA WATER SURROGATES ARE WITHIN QC LIMITS.

ALL PESTICIDE RECOVERIES ARE WITHIN ADVISORY LIMITS.

(6) MATRIX SPIKE/MATRIX SPIKE DUPLICATES

ALL VOA MS/MSD ON WATER SAMPLE EW 141 ARE SATISFACTORY FOR %REC AND %RPD'S.

ALL B/N MS/MSD ON WATER SAMPLE EW141 ARE SATISFACTORY FOR %REC AND %RPD'S.

Reviewed by: Robert Yates

Phone: 312-353-2917

Date: 5/24/88

DATA QUALIFIERS

Contractor: CAL

Case 9346 SAS 3758E

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

MATRIX SPIKES/MATRIX SPIKE DUPLICATES (CONTINUED):

THE ACID FRACTION OF WATER SAMPLE EW141 HAD A MSD % REC FOR 4-NITROPHENOL BELOW THE QC LIMIT. THE RPD WAS SATISFACTORY.

THE PESTICIDES OF WATER SAMPLE EW 141 HAD LINDANE, HEPTACHLOR AND ALDRIN % REC BELOW QC LIMITS IN THE MS FRACTION WHILE THESE THREE PESTICIDES WERE ABOVE LIMITS FOR % RPD'S.

(7) FIELD DUPLICATES

NO FIELD DUPLICATES WERE RAN WITH THIS CASE.

(8) INTERNAL STANDARDS PERFORMANCE

NO INTERNAL STANDARD PERFORMANCE DATA WAS INCLUDED WITH THE CASE.

(9) COMPOUND IDENTIFICATION

GC/MS RESULTS FOR COMPOUND IDENTIFICATION WAS SATISFACTORY.

Reviewed by: Robert Kelsey

Phone: 317-353-2917

Date: 5/24/86

DATA QUALIFIERS

Contractor: CAL

Case 9346 SAS 3756E

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

(10) COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS.

COMPOUND QUANTITATION WAS CARRIED OUT PROPERLY AND INSTRUMENT DETECTION LIMITS WERE INCLUDED IN THE CASE.

(11) SYSTEM PERFORMANCE

THE GC/MS RESULTS WERE SATISFACTORY AS WAS GC PESTICIDE RESULTS.

(12) ADDITIONAL CASE SPECIFIC PROBLEMS

THE CASE WAS WELL RAN AND ANALYSIS OF THE DATA WAS SATISFACTORY.

Reviewed by: Robert Katzen

Phone: 312-353-2917

Date: 5/04/88

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS # 9346/3758 E CONTRACTOR CAL

Instrument # F9	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/14/88			4/19/88 9:34											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone	0.195	12.68		0.206	57.7	J									
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone *	0.016	9.81	J/R	0.014	13.6	J/R									
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether *	0.046	12.31	J/R	0.043	8.1	J/R									
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone															
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

VOA BLANK	VOA BLANK
	HOLDING BLANK
	EW 142
	EW 145

Reviewer's Initials/Date: R Koh 4/28

* These flags should be applied to the analytes on the sample data sheets.

* POSITIVE RESULTS ARE FLAGGED J (ESTIMATED). NEGATIVE RESULTS ARE FLAGGED R (UNUSABLE).

8/87

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS # 9346/3758F CONTRACTOR CAL

Instrument # F4	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/18/88			4/18/88 12:57											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone															
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone	0.029	15.64	J/R	0.037	10.2	J/R									
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether															
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone															
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

VOA BLANK
EW 139
EW 140
EW 141
EW 141 MS
EW 141 MSD

Reviewer's Initials/Date: RK 5/24/88

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 9346 / 37588 CONTRACTOR CAL

Instrument # F10	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/20/88			4/22/88 13:46											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether															
2-Chlorophenol															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid															
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline															
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline															
Acenaphthene															
2,4-Dinitrophenol															
4-Nitrophenol															
Dibenzofuran															

METHOD BLANK

AFFECTED SAMPLES:

Reviewer Initials/Date: RK 5/24/88

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 9346/3758E CONTRACTOR CAL

Instrument # F10	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/20/88			4/22/88 13:46											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline															
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

Reviewer's Initials/Date: RK 5/24/88

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 9346 / 3758 CONTRACTOR CAL

Instrument # F10	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/25/88			4/25/88 11:29											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether															
2-Chlorophenol															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid															
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline															
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene															
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Pnthalate															
Acenaphthylene															
3-Nitroaniline															
Acenaphthene															
2,4-Dinitrophenol															
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

EW139
EW140
EW141
EW141 MS
EW141 MSD
EW142
EW143

Reviewer Initials/Date: KK 5/24/88

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 9346/3758F CONTRACTOR CAL

Instrument # FID	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	4/28/88			4/28/88 11:24											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline															
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene															
Butylbenzylphthalate															
Benzo(a)Anthracene															
bis(2-Ethylhexyl)Phthalate															
Chrysene															
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene															
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

Reviewer's Initials/Date: RK 5/24/88

Case: 9346 SAS 3758 E

Contractor: CAC

TENTATIVELY IDENTIFIED COMPOUNDS
MATCH ASSESSMENT

NOTE: Reviewer should note directly on Organic Analysis Data Sheet (OADS) those matches that in his opinion (based on contract criteria) are unreasonable.

CRITERIA

(1) Relative intensities of major ions (>10%) reference spectrum should be present in the sample spectrum.

(2) Relative intensities of major ions in sample spectrum should agree to within ± 20% of reference spectrum intensities.

(3) Molecular ions present in reference spectrum should be present in sample spectrum.

(4) Ions present in sample spectrum, but not in reference spectrum should be reviewed for possible background contamination or presence of coeluting interferences.

(5) Ions present in reference spectrum, but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting interferences.

(6) If, in the reviewer's opinion, no valid identification can be made the compound should be labelled as "unknown" and the initials and date of the reviewer placed on the OADS.

Robert Katzen 5/27/88.

Enseco

May 5, 1988

Joan Fisk
U.S. EPA
Hazardous Waste Investigation
401 M Street, SW
Washington, DC 20460

Dear Joan Fisk:

Enclosed are data summary sheets and documentation for samples and QA/QC comprising case 9346/3758E (SDG EW139) of Contract 68-W8-0069. These samples were received 4/15/88 and logged in under the following ENSECO CAL Lab numbers:

ENSECO CAL LAB Number	Sample I.D.
41070-1	EW139
-2	EW140
-3	EW141
-4	EW142
-5	EW145

The samples were analyzed as low concentration water samples for low detection limits on a twenty one day turnaround. No problems were encountered.

This report was checked for contractual compliance, assembled, paginated then printed and assembled by a Kodak copier/assembler. Each copy has been checked for completeness. This check may miss some individual pages. Please request by page number if any page is missing. If you have any questions, please give us a call.

Sincerely,

Michael Orbanosky, Karin S. Yee

Michael W. Orbanosky
Director of GC/MS Services

Karin S. Yee
Data Control Coordinator

Enseco Incorporated
2544 Industrial Boulevard
West Sacramento, California 95691
916/372-1393 Fax: 916/372-1059

SAMPLE DATES: 4/13-14/88
LOG IN DATE: 4/26/88
DUE DATE: 6/22/88

CENTRAL REGIONAL LABORATORY SAMPLE DATA REPORT
ORGANICS/INORGANICS

APR 19 1988

SUPERFUND 5049

THIS FORM IS TO BE USED FOR SAMPLES SENT TO CONTRACT ONLY

CASE NUMBER/SAS No. 9346/3758/3554 SITE NAME SCA/Barton Landfill LABORATORY CAL/Chemtech DATE SHIPPED 4/14/88

SUPERFUND DU NUMBER 4905 EPA RPM or OSC (S.M.S.)/(CES) _____ CERCLIS NUMBER ILD006670935 PAGE 1 OF 2

ACTIVITY NUMBER C72100

CRL LOG NUMBER	ORGANIC TRAFFIC REPORT NUMBER or SAS Packing List No.	INORGANIC TRAFFIC REPORT NUMBER	WATER OR LIQUIDS: ACID-BASE NEUTRAL CPDS ORGANIC SCAN UG/L TOX17574	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN UG/L TOX17564	WATER POLYCHLORINATED BIPHENYLS UG/L PES 17144	WATER CHLORINATED PESTICIDES UG/L PES17134	TOTAL METALS IN WATER UG/L MET111	WATER CYANIDE UG/L MIN74919	NITRATE NITRITE MG/L MIN7284	AMMONIA MG/L MIN7294	RESIDUE, FILTERABLE TDS MG/L MIN7362	RESIDUE, NON-FILT TSS MG/L MIN7372			SEDIMENTS or SOILS: ACID-BASE NEUTRAL CPDS ORGANIC SCAN MG/KG TOX215722	VOLATILE ORGANIC ANALYSIS ORGANIC SCAN MG/KG TOX215622	SEDIMENTS POLYCHLORINATED BIPHENYLS MG/KG PES211422	SEDIMENT CHLORINATED PESTICIDES MG/KG 211322	TOTAL METALS MG/KG MET413	CYANIDE MG/KG MIN44930	EP TOXICITY METALS MG/KG	AMMONIA MG/KG MIN42925				
88FC18S13	EW139	MEW950	✓	✓	✓	✓	✓	✓	✓	✓	✓															
88FC18D13	EW140	MEW951	✓	✓	✓	✓	✓	✓	✓	✓	✓															
88FC18S14	EW141	MEW952	✓	✓	✓	✓	✓	✓	✓	✓	✓															
88FC18S15	EW142	MEW953	✓	✓	✓	✓	✓	✓	✓	✓	✓															
88FC18R02	EW145	MEW956	✓	✓	✓	✓	✓	✓	✓	✓	✓															
									CC	TR	Dot															

WATER SURROGATE PERCENT RECOVERY SUMMARY

CASE NO.: 9346/3758E CONTRACT LABORATORY: CALIFORNIA ANALYTICAL LABS CONTRACT NO.: 68-W8-0069 DATA PREP/RELEASE BY: _____

SMO TRAFFIC NO.	VOLATILE: TOLUENE D8 (88-110)	VOLATILE: BFB (86-115)	VOLATILE: 1,2 DICHLORO ETHANE D4 (76-114)	SEMI-VOLATILE: NITRO-BENZENE D5 (35-114)	SEMI-VOLATILE: 2-FLUORO BIPHENYL (43-116)	SEMI-VOLATILE: TERPHENYL D14 (33-141)	SEMI-VOLATILE: PHENOL-D5 (10-94)	SEMI-VOLATILE: 2-FLUORO-PHENOL (21-100)	SEMI-VOLATILE: 2,4,6 TRIBROMO-PHENOL (10-123)	PESTICIDE: DIBUTYL-CHLORENDATE (24-154)**
EW 139	97	102	83	42	71	69	43	57	60	78
EW 140	98	106	90	35	66	70	36	52	50	78
EW 141	98	106	87	38	76	76	27	36	40	87
EW 141MS	97	102	88	39	73	75	28	38	47	79
EW 141MSD	97	104	88	42	75	72	30	41	44	77
EW 142	102	100	95	39	70	73	43	60	48	83
EW 145	101	102	97	37	65	70	40	55	44	63
VBK4880418	97	105	83	NR	NR	NR	NR	NR	NR	NR
VBK9880419	102	100	95	NR	NR	NR	NR	NR	NR	NR
41070MB	NR	NR	NR	58	81	83	44	63	52	79

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

VOLATILES: 0 OUT OF 27 : OUTSIDE OF QC LIMITS
SEMI-VOLATILES: 0 OUT OF 48 : OUTSIDE OF QC LIMITS
PESTICIDES: 0 OUT OF 8 : OUTSIDE OF QC LIMITS

COMMENTS: _____

WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

CASE NO.: 9346/3758E CONTRACTOR: Enseco - Cal Lab CONTRACT NO.68-W8-0069

FRACTION	COMPOUND	CONC.SPIKE ADDED(ug/L) SPIKE	DUPLICATE	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	%RPD	QC LIMITS* RPD	RECOVERY
VOA	1,1-Dichloroethene	10	10	0	9.6	96	10.7	107	11	14	61-145
SMO	Trichloroethene	10	10	0	9.5	95	10.2	102	7	14	71-120
SAMPLE NO.	Chlorobenzene	10	10	0	9.8	98	10.9	109	11	13	75-130
	Toluene	10	10	0	10	100	11	110	10	13	76-125
EW 141	Benzene	10	10	0	9.5	95	10.4	104	9	11	76-127
B/N	1,2,4-Trichlorobenzene	20	20	0	9.9	50	9.8	49	1	28	39-98
SMO	Acenaphthene	20	20	0	17.3	87	16.2	81	7	31	46-118
SAMPLE NO.	2,4-Dinitrotoluene	20	20	0	6.3	32	5.5	28	14	38	24-96
	Pyrene	20	20	0	16.9	85	15.4	77	9	31	26-127
	N-Nitrosodi-n-Propylamine	20	20	0	12.7	63	11.4	57	11	38	41-116
EW 141	1,4-Dichlorobenzene	20	20	0	10.9	55	10.2	51	7	28	36-97
ACID	Pentachlorophenol	40	40	0	15.2	38	13	33	16	50	9-103
SMO	Phenol	40	40	0	15.7	39	14.6	37	7	42	12-89
SAMPLE NO.	2-Chlorophenol	40	40	0	32.5	81	31	78	5	40	27-123
	4-Chloro-3-Methylphenol	40	40	0	21.1	53	20.4	51	3	42	23-97
EW 141	4-Nitrophenol	40	40	0	4	10	3.6	9 *	11	50	10-80
PEST	Lindane	0.0225	0.0206	0	0.0094	42 *	0.013	63	41 *	15	56-123
SMO	Heptachlor	0.0225	0.0206	0	0.0067	30 *	0.011	53	57 *	20	40-131
SAMPLE NO.	Aldrin	0.0225	0.0206	0	0.0078	35 *	0.011	53	43 *	22	40-120
	Dieldrin	0.0562	0.0514	0	0.043	77	0.042	82	7	18	52-126
	Endrin	0.0562	0.0514	0	0.048	85	0.046	89	5	21	56-121
EW 141	4,4-DDT	0.0562	0.0514	0	0.05	89	0.048	93	5	27	38-127

* ASTERISKED VALUES ARE OUTSIDE QC LIMITS

RPD: VOAs 0 out of 5 ; outside QC limits
B/Ns 0 out of 6 ; outside QC limits
ACID 0 out of 5 ; outside QC limits
PEST 3 out of 6 ; outside QC limits

RECOVERY: VOAs 0 out of 10 ; outside QC limits
B/Ns 0 out of 12 ; outside QC limits
ACID 1 out of 10 ; outside QC limits
PEST 3 out of 12 ; outside QC limits

Comments:

FORM III

7/85

METHOD BLANK SUMMARY

CASE NO. 9346/3758E REGION: 5 CONTRACTOR: Enseco - Cal Lab CONTRACT NO. 68-W8-0069

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL.TIC OR UNKNOWN)	CONC.	UNITS	CRDL
VBK9880419	4/19/88	VOA	WATER	LOW	F9	67-64-1	ACETONE	2	UG/L	10
VBK4880418	4/18/88	VOA	WATER	LOW	F4	-	NO VOLATILES FOUND	-	-	
41070MB	4/25/88	BNA	WATER	LOW	F10	117-81-7	BIS(2-ETHYLHEXYL) PHTHALATE	3	UG/L	1
41070MB	4/26/88	PEST	WATER	LOW	G10	-	NO PESTICIDES FOUND	-	-	-

COMMENTS:

14

SPECIAL COMPOUNDS

Method 624/CLP

Case: 9346/3758E
EPA ID: VOA Blank
Lab ID: VBK4880418 Enseco ID: NA
Matrix: Water Sampled: NA Received: NA
Authorized: NA Prepared: NA Analyzed: 18-Apr-88

Parameter	Result	Units	Reporting Limit
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	50

ND=Not Detected
NA=Not Applicable

Reported by: SES Approved by: SDB/BSM

The cover letter is an integral part of this report.
Rev 041588

SPECIAL COMPOUNDS

Method 624/CLP

Case: 9346/3758E
EPA ID: VOA Blank
Lab ID: VBK9880419 Enseco ID: NA
Matrix: Water Sampled: NA Received: NA
Authorized: NA Prepared: NA Analyzed: 18-Apr-88

Parameter	Result	Units	Reporting Limit
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	50

ND=Not Detected
NA=Not Applicable

Reported by: DN Approved by: SDB/BSM

The cover letter is an integral part of this report.
Rev 041588

SPECIAL COMPOUNDS

Method 624/CLP

Case: 9346/3758E
EPA ID: EW 139
Lab ID: 41070-1 Enseco ID: NA
Matrix: Water Sampled: 14-Apr-88 Received: 15-Apr-88
Authorized: 15-Apr-88 Prepared: 18-Apr-88 Analyzed: 18-Apr-88

Parameter	Result	Units	Reporting Limit
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	50

ND=Not Detected
NA=Not Applicable

Reported by: SES Approved by: SDB

The cover letter is an integral part of this report.
Rev 041588

SPECIAL COMPOUNDS

Method 624/CLP

Case: 9346/3758E
EPA ID: EW 140
Lab ID: 41070-2 Enseco ID: NA
Matrix: Water Sampled: 14-Apr-88 Received: 15-Apr-88
Authorized: 15-Apr-88 Prepared: 18-Apr-88 Analyzed: 18-Apr-88

Parameter	Result	Units	Reporting Limit
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	50

ND=Not Detected
NA=Not Applicable

Reported by: SES Approved by: SDB/BSM

The cover letter is an integral part of this report.
Rev 041588

SPECIAL COMPOUNDS

Method 624/CLP

Case: 9346/3758E
EPA ID: EW 141
Lab ID: 41070-3 Enseco ID: NA
Matrix: Water Sampled: 14-Apr-88 Received: 15-Apr-88
Authorized: 15-Apr-88 Prepared: 18-Apr-88 Analyzed: 18-Apr-88

Parameter	Result	Units	Reporting Limit
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	50

ND=Not Detected
NA=Not Applicable

Reported by: SES Approved by: SDB/BSM

The cover letter is an integral part of this report.
Rev 041588

SPECIAL COMPOUNDS

Method 624/CLP

Case: 9346/3758E
EPA ID: EW 142
Lab ID: 41070-4 Enseco ID: NA
Matrix: Water Sampled: 14-Apr-88 Received: 15-Apr-88
Authorized: 15-Apr-88 Prepared: 18-Apr-88 Analyzed: 18-Apr-88

Parameter	Result	Units	Reporting Limit
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	50

ND=Not Detected
NA=Not Applicable

Reported by: SES Approved by: SDB/BSM

The cover letter is an integral part of this report.
Rev 041588

SPECIAL COMPOUNDS

Method 624/CLP

Case: 9346/3758E
EPA ID: EW 145
Lab ID: 41070-5 Enseco ID: NA
Matrix: Water Sampled: 14-Apr-88 Received: 15-Apr-88
Authorized: 15-Apr-88 Prepared: 18-Apr-88 Analyzed: 18-Apr-88

Parameter	Result	Units	Reporting Limit
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	50

ND=Not Detected
NA=Not Applicable

Reported by: SES Approved by: SDB

The cover letter is an integral part of this report.
Rev 041588

SPECIAL COMPOUNDS

Method 624/CLP

Case: 9346/3758E
EPA ID: EW 141 MS
Lab ID: 41070-3MS Enseco ID: NA
Matrix: Water Sampled: 14-Apr-88 Received: 15-Apr-88
Authorized: 15-Apr-88 Prepared: 18-Apr-88 Analyzed: 18-Apr-88

Parameter	Result	Units	Reporting Limit
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	50

ND=Not Detected
NA=Not Applicable

Reported by: SES Approved by: SDB/BSM

The cover letter is an integral part of this report.
Rev 041588

SPECIAL COMPOUNDS

Method 624/CLP

Case: 9346/3758E
EPA ID: EW 141 MSD
Lab ID: 41070-3MSD Enseco ID: NA
Matrix: Water Sampled: 14-Apr-88 Received: 15-Apr-88
Authorized: 15-Apr-88 Prepared: 18-Apr-88 Analyzed: 18-Apr-88

Parameter	Result	Units	Reporting Limit
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	50

ND=Not Detected
NA=Not Applicable

Reported by: SES Approved by: SDB/BSM

The cover letter is an integral part of this report.
Rev 041588

Sample Number
EEW 139

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 9346/3758E

Lab Sample ID No: 41070-1

QC Report No: 3758E

Sample Matrix: WATER

Contract No: 68-W8-0069

Data Release Authorized By:

Date Sample Received: 4/15/88

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 4/18/88

Date Analyzed: 4/18/88

Conc/Dil Factor: 1 pH: NR

Percent Moisture: NR

Percent Moisture (Decanted): NR

CAS Number		ug/L
74-87-3	Chloromethane	5 U
74-83-9	Bromomethane	5 U
75-01-4	Vinyl Chloride	5 U
75-00-3	Chloroethane	1 U
75-09-2	Methylene Chloride	5 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	1 U
75-35-4	1,1-Dichloroethene	1 U
75-34-3	1,1-Dichloroethane	1 U
156-60-5	Trans-1,2-Dichloroethene	1 U
67-66-3	Chloroform	1 U
107-06-2	1,2-Dichloroethane	1 U
78-93-3	2-Butanone	10 U
71-55-6	1,1,1-Trichloroethane	1 U
56-23-5	Carbon Tetrachloride	1 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	1 U

CAS Number		ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1 U
78-87-5	1,2-Dichloropropane	1 U
10061-02-6	Trans-1,3-Dichloropropene	1 U
79-01-6	Trichloroethene	1 U
124-48-1	Dibromochloromethane	1 U
79-00-5	1,1,2-Trichloroethane	1 U
71-43-2	Benzene	1 U
10061-01-5	cis-1,3-Dichloropropene	1 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	1 U
591-78-6	2-Hexanone	10 U
108-10-1	4-Methyl-2-Pentanone	10 U
127-18-4	Tetrachloroethene	1 U
108-88-3	Toluene	1 U
108-90-7	Chlorobenzene	1 U
100-41-4	Ethylbenzene	1 U
100-42-5	Styrene	1 U
	Total Xylenes	1 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/ dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J). If limit of detection is 10ug/l and a concentration of 3ug/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >= 10ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NA Not Analyzed.

See cover letter.

NR Not Required.

S Spiked Compound.

22

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:9346/3758E

Sample Number
EW139

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 4/18/88

Date Analyzed: 4/25/88

Conc/DiL Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: YES

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/L
108-95-2	Phenol	1.0 U
111-44-4	bis(-2-Chloroethyl)Ether	1.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	1.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	1.0 U
67-72-1	Hexachloroethane	1.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	1.0 U
105-67-9	2,4-Dimethylphenol	1.0 U
65-85-0	Benzoic Acid	20 U
111-91-1	bis(-2-Chloroethoxy)Methane	1.0 U
120-83-2	2,4-Dichlorophenol	1.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	1.0 U
87-68-3	Hexachlorobutadiene	1.0 U
59-50-7	4-Chloro-3-Methylphenol	1.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	1.0 U
88-06-2	2,4,6-Trichlorophenol	1.0 U
95-95-4	2,4,5-Trichlorophenol	1.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethyl Phthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	5.0 U

CAS Number		ug/L
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	15 U
100-02-7	4-Nitrophenol	15 U
132-64-9	Dibenzofuran	1.0 U
121-14-2	2,4-Dinitrotoluene	1.0 U
606-20-2	2,6-Dinitrotoluene	1.0 U
84-66-2	Diethylphthalate	1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0 U
86-73-7	Fluorene	1.0 U
100-01-6	4-Nitroaniline	5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	15 U
86-30-6	N-Nitrosodiphenylamine(1)	1.5 U
101-55-3	4-Bromophenyl-phenylether	1.5 U
118-74-1	Hexachlorobenzene	1.5 U
87-86-5	Pentachlorophenol	2.0 U
85-01-8	Phenanthrene	1.0 U
120-12-7	Anthracene	2.5 U
84-74-2	Di-n-Butylphthalate	2.0 U
206-44-0	Fluoranthene	1.5 U
129-00-0	Pyrene	1.5 U
85-68-7	Butylbenzylphthalate	3.5 U
91-94-1	3,3'-Dichlorobenzidine	20 U
56-55-3	Benzo(a)Anthracene	1.5 U
117-81-7	bis(2-Ethylhexyl)Phthalate	3 ~~B~~ U
218-01-9	Chrysene	1.5 U
117-84-0	Di-n-Octyl Phthalate	1.5 U
205-99-2	Benzo(b)Fluoranthene	1.5 U
207-08-9	Benzo(k)Fluoranthene	1.5 U
50-32-8	Benzo(a)Pyrene	2.0 U
193-39-5	Indeno(1,2,3-cd)Pyrene	3.5 U
53-70-3	Dibenz(a,h)Anthracene	2.5 U
191-24-2	Benzo(g,h,i)Perylene	4.0 U

RK 5/24

(1) - Cannot be separated from diphenylamine

CLF: 10/11/85

Form I

Prepared by: CM

7/85

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:9346/3758E

Sample Number
EW 139

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

GPC Cleanup: NO

Date Extracted/Prepared: 04/18/88

Separatory Funnel Extraction: YES

Date Analyzed: 04/26/88

Continuous Liquid - Liquid Extraction: NO

Conc/Dil Factor: 1

CAS Number		ug/L
319-84-6	Alpha-BHC	0.010 U
319-85-7	Beta-BHC	0.0050 U
319-86-8	Delta-BHC	0.0050 U
58-89-9	Gamma-BHC (Lindane)	0.0050 U
76-44-8	Heptachlor	0.030 U
309-00-2	Aldrin	0.0050 U
1024-57-3	Heptachlor Epoxide	0.0050 U
959-98-8	Endosulfan I	0.010 U
60-57-1	Dieldrin	0.010 U
72-55-9	4,4'-DDE	0.0050 U
72-20-8	Endrin	0.010 U
33213-65-9	Endosulfan II	0.010 U
72-54-8	4,4'-DDD	0.020 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.020 U
72-43-5	Methoxychlor	0.020 U
53494-70-5	Endrin Ketone	0.030 U
57-74-9	Chlordane	0.020 U
8001-35-2	Toxaphene	0.25 U
12674-11-2	Aroclor-1016	0.10 U
11104-28-2	Aroclor-1221	0.10 U
11141-16-5	Aroclor-1232	0.10 U
53469-21-9	Aroclor-1242	0.10 U
12672-29-6	Aroclor-1248	0.10 U
11097-69-1	Aroclor-1254	0.10 U
11096-82-5	Aroclor-1260	0.10 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s =885 or W_s =NR V_t = 5000 V_i = 5

CLF: 11/14/85 Form I Prepared by: AR 7/85

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 9346/3758E Sample No. EW139,

GC Report No. 3/58E Lab Sample No. 4107001AB

Probability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= SOLVENT IMPURITY, see VOA

CAS#	COMPOUND NAME	SCAN FRACTION	NUMBER	PURITY	Estimated CONC. J VALUE
	No A/BN				

No volatile compounds qNP

FORM 1, PART B

Sample Number
EW 140

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 9346/3758E

Lab Sample ID No: 41070-2

QC Report No: 3758E

Sample Matrix: WATER

Contract No: 68-W8-0069

Data Release Authorized By:

Date Sample Received: 4/15/88

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 4/18/88

Date Analyzed: 4/18/88

Conc/Dil Factor: 1 pH: NR

Percent Moisture: NR

Percent Moisture (Decanted): NR

CAS Number		ug/L
74-87-3	Chloromethane	5 U
74-83-9	Bromomethane	5 U
75-01-4	Vinyl Chloride	5 U
75-00-3	Chloroethane	1 U
75-09-2	Methylene Chloride	5 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	1 U
75-35-4	1,1-Dichloroethene	1 U
75-34-3	1,1-Dichloroethane	1 U
156-60-5	Trans-1,2-Dichloroethene	1 U
67-66-3	Chloroform	1 U
107-06-2	1,2-Dichloroethane	1 U
78-93-3	2-Butanone	10 U
71-55-6	1,1,1-Trichloroethane	1 U
56-23-5	Carbon Tetrachloride	1 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	1 U

CAS Number		ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1 U
78-87-5	1,2-Dichloropropane	1 U
10061-02-6	Trans-1,3-Dichloropropene	1 U
79-01-6	Trichloroethene	1 U
124-48-1	Dibromochloromethane	1 U
79-00-5	1,1,2-Trichloroethane	1 U
71-43-2	Benzene	1 U
10061-01-5	cis-1,3-Dichloropropene	1 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	1 U
591-78-6	2-Hexanone	10 U
108-10-1	4-Methyl-2-Pentanone	10 U
127-18-4	Tetrachloroethene	1 U
108-88-3	Toluene	1 U
108-90-7	Chlorobenzene	1 U
100-41-4	Ethylbenzene	1 U
100-42-5	Styrene	1 U
	Total Xylenes	1 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

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J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J). If limit of detection is 10ug/l and a concentration of 3ug/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >= 10ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NA Not Analyzed.
See cover letter.
NR Not Required.
S Spiked Compound.

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No: 9346/3758E

Sample Number
EW140

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 4/18/88

Date Analyzed: 4/25/88

Conc/DiL Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: YES

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/L
108-95-2	Phenol	3
111-44-4	bis(-2-Chloroethyl)Ether	1.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	1.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	1.0 U
67-72-1	Hexachloroethane	1.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	1.0 U
105-67-9	2,4-Dimethylphenol	1.0 U
65-85-0	Benzoic Acid	20 U
111-91-1	bis(-2-Chloroethoxy)Methane	1.0 U
120-83-2	2,4-Dichlorophenol	1.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	1.0 U
87-68-3	Hexachlorobutadiene	1.0 U
59-50-7	4-Chloro-3-Methylphenol	1.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	1.0 U
88-06-2	2,4,6-Trichlorophenol	1.0 U
95-95-4	2,4,5-Trichlorophenol	1.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethyl Phthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	5.0 U

CAS Number		ug/L
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	15 U
100-02-7	4-Nitrophenol	15 U
132-64-9	Dibenzofuran	1.0 U
121-14-2	2,4-Dinitrotoluene	1.0 U
606-20-2	2,6-Dinitrotoluene	1.0 U
84-66-2	Diethylphthalate	1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0 U
86-73-7	Fluorene	1.0 U
100-01-6	4-Nitroaniline	5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	15 U
86-30-6	N-Nitrosodiphenylamine(1)	1.5 U
101-55-3	4-Bromophenyl-phenylether	1.5 U
118-74-1	Hexachlorobenzene	1.5 U
87-86-5	Pentachlorophenol	2.0 U
85-01-8	Phenanthrene	1.0 U
120-12-7	Anthracene	2.5 U
84-74-2	Di-n-Butylphthalate	2.0 U
206-44-0	Fluoranthene	1.5 U
129-00-0	Pyrene	1.5 U
85-68-7	Butylbenzylphthalate	3.5 U
91-94-1	3,3'-Dichlorobenzidine	20 U
56-55-3	Benzo(a)Anthracene	1.5 U
117-81-7	bis(2-Ethylhexyl)Phthalate	4.5 u
218-01-9	Chrysene	1.5 U
117-84-0	Di-n-Octyl Phthalate	1.5 U
205-99-2	Benzo(b)Fluoranthene	1.5 U
207-08-9	Benzo(k)Fluoranthene	1.5 U
50-32-8	Benzo(a)Pyrene	2.0 U
193-39-5	Indeno(1,2,3-cd)Pyrene	3.5 U
53-70-3	Dibenz(a,h)Anthracene	2.5 U
191-24-2	Benzo(g,h,i)Perylene	4.0 U

AK 5/24/

(1) - Cannot be separated from diphenylamine

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:9346/3758E

Sample Number
EW 140

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 04/18/88

Date Analyzed: 04/26/88

Conc/Dil Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: YES

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/L
319-84-6	Alpha-BHC	0.010 U
319-85-7	Beta-BHC	0.0050 U
319-86-8	Delta-BHC	0.0050 U
58-89-9	Gamma-BHC (Lindane)	0.0050 U
76-44-8	Heptachlor	0.030 U
309-00-2	Aldrin	0.0050 U
1024-57-3	Heptachlor Epoxide	0.0050 U
959-98-8	Endosulfan I	0.010 U
60-57-1	Dieldrin	0.010 U
72-55-9	4,4'-DDE	0.0050 U
72-20-8	Endrin	0.010 U
33213-65-9	Endosulfan II	0.010 U
72-54-8	4,4'-DDD	0.020 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.020 U
72-43-5	Methoxychlor	0.020 U
53494-70-5	Endrin Ketone	0.030 U
57-74-9	Chlordane	0.020 U
8001-35-2	Toxaphene	0.25 U
12674-11-2	Aroclor-1016	0.10 U
11104-28-2	Aroclor-1221	0.10 U
11141-16-5	Aroclor-1232	0.10 U
53469-21-9	Aroclor-1242	0.10 U
12672-29-6	Aroclor-1248	0.10 U
11097-69-1	Aroclor-1254	0.10 U
11096-82-5	Aroclor-1260	0.10 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s =900 or W_s =NR V_t = 5000 V_i = 5

CLF: 11/14/85 Form I Prepared by: AR 7/85

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 9346/3758E Sample No. EW140,

GC Report No. 3758E Lab Sample No. 4107002AB

Probability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= SOLVENT IMPURITY, see VOA

CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated CONC. J VALUE
	No A/BN				

No volatile compounds

FORM 1, PART B

Sample Number
EW 141

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 9346/3758E

Lab Sample ID No: 41070-3

QC Report No: 3758E

Sample Matrix: WATER

Contract No: 68-W8-0069

Data Release Authorized By:

Date Sample Received: 4/15/88

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 4/18/88

Date Analyzed: 4/18/88

Conc/Dil Factor: 1 pH: NR

Percent Moisture: NR

Percent Moisture (Decanted): NR

CAS Number		ug/L
74-87-3	Chloromethane	5 U
74-83-9	Bromomethane	5 U
75-01-4	Vinyl Chloride	5 U
75-00-3	Chloroethane	1 U
75-09-2	Methylene Chloride	5 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	1 U
75-35-4	1,1-Dichloroethene	1 U
75-34-3	1,1-Dichloroethane	1 U
156-60-5	Trans-1,2-Dichloroethene	1 U
67-66-3	Chloroform	1 U
107-06-2	1,2-Dichloroethane	1 U
78-93-3	2-Butanone	10 U
71-55-6	1,1,1-Trichloroethane	1 U
56-23-5	Carbon Tetrachloride	1 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	1 U

CAS Number		ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1 U
78-87-5	1,2-Dichloropropane	1 U
10061-02-6	Trans-1,3-Dichloropropene	1 U
79-01-6	Trichloroethene	1 U
124-48-1	Dibromochloromethane	1 U
79-00-5	1,1,2-Trichloroethane	1 U
71-43-2	Benzene	1 U
10061-01-5	cis-1,3-Dichloropropene	1 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	1 U
591-78-6	2-Hexanone	10 U
108-10-1	4-Methyl-2-Pentanone	10 U
127-18-4	Tetrachloroethene	1 U
108-88-3	Toluene	1 U
108-90-7	Chlorobenzene	1 U
100-41-4	Ethylbenzene	1 U
100-42-5	Styrene	1 U
	Total Xylenes	1 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/ dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J). If limit of detection is 10ug/l and a concentration of 3ug/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >= 10ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NA Not Analyzed.
See cover letter.
NR Not Required.
S Spiked Compound.

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No: 9346/3758E

Sample Number
EW141

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 4/18/88

Date Analyzed: 4/25/88

Conc/DiL Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: YES

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/L
108-95-2	Phenol	1.0 U
111-44-4	bis(-2-Chloroethyl)Ether	1.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	1.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	1.0 U
67-72-1	Hexachloroethane	1.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	1.0 U
105-67-9	2,4-Dimethylphenol	1.0 U
65-85-0	Benzoic Acid	20 U
111-91-1	bis(-2-Chloroethoxy)Methane	1.0 U
120-83-2	2,4-Dichlorophenol	1.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	1.0 U
87-68-3	Hexachlorobutadiene	1.0 U
59-50-7	4-Chloro-3-Methylphenol	1.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	1.0 U
88-06-2	2,4,6-Trichlorophenol	1.0 U
95-95-4	2,4,5-Trichlorophenol	1.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethyl Phthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	5.0 U

CAS Number		ug/L
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	15 U
100-02-7	4-Nitrophenol	15 U
132-64-9	Dibenzofuran	1.0 U
121-14-2	2,4-Dinitrotoluene	1.0 U
606-20-2	2,6-Dinitrotoluene	1.0 U
84-66-2	Diethylphthalate	1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0 U
86-73-7	Fluorene	1.0 U
100-01-6	4-Nitroaniline	5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	15 U
86-30-6	N-Nitrosodiphenylamine(1)	1.5 U
101-55-3	4-Bromophenyl-phenylether	1.5 U
118-74-1	Hexachlorobenzene	1.5 U
87-86-5	Pentachlorophenol	2.0 U
85-01-8	Phenanthrene	1.0 U
120-12-7	Anthracene	2.5 U
84-74-2	Di-n-Butylphthalate	2.0 U
206-44-0	Fluoranthene	1.5 U
129-00-0	Pyrene	1.5 U
85-68-7	Butylbenzylphthalate	3.5 U
91-94-1	3,3'-Dichlorobenzidine	20 U
56-55-3	Benzo(a)Anthracene	1.5 U
117-81-7	bis(2-Ethylhexyl)Phthalate	2.5 U
218-01-9	Chrysene	1.5 U
117-84-0	Di-n-Octyl Phthalate	1.5 U
205-99-2	Benzo(b)Fluoranthene	1.5 U
207-08-9	Benzo(k)Fluoranthene	1.5 U
50-32-8	Benzo(a)Pyrene	2.0 U
193-39-5	Indeno(1,2,3-cd)Pyrene	3.5 U
53-70-3	Dibenz(a,h)Anthracene	2.5 U
191-24-2	Benzo(g,h,i)Perylene	4.0 U

(1) - Cannot be separated from diphenylamine

CLF: 10/11/85

Form I

Prepared by:

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:9346/3758E

Sample Number
EW 141

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

GPC Cleanup: NO

Date Extracted/Prepared: 04/18/88

Separatory Funnel Extraction: YES

Date Analyzed: 04/27/88

Continuous Liquid - Liquid Extraction: NO

Conc/Dil Factor: 1

CAS Number		ug/L
319-84-6	Alpha-BHC	0.010 U
319-85-7	Beta-BHC	0.0050 U
319-86-8	Delta-BHC	0.0050 U
58-89-9	Gamma-BHC (Lindane)	0.0050 U
76-44-8	Heptachlor	0.030 U
309-00-2	Aldrin	0.0050 U
1024-57-3	Heptachlor Epoxide	0.0050 U
959-98-8	Endosulfan I	0.010 U
60-57-1	Dieldrin	0.010 U
72-55-9	4,4'-DDE	0.0050 U
72-20-8	Endrin	0.010 U
33213-65-9	Endosulfan II	0.010 U
72-54-8	4,4'-DDD	0.020 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.020 U
72-43-5	Methoxychlor	0.020 U
53494-70-5	Endrin Ketone	0.030 U
57-74-9	Chlordane	0.020 U
8001-35-2	Toxaphene	0.25 U
12674-11-2	Aroclor-1016	0.10 U
11104-28-2	Aroclor-1221	0.10 U
11141-16-5	Aroclor-1232	0.10 U
53469-21-9	Aroclor-1242	0.10 U
12672-29-6	Aroclor-1248	0.10 U
11097-69-1	Aroclor-1254	0.10 U
11096-82-5	Aroclor-1260	0.10 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s =880 or W_s =NR V_t = 5000 V_i = 5

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 9346/3758E Sample No. EW141,

GC Report No. 3758E Lab Sample No. 4107003AB

Probability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= SOLVENT IMPURITY, see VOA

CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated CONC. J VALUE
	No A/BN				

No Molalice Compounds

FORM 1, PART B

Sample Number
EW 142

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 9346/3758E

Lab Sample ID No: 41070-4

QC Report No: 3758E

Sample Matrix: WATER

Contract No: 68-W8-0069

Data Release Authorized By:

Date Sample Received: 4/15/88

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 4/19/88

Date Analyzed: 4/19/88

Conc/Dil Factor: 1 pH: NR

Percent Moisture: NR

Percent Moisture (Decanted): NR

CAS Number		ug/L
74-87-3	Chloromethane	5 U
74-83-9	Bromomethane	5 U
75-01-4	Vinyl Chloride	5 U
75-00-3	Chloroethane	1 U
75-09-2	Methylene Chloride	5 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	1 U
75-35-4	1,1-Dichloroethene	1 U
75-34-3	1,1-Dichloroethane	1 U
156-60-5	Trans-1,2-Dichloroethene	1 U
67-66-3	Chloroform	1 U
107-06-2	1,2-Dichloroethane	1 U
78-93-3	2-Butanone	10 U
71-55-6	1,1,1-Trichloroethane	1 U
56-23-5	Carbon Tetrachloride	1 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	1 U

CAS Number		ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1 U
78-87-5	1,2-Dichloropropane	1 U
10061-02-6	Trans-1,3-Dichloropropene	1 U
79-01-6	Trichloroethene	1 U
124-48-1	Dibromochloromethane	1 U
79-00-5	1,1,2-Trichloroethane	1 U
71-43-2	Benzene	1 U
10061-01-5	cis-1,3-Dichloropropene	1 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	1 U
591-78-6	2-Hexanone	10 U
108-10-1	4-Methyl-2-Pentanone	10 U
127-18-4	Tetrachloroethene	1 U
108-88-3	Toluene	1
108-90-7	Chlorobenzene	1 U
100-41-4	Ethylbenzene	1 U
100-42-5	Styrene	1 U
	Total Xylenes	1 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/ dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J). If limit of detection is 10ug/l and a concentration of 3ug/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >= 10ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NA Not Analyzed.
See cover letter.
NR Not Required.
S Spiked Compound.

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:9346/3758E

Sample Number
EW142

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 4/18/88

Date Analyzed: 4/18/88

Conc/DiL Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: YES

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/L
108-95-2	Phenol	3
111-44-4	bis(-2-Chloroethyl)Ether	1.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	1.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	1.0 U
67-72-1	Hexachloroethane	1.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	1.0 U
105-67-9	2,4-Dimethylphenol	1.0 U
65-85-0	Benzoic Acid	20 U
111-91-1	bis(-2-Chloroethoxy)Methane	1.0 U
120-83-2	2,4-Dichlorophenol	1.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	1.0 U
87-68-3	Hexachlorobutadiene	1.0 U
59-50-7	4-Chloro-3-Methylphenol	1.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	1.0 U
88-06-2	2,4,6-Trichlorophenol	1.0 U
95-95-4	2,4,5-Trichlorophenol	1.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethyl Phthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	5.0 U

CAS Number		ug/L
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	15 U
100-02-7	4-Nitrophenol	15 U
132-64-9	Dibenzofuran	1.0 U
121-14-2	2,4-Dinitrotoluene	1.0 U
606-20-2	2,6-Dinitrotoluene	1.0 U
84-66-2	Diethylphthalate	1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0 U
86-73-7	Fluorene	1.0 U
100-01-6	4-Nitroaniline	5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	15 U
86-30-6	N-Nitrosodiphenylamine(1)	1.5 U
101-55-3	4-Bromophenyl-phenylether	1.5 U
118-74-1	Hexachlorobenzene	1.5 U
87-86-5	Pentachlorophenol	2.0 U
85-01-8	Phenanthrene	1.0 U
120-12-7	Anthracene	2.5 U
84-74-2	Di-n-Butylphthalate	2.0 U
206-44-0	Fluoranthene	1.5 U
129-00-0	Pyrene	1.5 U
85-68-7	Butylbenzylphthalate	3.5 U
91-94-1	3,3'-Dichlorobenzidine	20 U
56-55-3	Benzo(a)Anthracene	1.5 U
117-81-7	bis(2-Ethylhexyl)Phthalate	3.5 U
218-01-9	Chrysene	1.5 U
117-84-0	Di-n-Octyl Phthalate	1.5 U
205-99-2	Benzo(b)Fluoranthene	1.5 U
207-08-9	Benzo(k)Fluoranthene	1.5 U
50-32-8	Benzo(a)Pyrene	2.0 U
193-39-5	Indeno(1,2,3-cd)Pyrene	3.5 U
53-70-3	Dibenz(a,h)Anthracene	2.5 U
191-24-2	Benzo(g,h,i)Perylene	4.0 U

RK. 5/04

(1) - Cannot be separated from diphenylamine

CLF: 10/11/85

Form I

Prepared by: CM

7/85

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:9346/3758E

Sample Number
EW 142

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

GPC Cleanup: NO

Date Extracted/Prepared: 04/18/88

Separatory Funnel Extraction: YES

Date Analyzed: 04/27/88

Continuous Liquid - Liquid Extraction: NO

Conc/Dil Factor: 1

CAS Number		ug/L
319-84-6	Alpha-BHC	0.010 U
319-85-7	Beta-BHC	0.0050 U
319-86-8	Delta-BHC	0.0050 U
58-89-9	Gamma-BHC (Lindane)	0.0050 U
76-44-8	Heptachlor	0.030 U
309-00-2	Aldrin	0.0050 U
1024-57-3	Heptachlor Epoxide	0.0050 U
959-98-8	Endosulfan I	0.010 U
60-57-1	Dieldrin	0.010 U
72-55-9	4,4'-DDE	0.0050 U
72-20-8	Endrin	0.010 U
33213-65-9	Endosulfan II	0.010 U
72-54-8	4,4'-DDD	0.020 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.020 U
72-43-5	Methoxychlor	0.020 U
53494-70-5	Endrin Ketone	0.030 U
57-74-9	Chlordane	0.020 U
8001-35-2	Toxaphene	0.25 U
12674-11-2	Aroclor-1016	0.10 U
11104-28-2	Aroclor-1221	0.10 U
11141-16-5	Aroclor-1232	0.10 U
53469-21-9	Aroclor-1242	0.10 U
12672-29-6	Aroclor-1248	0.10 U
11097-69-1	Aroclor-1254	0.10 U
11096-82-5	Aroclor-1260	0.10 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s =925 or W_s =NR V_t = 5000 V_i = 5

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 9346/3758E Sample No. EW 142

QC Report No. 3758E Lab Sample No. 4107004AB

Probability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= SOLVENT IMPURITY, see VOA

CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated CONC. J VALUE
	No A/BN				

No volatile Compounds

FORM 1, PART B

Sample Number
EW 145

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 9346/3758E

Lab Sample ID No: 41070-5

QC Report No: 3758E

Sample Matrix: WATER

Contract No: 68-W8-0069

Data Release Authorized By:

Date Sample Received: 4/15/88

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 4/19/88

Date Analyzed: 4/19/88

Conc/Dil Factor: 1 pH: NR

Percent Moisture: NR

Percent Moisture (Decanted): NR

CAS Number		ug/L
74-87-3	Chloromethane	5 U
74-83-9	Bromomethane	5 U
75-01-4	Vinyl Chloride	5 U
75-00-3	Chloroethane	1 U
75-09-2	Methylene Chloride	5 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	1 U
75-35-4	1,1-Dichloroethene	1 U
75-34-3	1,1-Dichloroethane	1 U
156-60-5	Trans-1,2-Dichloroethene	1 U
67-66-3	Chloroform	3
107-06-2	1,2-Dichloroethane	1 U
78-93-3	2-Butanone	1
71-55-6	1,1,1-Trichloroethane	1 U
56-23-5	Carbon Tetrachloride	1 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	2

CAS Number		ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1 U
78-87-5	1,2-Dichloropropane	1 U
10061-02-6	Trans-1,3-Dichloropropene	1 U
79-01-6	Trichloroethene	1 U
124-48-1	Dibromochloromethane	1 U
79-00-5	1,1,2-Trichloroethane	1 U
71-43-2	Benzene	1 U
10061-01-5	cis-1,3-Dichloropropene	1 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	1 U
591-78-6	2-Hexanone	10 U
108-10-1	4-Methyl-2-Pentanone	10 U
127-18-4	Tetrachloroethene	1 U
108-88-3	Toluene	2
108-90-7	Chlorobenzene	1 U
100-41-4	Ethylbenzene	1 U
100-42-5	Styrene	1 U
	Total Xylenes	1 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/ dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J). If limit of detection is 10ug/l and a concentration of 3ug/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >= 10ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NA Not Analyzed.
See cover letter.
NR Not Required.
S Spiked Compound.

CLF: 11/14/85 Form I Prepared by: AR 10/85

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No: 9346/3758E

Sample Number
EW145

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 4/18/88

Date Analyzed: 4/25/88

Conc/Dil. Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: YES

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/L
108-95-2	Phenol	6
111-44-4	bis(-2-Chloroethyl)Ether	1.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	1.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	1.0 U
67-72-1	Hexachloroethane	1.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	1.0 U
105-67-9	2,4-Dimethylphenol	1.0 U
65-85-0	Benzoic Acid	20 U
111-91-1	bis(-2-Chloroethoxy)Methane	1.0 U
120-83-2	2,4-Dichlorophenol	1.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	1.0 U
87-68-3	Hexachlorobutadiene	1.0 U
59-50-7	4-Chloro-3-Methylphenol	1.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	1.0 U
88-06-2	2,4,6-Trichlorophenol	1.0 U
95-95-4	2,4,5-Trichlorophenol	1.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethyl Phthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	5.0 U

CAS Number		ug/L
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	15 U
100-02-7	4-Nitrophenol	15 U
132-64-9	Dibenzofuran	1.0 U
121-14-2	2,4-Dinitrotoluene	1.0 U
606-20-2	2,6-Dinitrotoluene	1.0 U
84-66-2	Diethylphthalate	1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0 U
86-73-7	Fluorene	1.0 U
100-01-6	4-Nitroaniline	5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	15 U
86-30-6	N-Nitrosodiphenylamine(1)	1.5 U
101-55-3	4-Bromophenyl-phenylether	1.5 U
118-74-1	Hexachlorobenzene	1.5 U
87-86-5	Pentachlorophenol	2.0 U
85-01-8	Phenanthrene	1.0 U
120-12-7	Anthracene	2.5 U
84-74-2	Di-n-Butylphthalate	2.0 U
206-44-0	Fluoranthene	1.5 U
129-00-0	Pyrene	1.5 U
85-68-7	Butylbenzylphthalate	3.5 U
91-94-1	3,3'-Dichlorobenzidine	20 U
56-55-3	Benzo(a)Anthracene	1.5 U
117-81-7	bis(2-Ethylhexyl)Phthalate	3 B
218-01-9	Chrysene	1.5 U
117-84-0	Di-n-Octyl Phthalate	1.5 U
205-99-2	Benzo(b)Fluoranthene	1.5 U
207-08-9	Benzo(k)Fluoranthene	1.5 U
50-32-8	Benzo(a)Pyrene	2.0 U
193-39-5	Indeno(1,2,3-cd)Pyrene	3.5 U
53-70-3	Dibenz(a,h)Anthracene	2.5 U
191-24-2	Benzo(g,h,i)Perylene	4.0 U

RK 5/24/88

166

(1) - Cannot be separated from diphenylamine

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:9346/3758E

Sample Number
EW 145

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 04/18/88

Date Analyzed: 04/27/88

Conc/Dil Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: YES

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/L
319-84-6	Alpha-BHC	0.010 U
319-85-7	Beta-BHC	0.0050 U
319-86-8	Delta-BHC	0.0050 U
58-89-9	Gamma-BHC (Lindane)	0.0050 U
76-44-8	Heptachlor	0.030 U
309-00-2	Aldrin	0.0050 U
1024-57-3	Heptachlor Epoxide	0.0050 U
959-98-8	Endosulfan I	0.010 U
60-57-1	Dieldrin	0.010 U
72-55-9	4,4'-DDE	0.0050 U
72-20-8	Endrin	0.010 U
33213-65-9	Endosulfan II	0.010 U
72-54-8	4,4'-DDD	0.020 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.020 U
72-43-5	Methoxychlor	0.020 U
53494-70-5	Endrin Ketone	0.030 U
57-74-9	Chlordane	0.020 U
8001-35-2	Toxaphene	0.25 U
12674-11-2	Aroclor-1016	0.10 U
11104-28-2	Aroclor-1221	0.10 U
11141-16-5	Aroclor-1232	0.10 U
53469-21-9	Aroclor-1242	0.10 U
12672-29-6	Aroclor-1248	0.10 U
11097-69-1	Aroclor-1254	0.10 U
11096-82-5	Aroclor-1260	0.10 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s =850 or W_s =NR V_t = 5000 V_i = 5

CLF: 11/14/85 Form I Prepared by: AR 7/85

ORGANICS ANALYSIS DATA SHEET
PAGE 4
TENTATIVELY IDENTIFIED COMPOUNDS

LAB NAME: CAL CASE NO. ~~9207~~ 9346/3758E SAMPLE NO. EW 145

QC REPORT NO. 3758E LAB SAMPLE NO. 4107005V

PROBABILITY THAT IDENTIFICATION IS CORRECT:
A= HIGH B= MODERATE C= LOW D= SEE ABN

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	ESTIMATED CONC. J VALUE
1.	6245-99-4	OXETANE, 2,2-DIMETHYL-	VOA	84	609	1.8 UG/L

COMPOUND NAME	PROBABILITY	COMMENTS
1. OXETANE, 2,2-DIMETHYL-	1. ~~B~~ ~~B~~ A 1.	

FORM 1, PART B

ORGANICS ANALYSIS DATA SHEET
PAGE 4
TENTATIVELY IDENTIFIED COMPOUNDS

LAB NAME: CAL CASE NO. ~~9307~~ 9316 3758E SAMPLE NO. EW 145

QC REPORT NO. 3758E LAB SAMPLE NO. 4107005V

PROBABILITY THAT IDENTIFICATION IS CORRECT:
A= HIGH B= MODERATE C= LOW D= SEE ABN

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	ESTIMATED CONC. J VALUE
1.	75-28-5	PROPANE, 2-METHYL-	VOA	72	773	6.6 UG/L
2.	78-78-4	BUTANE, 2-METHYL-	VOA	169	887	0.3 UG/L
3.	124-48-1	METHANE, DIBROMOCHLORO-	VOA	234	826	0.5 UG/L

COMPOUND NAME	PROBABILITY	COMMENTS
1. PROPANE, 2-METHYL-	1. C	1.
2. BUTANE, 2-METHYL-	2. B	2.
3. METHANE, DIBROMOCHLORO-	3. A	3. HSL cmpd < CRDL.

FORM 1, PART B

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 9346/3758E Sample No. EW 145

QC Report No. 3758E Lab Sample No. 4107005AB

Probability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= SOLVENT IMPURITY, see VOA

CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated CONC. J VALUE
	No A/BN				

FORM 1, PART B

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No: 9346/3758E

Sample Number
EW140

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 4/18/88

Date Analyzed: 4/25/88

Conc/Dil. Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: YES

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/L
108-95-2	Phenol	3
111-44-4	bis(-2-Chloroethyl)Ether	1.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	1.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	1.0 U
67-72-1	Hexachloroethane	1.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	1.0 U
105-67-9	2,4-Dimethylphenol	1.0 U
65-85-0	Benzoic Acid	20 U
111-91-1	bis(-2-Chloroethoxy)Methane	1.0 U
120-83-2	2,4-Dichlorophenol	1.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	1.0 U
87-68-3	Hexachlorobutadiene	1.0 U
59-50-7	4-Chloro-3-Methylphenol	1.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	1.0 U
88-06-2	2,4,6-Trichlorophenol	1.0 U
95-95-4	2,4,5-Trichlorophenol	1.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethyl Phthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	5.0 U

CAS Number		ug/L
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	15 U
100-02-7	4-Nitrophenol	15 U
132-64-9	Dibenzofuran	1.0 U
121-14-2	2,4-Dinitrotoluene	1.0 U
606-20-2	2,6-Dinitrotoluene	1.0 U
84-66-2	Diethylphthalate	1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0 U
86-73-7	Fluorene	1.0 U
100-01-6	4-Nitroaniline	5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	15 U
86-30-6	N-Nitrosodiphenylamine(1)	1.5 U
101-55-3	4-Bromophenyl-phenylether	1.5 U
118-74-1	Hexachlorobenzene	1.5 U
87-86-5	Pentachlorophenol	2.0 U
85-01-8	Phenanthrene	1.0 U
120-12-7	Anthracene	2.5 U
84-74-2	Di-n-Butylphthalate	2.0 U
206-44-0	Fluoranthene	1.5 U
129-00-0	Pyrene	1.5 U
85-68-7	Butylbenzylphthalate	3.5 U
91-94-1	3,3'-Dichlorobenzidine	20 U
56-55-3	Benzo(a)Anthracene	1.5 U
117-81-7	bis(2-Ethylhexyl)Phthalate	4.5 u
218-01-9	Chrysene	1.5 U
117-84-0	Di-n-Octyl Phthalate	1.5 U
205-99-2	Benzo(b)Fluoranthene	1.5 U
207-08-9	Benzo(k)Fluoranthene	1.5 U
50-32-8	Benzo(a)Pyrene	2.0 U
193-39-5	Indeno(1,2,3-cd)Pyrene	3.5 U
53-70-3	Dibenz(a,h)Anthracene	2.5 U
191-24-2	Benzo(g,h,i)Perylene	4.0 U

AK 5/4/88

(1) - Cannot be separated from diphenylamine

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:9346/3758E

Sample Number
EW 140

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 04/18/88

Date Analyzed: 04/26/88

Conc/Dil Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: YES

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/L
319-84-6	Alpha-BHC	0.010 U
319-85-7	Beta-BHC	0.0050 U
319-86-8	Delta-BHC	0.0050 U
58-89-9	Gamma-BHC (Lindane)	0.0050 U
76-44-8	Heptachlor	0.030 U
309-00-2	Aldrin	0.0050 U
1024-57-3	Heptachlor Epoxide	0.0050 U
959-98-8	Endosulfan I	0.010 U
60-57-1	Dieldrin	0.010 U
72-55-9	4,4'-DDE	0.0050 U
72-20-8	Endrin	0.010 U
33213-65-9	Endosulfan II	0.010 U
72-54-8	4,4'-DDD	0.020 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.020 U
72-43-5	Methoxychlor	0.020 U
53494-70-5	Endrin Ketone	0.030 U
57-74-9	Chlordane	0.020 U
8001-35-2	Toxaphene	0.25 U
12674-11-2	Aroclor-1016	0.10 U
11104-28-2	Aroclor-1221	0.10 U
11141-16-5	Aroclor-1232	0.10 U
53469-21-9	Aroclor-1242	0.10 U
12672-29-6	Aroclor-1248	0.10 U
11097-69-1	Aroclor-1254	0.10 U
11096-82-5	Aroclor-1260	0.10 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s =900 or W_s =NR V_t = 5000 V_i = 5

CLF: 11/14/85 Form I Prepared by: AR 7/85

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 9346/3758E Sample No. EW140,

GC Report No. 3758E Lab Sample No. 4107002AB

Probability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= SOLVENT IMPURITY, see VOA

CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated CONC. J VALUE
	No A/BN				

No volatile compounds

FORM 1, PART B

Sample Number
EW 141

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 9346/3758E

Lab Sample ID No: 41070-3

QC Report No: 3758E

Sample Matrix: WATER

Contract No: 68-W8-0069

Data Release Authorized By:

Date Sample Received: 4/15/88

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 4/18/88

Date Analyzed: 4/18/88

Conc/Dil Factor: 1 pH: NR

Percent Moisture: NR

Percent Moisture (Decanted): NR

CAS Number		ug/L
74-87-3	Chloromethane	5 U
74-83-9	Bromomethane	5 U
75-01-4	Vinyl Chloride	5 U
75-00-3	Chloroethane	1 U
75-09-2	Methylene Chloride	5 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	1 U
75-35-4	1,1-Dichloroethene	1 U
75-34-3	1,1-Dichloroethane	1 U
156-60-5	Trans-1,2-Dichloroethene	1 U
67-66-3	Chloroform	1 U
107-06-2	1,2-Dichloroethane	1 U
78-93-3	2-Butanone	10 U
71-55-6	1,1,1-Trichloroethane	1 U
56-23-5	Carbon Tetrachloride	1 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	1 U

CAS Number		ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1 U
78-87-5	1,2-Dichloropropane	1 U
10061-02-6	Trans-1,3-Dichloropropene	1 U
79-01-6	Trichloroethene	1 U
124-48-1	Dibromochloromethane	1 U
79-00-5	1,1,2-Trichloroethane	1 U
71-43-2	Benzene	1 U
10061-01-5	cis-1,3-Dichloropropene	1 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	1 U
591-78-6	2-Hexanone	10 U
108-10-1	4-Methyl-2-Pentanone	10 U
127-18-4	Tetrachloroethene	1 U
108-88-3	Toluene	1 U
108-90-7	Chlorobenzene	1 U
100-41-4	Ethylbenzene	1 U
100-42-5	Styrene	1 U
	Total Xylenes	1 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J). If limit of detection is 10ug/l and a concentration of 3ug/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >= 10ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NA Not Analyzed.
See cover letter.
NR Not Required.
S Spiked Compound.

CLF: 11/14/85

Form I

Prepared by: AR

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No: 9346/3758E

Sample Number
EW141

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 4/18/88

Date Analyzed: 4/25/88

Conc/Dil. Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: YES

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/L
108-95-2	Phenol	1.0 U
111-44-4	bis(-2-Chloroethyl)Ether	1.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	1.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	1.0 U
67-72-1	Hexachloroethane	1.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	1.0 U
105-67-9	2,4-Dimethylphenol	1.0 U
65-85-0	Benzoic Acid	20 U
111-91-1	bis(-2-Chloroethoxy)Methane	1.0 U
120-83-2	2,4-Dichlorophenol	1.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	1.0 U
87-68-3	Hexachlorobutadiene	1.0 U
59-50-7	4-Chloro-3-Methylphenol	1.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	1.0 U
88-06-2	2,4,6-Trichlorophenol	1.0 U
95-95-4	2,4,5-Trichlorophenol	1.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethyl Phthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	5.0 U

CAS Number		ug/L
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	15 U
100-02-7	4-Nitrophenol	15 U
132-64-9	Dibenzofuran	1.0 U
121-14-2	2,4-Dinitrotoluene	1.0 U
606-20-2	2,6-Dinitrotoluene	1.0 U
84-66-2	Diethylphthalate	1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0 U
86-73-7	Fluorene	1.0 U
100-01-6	4-Nitroaniline	5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	15 U
86-30-6	N-Nitrosodiphenylamine(1)	1.5 U
101-55-3	4-Bromophenyl-phenylether	1.5 U
118-74-1	Hexachlorobenzene	1.5 U
87-86-5	Pentachlorophenol	2.0 U
85-01-8	Phenanthrene	1.0 U
120-12-7	Anthracene	2.5 U
84-74-2	Di-n-Butylphthalate	2.0 U
206-44-0	Fluoranthene	1.5 U
129-00-0	Pyrene	1.5 U
85-68-7	Butylbenzylphthalate	3.5 U
91-94-1	3,3'-Dichlorobenzidine	20 U
56-55-3	Benzo(a)Anthracene	1.5 U
117-81-7	bis(2-Ethylhexyl)Phthalate	2.5 U
218-01-9	Chrysene	1.5 U
117-84-0	Di-n-Octyl Phthalate	1.5 U
205-99-2	Benzo(b)Fluoranthene	1.5 U
207-08-9	Benzo(k)Fluoranthene	1.5 U
50-32-8	Benzo(a)Pyrene	2.0 U
193-39-5	Indeno(1,2,3-cd)Pyrene	3.5 U
53-70-3	Dibenz(a,h)Anthracene	2.5 U
191-24-2	Benzo(g,h,i)Perylene	4.0 U

(1) - Cannot be separated from diphenylamine

CLF: 10/11/85

Form I

Prepared by:

7/85

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:9346/3758E

Sample Number
EW 141

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

GPC Cleanup: NO

Date Extracted/Prepared: 04/18/88

Separatory Funnel Extraction: YES

Date Analyzed: 04/27/88

Continuous Liquid - Liquid Extraction: NO

Conc/Dil Factor: 1

CAS Number		ug/L
319-84-6	Alpha-BHC	0.010 U
319-85-7	Beta-BHC	0.0050 U
319-86-8	Delta-BHC	0.0050 U
58-89-9	Gamma-BHC (Lindane)	0.0050 U
76-44-8	Heptachlor	0.030 U
309-00-2	Aldrin	0.0050 U
1024-57-3	Heptachlor Epoxide	0.0050 U
959-98-8	Endosulfan I	0.010 U
60-57-1	Dieldrin	0.010 U
72-55-9	4,4'-DDE	0.0050 U
72-20-8	Endrin	0.010 U
33213-65-9	Endosulfan II	0.010 U
72-54-8	4,4'-DDD	0.020 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.020 U
72-43-5	Methoxychlor	0.020 U
53494-70-5	Endrin Ketone	0.030 U
57-74-9	Chlordane	0.020 U
8001-35-2	Toxaphene	0.25 U
12674-11-2	Aroclor-1016	0.10 U
11104-28-2	Aroclor-1221	0.10 U
11141-16-5	Aroclor-1232	0.10 U
53469-21-9	Aroclor-1242	0.10 U
12672-29-6	Aroclor-1248	0.10 U
11097-69-1	Aroclor-1254	0.10 U
11096-82-5	Aroclor-1260	0.10 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s =880 or W_s =NR V_t = 5000 V_i = 5

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 9346/3758E Sample No. EW141,

GC Report No. 3758E Lab Sample No. 4107003AB

Probability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= SOLVENT IMPURITY, see VOA

CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated CONC. J VALUE
	No A/BN				

No Molalice Compounds

FORM 1, PART B

Sample Number
EW 142

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Lab Sample ID No: 41070-4

Sample Matrix: WATER

Data Release Authorized By:

Case No: 9346/3758E

QC Report No: 3758E

Contract No: 68-W8-0069

Date Sample Received: 4/15/88

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 4/19/88

Date Analyzed: 4/19/88

Conc/Dil Factor: 1 pH: NR

Percent Moisture: NR

Percent Moisture (Decanted): NR

CAS Number		ug/L
74-87-3	Chloromethane	5 U
74-83-9	Bromomethane	5 U
75-01-4	Vinyl Chloride	5 U
75-00-3	Chloroethane	1 U
75-09-2	Methylene Chloride	5 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	1 U
75-35-4	1,1-Dichloroethene	1 U
75-34-3	1,1-Dichloroethane	1 U
156-60-5	Trans-1,2-Dichloroethene	1 U
67-66-3	Chloroform	1 U
107-06-2	1,2-Dichloroethane	1 U
78-93-3	2-Butanone	10 U
71-55-6	1,1,1-Trichloroethane	1 U
56-23-5	Carbon Tetrachloride	1 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	1 U

CAS Number		ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1 U
78-87-5	1,2-Dichloropropane	1 U
10061-02-6	Trans-1,3-Dichloropropene	1 U
79-01-6	Trichloroethene	1 U
124-48-1	Dibromochloromethane	1 U
79-00-5	1,1,2-Trichloroethane	1 U
71-43-2	Benzene	1 U
10061-01-5	cis-1,3-Dichloropropene	1 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	1 U
591-78-6	2-Hexanone	10 U
108-10-1	4-Methyl-2-Pentanone	10 U
127-18-4	Tetrachloroethene	1 U
108-88-3	Toluene	1
108-90-7	Chlorobenzene	1 U
100-41-4	Ethylbenzene	1 U
100-42-5	Styrene	1 U
	Total Xylenes	1 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/ dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J). If limit of detection is 10ug/l and a concentration of 3ug/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >= 10ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NA Not Analyzed.
See cover letter.
NR Not Required.
S Spiked Compound.

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:9346/3758E

Sample Number
EW142

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 4/18/88

Date Analyzed: 4/18/88

Conc/DiL Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: YES

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/L
108-95-2	Phenol	3
111-44-4	bis(-2-Chloroethyl)Ether	1.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	1.0 U
39638-32-9	bis(2-chloroisopropyl)Ether	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	1.0 U
67-72-1	Hexachloroethane	1.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	1.0 U
105-67-9	2,4-Dimethylphenol	1.0 U
65-85-0	Benzoic Acid	20 U
111-91-1	bis(-2-Chloroethoxy)Methane	1.0 U
120-83-2	2,4-Dichlorophenol	1.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	1.0 U
87-68-3	Hexachlorobutadiene	1.0 U
59-50-7	4-Chloro-3-Methylphenol	1.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	1.0 U
88-06-2	2,4,6-Trichlorophenol	1.0 U
95-95-4	2,4,5-Trichlorophenol	1.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethyl Phthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	5.0 U

CAS Number		ug/L
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	15 U
100-02-7	4-Nitrophenol	15 U
132-64-9	Dibenzofuran	1.0 U
121-14-2	2,4-Dinitrotoluene	1.0 U
606-20-2	2,6-Dinitrotoluene	1.0 U
84-66-2	Diethylphthalate	1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0 U
86-73-7	Fluorene	1.0 U
100-01-6	4-Nitroaniline	5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	15 U
86-30-6	N-Nitrosodiphenylamine(1)	1.5 U
101-55-3	4-Bromophenyl-phenylether	1.5 U
118-74-1	Hexachlorobenzene	1.5 U
87-86-5	Pentachlorophenol	2.0 U
85-01-8	Phenanthrene	1.0 U
120-12-7	Anthracene	2.5 U
84-74-2	Di-n-Butylphthalate	2.0 U
206-44-0	Fluoranthene	1.5 U
129-00-0	Pyrene	1.5 U
85-68-7	Butylbenzylphthalate	2.5 U
91-94-1	3,3'-Dichlorobenzidine	20 U
56-55-3	Benzo(a)Anthracene	1.5 U
117-81-7	bis(2-Ethylhexyl)Phthalate	3.5
218-01-9	Chrysene	1.5 U
117-84-0	Di-n-Octyl Phthalate	1.5 U
205-99-2	Benzo(b)Fluoranthene	1.5 U
207-08-9	Benzo(k)Fluoranthene	1.5 U
50-32-8	Benzo(a)Pyrene	2.0 U
193-39-5	Indeno(1,2,3-cd)Pyrene	3.5 U
53-70-3	Dibenz(a,h)Anthracene	2.5 U
191-24-2	Benzo(g,h,i)Perylene	4.0 U

(1) - Cannot be separated from diphenylamine

CLF: 10/11/85 Form I Prepared by: CM 7/85

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:9346/3758E

Sample Number
EW 142

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 04/18/88

Date Analyzed: 04/27/88

Conc/Dil Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: YES

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/L
319-84-6	Alpha-BHC	0.010 U
319-85-7	Beta-BHC	0.0050 U
319-86-8	Delta-BHC	0.0050 U
58-89-9	Gamma-BHC (Lindane)	0.0050 U
76-44-8	Heptachlor	0.030 U
309-00-2	Aldrin	0.0050 U
1024-57-3	Heptachlor Epoxide	0.0050 U
959-98-8	Endosulfan I	0.010 U
60-57-1	Dieldrin	0.010 U
72-55-9	4,4'-DDE	0.0050 U
72-20-8	Endrin	0.010 U
33213-65-9	Endosulfan II	0.010 U
72-54-8	4,4'-DDD	0.020 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.020 U
72-43-5	Methoxychlor	0.020 U
53494-70-5	Endrin Ketone	0.030 U
57-74-9	Chlordane	0.020 U
8001-35-2	Toxaphene	0.25 U
12674-11-2	Aroclor-1016	0.10 U
11104-28-2	Aroclor-1221	0.10 U
11141-16-5	Aroclor-1232	0.10 U
53469-21-9	Aroclor-1242	0.10 U
12672-29-6	Aroclor-1248	0.10 U
11097-69-1	Aroclor-1254	0.10 U
11096-82-5	Aroclor-1260	0.10 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s =925 or W_s =NR V_t = 5000 V_i = 5

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 9346/3758E Sample No. EW 142
QC Report No. 3759E Lab Sample No. 4107004AB

Probability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= SOLVENT IMPURITY, see VOA

CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated CONC. J VALUE
	No A/BN				

No volatile Compounds

FORM 1, PART B

Sample Number
EW 145

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 9346/3758E

Lab Sample ID No: 41070-5

QC Report No: 3758E

Sample Matrix: WATER

Contract No: 68-W8-0069

Data Release Authorized By:

Date Sample Received: 4/15/88

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 4/19/88

Date Analyzed: 4/19/88

Conc/Dil Factor: 1 pH: NR

Percent Moisture: NR

Percent Moisture (Decanted): NR

CAS Number		ug/L
74-87-3	Chloromethane	5 U
74-83-9	Bromomethane	5 U
75-01-4	Vinyl Chloride	5 U
75-00-3	Chloroethane	1 U
75-09-2	Methylene Chloride	5 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	1 U
75-35-4	1,1-Dichloroethene	1 U
75-34-3	1,1-Dichloroethane	1 U
156-60-5	Trans-1,2-Dichloroethene	1 U
67-66-3	Chloroform	3
107-06-2	1,2-Dichloroethane	1 U
78-93-3	2-Butanone	1
71-55-6	1,1,1-Trichloroethane	1 U
56-23-5	Carbon Tetrachloride	1 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	2

CAS Number		ug/L
79-34-5	1,1,2,2-Tetrachloroethane	1 U
78-87-5	1,2-Dichloropropane	1 U
10061-02-6	Trans-1,3-Dichloropropene	1 U
79-01-6	Trichloroethene	1 U
124-48-1	Dibromochloromethane	1 U
79-00-5	1,1,2-Trichloroethane	1 U
71-43-2	Benzene	1 U
10061-01-5	cis-1,3-Dichloropropene	1 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	1 U
591-78-6	2-Hexanone	10 U
108-10-1	4-Methyl-2-Pentanone	10 U
127-18-4	Tetrachloroethene	1 U
108-88-3	Toluene	2
108-90-7	Chlorobenzene	1 U
100-41-4	Ethylbenzene	1 U
100-42-5	Styrene	1 U
	Total Xylenes	1 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/ dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J). If limit of detection is 10ug/l and a concentration of 3ug/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >= 10ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NA Not Analyzed.
See cover letter.
NR Not Required.
S Spiked Compound.

CLF: 11/14/85 Form I Prepared by: AR 10/85

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No: 9346/3758E

Sample Number
EW145

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 4/18/88

Date Analyzed: 4/25/88

Conc/Dil. Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: YES

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/L
108-95-2	Phenol	6
111-44-4	bis(-2-Chloroethyl)Ether	1.0 U
95-57-8	2-Chlorophenol	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
100-51-6	Benzyl Alcohol	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
95-48-7	2-Methylphenol	1.0 U
99638-32-9	bis(2-chloroisopropyl)Ether	1.0 U
106-44-5	4-Methylphenol	1.0 U
621-64-7	N-Nitroso-Di-n-Propylamine	1.0 U
67-72-1	Hexachloroethane	1.0 U
98-95-3	Nitrobenzene	1.0 U
78-59-1	Isophorone	1.0 U
88-75-5	2-Nitrophenol	1.0 U
105-67-9	2,4-Dimethylphenol	1.0 U
65-85-0	Benzoic Acid	20 U
111-91-1	bis(-2-Chloroethoxy)Methane	1.0 U
120-83-2	2,4-Dichlorophenol	1.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
106-47-8	4-Chloroaniline	1.0 U
87-68-3	Hexachlorobutadiene	1.0 U
59-50-7	4-Chloro-3-Methylphenol	1.0 U
91-57-6	2-Methylnaphthalene	1.0 U
77-47-4	Hexachlorocyclopentadiene	1.0 U
88-06-2	2,4,6-Trichlorophenol	1.0 U
95-95-4	2,4,5-Trichlorophenol	1.0 U
91-58-7	2-Chloronaphthalene	1.0 U
88-74-4	2-Nitroaniline	5.0 U
131-11-3	Dimethyl Phthalate	1.0 U
208-96-8	Acenaphthylene	1.0 U
99-09-2	3-Nitroaniline	5.0 U

CAS Number		ug/L
83-32-9	Acenaphthene	1.0 U
51-28-5	2,4-Dinitrophenol	15 U
100-02-7	4-Nitrophenol	15 U
132-64-9	Dibenzofuran	1.0 U
121-14-2	2,4-Dinitrotoluene	1.0 U
606-20-2	2,6-Dinitrotoluene	1.0 U
84-66-2	Diethylphthalate	1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0 U
86-73-7	Fluorene	1.0 U
100-01-6	4-Nitroaniline	5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	15 U
86-30-6	N-Nitrosodiphenylamine(1)	1.5 U
101-55-3	4-Bromophenyl-phenylether	1.5 U
118-74-1	Hexachlorobenzene	1.5 U
87-86-5	Pentachlorophenol	2.0 U
85-01-8	Phenanthrene	1.0 U
120-12-7	Anthracene	2.5 U
84-74-2	Di-n-Butylphthalate	2.0 U
206-44-0	Fluoranthene	1.5 U
129-00-0	Pyrene	1.5 U
85-68-7	Butylbenzylphthalate	3.5 U
91-94-1	3,3'-Dichlorobenzidine	20 U
56-55-3	Benzo(a)Anthracene	1.5 U
117-81-7	bis(2-Ethylhexyl)Phthalate	3 B
218-01-9	Chrysene	1.5 U
117-84-0	Di-n-Octyl Phthalate	1.5 U
205-99-2	Benzo(b)Fluoranthene	1.5 U
207-08-9	Benzo(k)Fluoranthene	1.5 U
50-32-8	Benzo(a)Pyrene	2.0 U
193-39-5	Indeno(1,2,3-cd)Pyrene	3.5 U
53-70-3	Dibenz(a,h)Anthracene	2.5 U
191-24-2	Benzo(g,h,i)Perylene	4.0 U

(1) - Cannot be separated from diphenylamine

RK 5/11/88

166

CLF: 10/11/85 Form I Prepared by: CM 7/85

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:9346/3758E

Sample Number
EW 145

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 04/18/88

Date Analyzed: 04/27/88

Conc/Dil Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: YES

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/L
319-84-6	Alpha-BHC	0.010 U
319-85-7	Beta-BHC	0.0050 U
319-86-8	Delta-BHC	0.0050 U
58-89-9	Gamma-BHC (Lindane)	0.0050 U
76-44-8	Heptachlor	0.030 U
309-00-2	Aldrin	0.0050 U
1024-57-3	Heptachlor Epoxide	0.0050 U
959-98-8	Endosulfan I	0.010 U
60-57-1	Dieldrin	0.010 U
72-55-9	4,4'-DDE	0.0050 U
72-20-8	Endrin	0.010 U
33213-65-9	Endosulfan II	0.010 U
72-54-8	4,4'-DDD	0.020 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.020 U
72-43-5	Methoxychlor	0.020 U
53494-70-5	Endrin Ketone	0.030 U
57-74-9	Chlordane	0.020 U
8001-35-2	Toxaphene	0.25 U
12674-11-2	Aroclor-1016	0.10 U
11104-28-2	Aroclor-1221	0.10 U
11141-16-5	Aroclor-1232	0.10 U
53469-21-9	Aroclor-1242	0.10 U
12672-29-6	Aroclor-1248	0.10 U
11097-69-1	Aroclor-1254	0.10 U
11096-82-5	Aroclor-1260	0.10 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s =850 or W_s =NR V_t = 5000 V_i = 5

CLF: 11/14/85 Form I Prepared by: AR 7/85

ORGANICS ANALYSIS DATA SHEET
PAGE 4
TENTATIVELY IDENTIFIED COMPOUNDS

LAB NAME: CAL CASE NO. ~~9207~~ 9346 3758E SAMPLE NO. EW 145

QC REPORT NO. 3758E LAB SAMPLE NO. 4107005V

PROBABILITY THAT IDENTIFICATION IS CORRECT:
A= HIGH B= MODERATE C= LOW D= SEE ABN

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	ESTIMATED CONC. J VALUE
1.	6245-99-4	OXETANE, 2,2-DIMETHYL-	VOA	84	609	1.8 UG/L

COMPOUND NAME	PROBABILITY	COMMENTS
1. OXETANE, 2,2-DIMETHYL-	1. ~~B~~ ~~B~~ A 1.	

FORM 1, PART B

ORGANICS ANALYSIS DATA SHEET
PAGE 4
TENTATIVELY IDENTIFIED COMPOUNDS

LAB NAME: CAL CASE NO. ~~9307~~ 93116/3758E SAMPLE NO. EW 145

QC REPORT NO. M158E LAB SAMPLE NO. 4107005V

PROBABILITY THAT IDENTIFICATION IS CORRECT:
A= HIGH B= MODERATE C= LOW D= SEE ABN

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	ESTIMATED CONC. J VALUE
1.	75-28-5	PROPANE, 2-METHYL-	VOA	72	773	6.6 UG/L
2.	78-78-4	BUTANE, 2-METHYL-	VOA	169	887	0.3 UG/L
3.	124-48-1	METHANE, DIBROMOCHLORO-	VOA	234	826	0.5 UG/L

COMPOUND NAME	PROBABILITY	COMMENTS
1. PROPANE, 2-METHYL-	1. C	1.
2. BUTANE, 2-METHYL-	2. B	2.
3. METHANE, DIBROMOCHLORO-	3. A	3. HSL cmpd < CRDL.

FORM 1, PART B

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 9346/3758E Sample No. EW 145

QC Report No. 3758E Lab Sample No. 4107005AB

Probability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= SOLVENT IMPURITY, see VOA

CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated CONC. J VALUE
	No A/BN				

FORM 1, PART B

ecology and environment, inc.

111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415

International Specialists in the Environment

CRL Receipt Date 4/25 FIT Receipt Date 5/16/88 Review Completed 5/22/88

TO: Gary Cobb

FROM: Zena Gold-Kaufman ZGK

SUBJECT: GCA Selv/Barton LF

PAN: IL0599 (1 hour charged for review) Case # 9346/3554E

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
#	Low Soil	#	Low Soil
	Low Water		Low Water
	Drinking Water	5	Drinking Water
	Other		Other

Project Data Status _____ Completed!!

_____ Incomplete, awaiting organics and inorg: soil, waters, organic drinking water.

FIT Data Review Findings:

Common inorganic analytes detected as well as other analytes such as Lead, selenium, valium, arsenic.

Check Data Sheets for Transcription Errors

✓ Compounds were detected in sample(s); see enclosed sheet.

Book No. 8 Page No. 12 Date Sampled 4/13

0759:2

recycled paper

ecology and environment, inc.
CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

SITE NAME: SCA / Serv Barton PAN #: DATE: 5/22/88
CASE #: 9346/3554E UNITS: µg/l REVIEWER: ZOK

COMPOUND	CRDL** RAS SOIL mg/Kg (ppm)	CRDL** RAS WATER ug/L (ppb)	CRDL** SAS DRINKING WATER ug/L (ppb)	950	951	952	953	96J		
ALUMINUM *	40	200	100	—	—	—	—	—		
ANTIMONY	2.4	60	5	—	—	—	—	—		
ARSENIC	2	10	5	5.1S	6.1S	8.6	6.0S	—		
BARIUM *	40	200	50	—	—	68	[21]	—		
BERYLLIUM	1	5	5	—	—	—	—	—		
CADMIUM	1	5	0.5	—	—	—	—	—		
CALCIUM *	1000	5000	1000	—	—	60100	27000	—		
CHROMIUM	2	10	10	—	—	—	—	—		
COBALT	10	50	10	—	—	—	—	—		
COPPER J	5	25	10	15J	160J	53J	30J	83J		
IRON *	20	100	100	—	—	210	—	—		
LEAD J	1	5	2	13S*J	10S*J	14S*J	9.6S*J	9.3S*J		
MAGNESIUM *	1000	5000	1000	—	—	19500	6790	—		
MANGANESE *	3	15	10	—	—	17S	—	—		
MERCURY	0.008	0.2	0.2	—	—	—	—	—		
NICKEL	8	40	20	—	—	—	—	—		
POTASSIUM *	1000	5000	2000	—	—	—	[500]	—		
SELENIUM	1	5	2	8.2SJ	11S	3.5SJ	2.0SJ	2.0SJ		
SILVER	2	10	5	—	—	—	—	—		
SODIUM * J	1000	5000	1000	169000J	157000NJ	15200NJ	2480NJ	—		
THALLIUM	2	10	2	—	—	—	—	—		
VANADIUM	10	50	10	—	—	—	—	[8.8]		
ZINC *	4	20	20	[19]	[18]	264	24	—		
CYANIDE	2	10	10	—	—	—	—	—		

* NOT GENERALLY USED FOR HRS SCORING
** SPECIFIC DETECTION LIMITS ARE HIGHLY MATRIX DEPENDENT. THE DETECTION LIMITS LISTED HEREIN ARE PROVIDED FOR GUIDANCE AND MAY NOT ALWAYS BE ACHIEVABLE.

... QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscop
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Metals

FOOTNOTE		DEFINITION	INTERPRETATION
OLD	NEW		
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
J		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not calculated since chemical is not a carcinogen.
( ) Estimated value.

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

MEMORANDUM

DATE:

TO: File

FROM: ~~Loretta Guzdziol~~ Zena Gold-Kaufman

SUBJECT: SCA SERV/Barton LF

PAN

Below is a list of elements whose spike recoveries were biased low:

Element	Spike Recovery
Sodium	50%

The low recoveries rates biases the data low, thereby raising the detection limits and estimating any reported values. This means that in the worst case the true concentration is greater than the reported values and the data is an underestimation.

It is the opinion of this reviewer that the data is acceptable for HRS scoring.

45G:2

recycled paper

13 pages
5/16/88

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 5-6-88

SUBJECT: Review of Region V CLP Data
Received for Review on 4-25-88

FROM: Curtis Ross ,Director (5SCRL)
Central Regional Laboratory Jay Thakker

TO: Data User : FIT

We have reviewed the data for the following case(s).

SITE NAME: SCA SERV/BARTON LF SMO case No. 9346SAS3554

EPA Data Set No. SF5049 No.of Samples: 5 D.U/Activity Numbers Y905/C721ZZZ

CRL No. 88FC18S13-S15,D13,R02

SMO Traffic No. MEW950-953,956

CLP Laboratory: CHEMTECH Hrs.required for Review 2

Following are our findings:

This review covers five low water samples analyzed for metals and cyanide.

Field blank(MEW956) showed contaminations for Cu(83ug/l), Pb(9.3ug/l) and Se(2.0ug/l). All Cu data are estimated(J). All Se data except MEW951 are estimated(J).

Duplicate analysis gave high RPD for Pb. All Pb data are estimated(J).

Spike recovery for Na(50%) are shown above. All Na data are estimated(J).

Thallium for sample MEW951 was calculated and reported wrong.This was corrected by reviewer.

All other QC audits are acceptable.

Ada Levin
5.5.88.

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary-pending verification by Contract Laboratory.
( ) Data are unacceptable.

cc: Carla Dempsey, Quality Assurance Officer, EPA Support Services
James Petty,Chief Quality Assurance Research,EMSL,Las Vegas

EPA FORM 1320-6 (Rev. 5/87)

WA85-0839 - AMENDMENT THREE (3)
U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

Date 4/22/88

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

Lab Name Chemtech Consulting Group

Case No. 9346/3554 G

SOW No. 785

Q.C. Report No. G2- 1206

Sample Numbers

EPA No.	Lab ID No.	EPA No.	Lab ID No.
MEW 950	G2-1206-01		
951	-02		
952	-03		
953	-04		
956	-05		

RECEIVED
APR 2 1988
U.S. EPA CENTRAL REGIONAL LAB

Comments:

ICP interelement and background corrections applied? Yes X No ____

If yes, corrections applied before X or after ____ generation of raw data.

Footnotes:

NR - Not required by contract at this time

Form I:

Value - If the result is a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, report the value in brackets (i.e., [10]). Indicate the analytical method used with P (for ICP), A (for Flame AA) or F (for Furnace AA).

U - Indicates element was analyzed for but not detected. Report with the instrument detection limit value (e.g., 10U).

E - Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.

S - Indicates value determined by Method of Standard Addition.

N - Indicates spike sample recovery is not within control limits.

* - Indicates duplicate analysis is not within control limits.

+ - Indicates the correlation coefficient for method of standard addition is less than 0.995

M - Indicates duplicate injection results exceeded control limits.

Indicate method used: P for ICP; A for Flame AA and F for Furnace.

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No. MEW 950

Date 4/22/88

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group

CASE NO. 9346/3554 E

SOW NO. 785

Lab Receipt Date 4/15/88

LAB SAMPLE ID. NO. G2-1206-01

QC REPORT NO. G2- 1206

Elements Identified and Measured

Concentration: Low X Medium ____

Matrix: Water X Soil ____ Sludge ____ Other ____

(ug/L) or mg/kg dry weight (Circle One)

1.	Aluminum	100U P	13.	Magnesium	500U P
2.	Antimony	5.0U ~~P~~ F S	14.	Manganese	7U P
3.	Arsenic	5.1 FS	15.	Mercury	0.2U
4.	Barium	5U P	16.	Nickel	11U P
5.	Beryllium	2U P	17.	Potassium	500U A
6.	Cadmium	0.5U ~~P~~ FS	18.	Selenium	8.2 FS
7.	Calcium	500U ~~P~~ P	19.	Silver	5U P
8.	Chromium	4U P	20.	Sodium	169000 P N
9.	Cobalt	6U P	21.	Thallium	2U FS
10.	Copper	151 P	22.	Vanadium	4U P
11.	Iron	100U P	23.	Zinc	[19] P
12.	Lead	13 FS *		Precent Solids (%)	
	Cyanide	10U			

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before- Colorless, After- Colorless, Clarity: clear

Lab Manager [signature]

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No. MEW 951

Date 4/22/88

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group

CASE NO. 9346/3554E

SOW NO. 785

Lab Receipt Date 4/15/88

LAB SAMPLE ID. NO. G2-1206-02

QC REPORT NO. G2- 1206

Elements Identified and Measured

Concentration: Low X Medium ____

Matrix: Water X Soil ____ Sludge ____ Other ____

(ug/L) or mg/kg dry weight (Circle One)

1.	Aluminum	100U P	13.	Magnesium	500U P
2.	Antimony	5.0U P F S	14.	Manganese	7U P
3.	Arsenic	6.1 F S	15.	Mercury	0.2U
4.	Barium	5U P	16.	Nickel	11U P
5.	Beryllium	2U P	17.	Potassium	500U A
6.	Cadmium	0.5U P F S	18.	Selenium	11 F S
7.	Calcium	500U P	19.	Silver	5U P
8.	Chromium	4U P	20.	Sodium	157000 P N
9.	Cobalt	6U P	21.	Thallium	2U F S
10.	Copper	16U P	22.	Vanadium	4U P
11.	Iron	100U P	23.	Zinc	[18] P
12.	Lead	10 F S *		Percent Solids (%)	
	Cyanide	10U			

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before- Colorless After- Colorless, Clarity: clear

Lab Manager [signature]

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No. MEW 952

Date 4/22/88

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group

CASE NO. 9346/3554C

SOW NO. 785

Lab Receipt Date 4/15/88

LAB SAMPLE ID. NO. G2-1206-03

QC REPORT NO. G2- 1206

Elements Identified and Measured

Concentration: Low X Medium ____

Matrix: Water X Soil ____ Sludge ____ Other ____

(ug/L) or mg/kg dry weight (Circle One)

1.	Aluminum	100U P	13.	Magnesium	19500 P
2.	Antimony	5.0U ~~P~~ F S	14.	Manganese	175 P
3.	Arsenic	8.6 F S	15.	Mercury	0.2U
4.	Barium	68 P	16.	Nickel	11U P
5.	Beryllium	2U P	17.	Potassium	500U A
6.	Cadmium	0.5U ~~P~~ F S	18.	Selenium	3.5 F S
7.	Calcium	60100 P	19.	Silver	5U P
8.	Chromium	4U P	20.	Sodium	15200 P N
9.	Cobalt	6U P	21.	Thallium	2U F S
10.	Copper	53 P	22.	Vanadium	4U P
11.	Iron	210 P	23.	Zinc	264 P
12.	Lead	14 F S *		Percent Solids (%)	
	Cyanide	10U			

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before- Colorless. After- Colorless. Clarity: clear

Lab Manager [signature]

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No. MEW 953

Date 4/22/88

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group

CASE NO. 9346/3554G

SOW NO. 785

Lab Receipt Date 4/15/88

LAB SAMPLE ID. NO. G2-1206-04

QC REPORT NO. G2- 1206

Elements Identified and Measured

Concentration: Low X Medium ____

Matrix: Water X Soil ____ Sludge ____ Other ____

(ug/L) or mg/kg dry weight (Circle One)

1.	Aluminum	100 U P	13.	Magnesium	6790 P
2.	Antimony	5.0 U F S	14.	Manganese	7 U P
3.	Arsenic	6.0 F S	15.	Mercury	0.2 U
4.	Barium	[21] P	16.	Nickel	11 U P
5.	Beryllium	2 U P	17.	Potassium	[500] A
6.	Cadmium	0.5 U F S	18.	Selenium	2.0 F S
7.	Calcium	27000 P	19.	Silver	5 U P
8.	Chromium	4 U P	20.	Sodium	2480 P N
9.	Cobalt	6 U P	21.	Thallium	2 U F S
10.	Copper	30 P	22.	Vanadium	4 U P
11.	Iron	100 U P	23.	Zinc	24 P
12.	Lead	9.6 F S *		Percent Solids (%)	
	Cyanide	10 U			

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before- Colorless. After- Colorless, Clarity: Clear

Lab Manager [signature]

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MEW 956

Date 4/22/88

INORGANIC ANALYSIS DATA SHEET

LAB NAME Chemtech Consulting Group
CASE NO. 9346/3554E
SOW NO. 785
Lab Receipt Date 4/15/88
LAB SAMPLE ID. NO. G2-1206-05
QC REPORT NO. G2- 1206

Elements Identified and Measured

Concentration: Low X Medium ____

Matrix: Water X Soil ____ Sludge ____ Other ____

(ug/L) or mg/kg dry weight (Circle One)

1.	Aluminum	100 U P	13.	Magnesium	500 U P
2.	Antimony	5.0 U F S	14.	Manganese	7 U P
3.	Arsenic	5.0 U F S	15.	Mercury	0.2 U
4.	Barium	5 U P	16.	Nickel	11 U P
5.	Beryllium	2 U P	17.	Potassium	500 U A
6.	Cadmium	0.5 U F S	18.	Selenium	2.0 F S
7.	Calcium	500 U P	19.	Silver	5 U P
8.	Chromium	4 U P	20.	Sodium	597 U P N
9.	Cobalt	6 U P	21.	Thallium	2 U F S
10.	Copper	83 P	22.	Vanadium	[8.8] P
11.	Iron	100 U P	23.	Zinc	7 U P
12.	Lead	9.3 F S *		Percent Solids (%)	
	Cyanide	10 U			

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Color: Before- Colorless. After- Colorless, Clarity: clear

Lab Manager [signature]

Form III - A

Q. C. Report No. 1206

BLANKS

LAB NAME Chemtech Consulting Group

CASE NO. 9346/3554E

DATE 4/22/88 JH

UNITS ug/L

Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank[1] Matrix: Water ug/L	Matrix: 2
Metals:							
1. Aluminum	100 U	100U	100U	100U	100U	100 U	
2. Antimony	5.0 U	5.0U	5.0U	5.0U		5.0U	
3. Arsenic	5.0 U	5.0U	5.0U	5.0U		5.0U	
4. Barium	5 U	5U	5U	5U	5U	5U	
5. Beryllium	2 U	2U	2U	2U	2U	2U	
6. Cadmium	0.5 U	0.5U	0.5U	0.5U		0.5U	
7. Calcium	500 U	500U	500U	500U	500U	500U	
8. Chromium	4 U	4U	4U	4U	4U	4U	
9. Cobalt	6 U	6U	6U	6U	6U	6U	
10. Copper	9 U	9U	9U	9U	9U	9U	
11. Iron	100 U	100U	100U	100U	100U	100U	
12. Lead	2 U	2U	2U	2U	2U	2U	
13. Magnesium	500 U	500U	500U	500U	500U	500U	
14. Manganese	7 U	7U	7U	7U	7U	7U	
15. Mercury	0.2 U	0.2U				0.2U	
16. Nickel	11 U	11U	11U	11U	11U	11U	
17. Potassium	500 U	500U				500U	
18. Selenium	2 U	2U	2U	2U		2U	
19. Silver	5 U	5U	5U	5U	5U	5U	
20. Sodium	597 U	597U	597U	597U	597U	597U	
21. Thallium	2 U	2U	2U	2U		2U	
22. Vanadium	4 U	4U	4U	4U	4U	4U	
23. Zinc	7 U	7U	7U	7U	7U	7U	
Other: LEAD(P)	21 U	21U	21U	21U	21U	21U	
Cyanide	10U	10U				10U	

[1] Reporting Units: aqueous, ug/L; solid, mg/kg

Form III - B

Q. C. Report No. 1206

BLANKS

LAB NAME Chemtech Consulting Group

CASE NO. 9346/3554 E

DATE 4/22/88

UNITS ug/L

Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank[1] Matrix: 1	Matrix: 2
Metals:							
1. Aluminum	100 U	100 U					
2. Antimony	U						
3. Arsenic	U						
4. Barium	U	5 U					
5. Beryllium	U	2 U					
6. Cadmium	U						
7. Calcium	U	500 U					
8. Chromium	U	4 U					
9. Cobalt	U	6 U					
10. Copper	U	9 U					
11. Iron	U	100 U					
12. Lead	U						
13. Magnesium	U	500 U					
14. Manganese	U	7 U					
15. Mercury	U						
16. Nickel	U	11 U					
17. Potassium	U						
18. Selenium	U						
19. Silver	U	5 U					
20. Sodium	U	597 U					
21. Thallium	U						
22. Vanadium	U	4 U					
23. Zinc	U	7 U					
Other: LEAD(P)	U	21 U					
Cyanide							

[1] Reporting Units: aqueous, ug/L; solid, mg/kg

Form III-C

Q. C. Report No. 1206

BLANKS

LAB NAME Chemtech Consulting Group

DATE 11/22/88

CASE NO. 9346/3554/E

UNITS ug/L

Compound	Initial Calibration Blank Value		Continuing Calibration Blank Value 1	2	3	4	Preparation Blank[1] Matrix: 1	Matrix: 2
Metals:								
1. Aluminum	100	U	100 U	100 U	100 U			
2. Antimony		U						
3. Arsenic		U						
4. Barium	5	U	5 U	5 U	5 U			
5. Beryllium	2	U	2 U	2 U	2 U			
6. Cadmium		U						
7. Calcium	500	U	500 U	500 U	500 U			
8. Chromium	4	U	4 U	4 U	4 U			
9. Cobalt	6	U	6 U	6 U	6 U			
10. Copper	9	U	9 U	9 U	9 U			
11. Iron	100	U	100 U	100 U	100 U			
12. Lead		U						
13. Magnesium	500	U	500 U	500 U	500 U			
14. Manganese	7	U	7 U	7 U	7 U			
15. Mercury		U						
16. Nickel	11	U	11 U	11 U	11 U			
17. Potassium		U						
18. Selenium		U						
19. Silver	5	U	5 U	5 U	5 U			
20. Sodium	597	U	597 U	597 U	597 U			
21. Thallium		U						
22. Vanadium	4	U	4 U	4 U	4 U			
23. Zinc	7	U	7 U	7 U	7 U			
Other: LEAD(P)	21	U	21 U	21 U	21 U			
Cyanide								

[1] Reporting Units: aqueous, ug/L; solid, mg/kg

Form V

Q. C. Report No. 1206

SPIKE SAMPLE RECOVERY

LAB NAME Chemtech Consulting Group

DATE 4/22/88

CASE NO. 4346/3554E

EPA Sample No. MCW-951

Lab Sample ID No. 1206-02

Units ug/L

Matrix LOW WATER

PDS #1

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	%R[1]
Metals:					
1. Aluminum	85-115 ~~75-125~~	1710	100 U	2000	86
2. Antimony	-			500	NR
3. Arsenic	-			20	NR
4. Barium	-	1940	5 U	2000	97
5. Beryllium	-	48	2 U	50	96
6. Cadmium	-			50	NR
7. Calcium	-			---	NR
8. Chromium	-	192	4 U	200	96
9. Cobalt	-	488	6 U	500	98
10. Copper	-	386	160	250	90
11. Iron	-	1120	100 U	1000	112
12. Lead	-			20	NR
13. Magnesium	-			---	NR
14. Manganese	-	210	7 U	200	105
15. Mercury	-	1.0	0.2 U	1.0	100
16. Nickel	-	403	11 U	400	101
17. Potassium	-			---	NR
18. Selenium	-			10	NR
19. Silver	-	44	5 U	50	88
20. Sodium	-			---	NR
21. Thallium	-			50	NR
22. Vanadium	-	492	4 U	500	98
23. Zinc	-	237	[18]	200	110
Other: LEAD(P)				500	NR
Cyanide	-	106	10 U	100	106

[1] %R = [(SSR - SR)/SA] x 100

"N" - out of control

"NR" - Not required

Comments:

Form V

C. C. Report No. 1206

SPIKE SAMPLE RECOVERY

LAB NAME Chemtech Consulting Group

DATE 4/22/88 EH

CASE NO. 9346/3554 E

EPA Sample No. MEW-951

Lab Sample ID No. 1206-02

Units ug/L

Matrix LOW WATER

PDS #2

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spiked Added (SA)	%R[1]
Metals:					
1. Aluminum	85-115 ~~75-125~~			2000	
2. Antimony	-			500	
3. Arsenic	-			20	
4. Barium	-			2000	
5. Beryllium	-			50	
6. Cadmium	-			50	
7. Calcium	-	47,500	500U	50,000	95
8. Chromium	-			200	
9. Cobalt	-			500	
10. Copper	-			250	
11. Iron	-			1000	
12. Lead	-			20	
13. Magnesium	-	26,600	500U	25,000	106
14. Manganese	-			200	
15. Mercury	-			1.0	
16. Nickel	-			400	
17. Potassium	-	22,000	500U	20,000	110
18. Selenium	-			10	
19. Silver	-			50	
20. Sodium	-	182000	157000	50,000	50 N
21. Thallium	-			50	
22. Vanadium	-			500	
23. Zinc	-			200	
Other: LEAD(P)				500	
Cyanide	-				

[1] %R = [(SSR - SR)/SA] x 100

"N" - out of control

"NR" - Not required

Comments:

Form VI

Q. C. Report No. 1206

DUPLICATES

LAB NAME Chemtech Consulting Group

DATE 4/22/88 EH

CASE NO. 4346/3554E
EPA Sample No. MEW-950
Lab Sample ID No. 1206-01
Units ug/L

Matrix LOW WATER

Compound	Control Limit[1]	Sample(S)	Duplicate(D)	RPD[2]
Metals:				
1. Aluminum		100U	100U	NC
2. Antimony		5.0U	5.0U	NC
3. Arsenic	± 5	5.1	6.1	18
4. Barium		5U	5U	NC
5. Beryllium		2U	2U	NC
6. Cadmium		0.5U	0.5U	NC
7. Calcium		~~256~~ 500U	500U	NC
8. Chromium		4U	4U	NC
9. Cobalt		6U	6U	NC
10. Copper	± 20 %	151	157	3.9
11. Iron		100U	100U	NC
12. Lead	± 20%	13	11	17 *
13. Magnesium		500U	500U	NC
14. Manganese		7U	7U	NC
15. Mercury		0.2U	0.2U	NC
16. Nickel		11U	11U	NC
17. Potassium		500U	500U	NC
18. Selenium	~~± 20%~~ ± 2	8.2	9.4	14
19. Silver		5U	5U	NC
20. Sodium	± 20%	169000	173000	2.3
21. Thallium		2U	2U	NC
22. Vanadium		4U	[4.7]	NC
23. Zinc		[19]	22	NC
Other:				
Cyanide		10U	10U	NC

* Out of Control

[1] To be added at a later date.

[2] RPD = [|S - D|/((S + D)/2)] x 100

NC - Non calculable RPD due to value(s) less than CRDL

Form VII

Q. C. Report No. 1206

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE.

LAB NAME Chemtech Consulting Group CASE NO. 9346/3554C DATE 4/22/88

Compound	Required Detection Limits (CRDL)-ug/L	Instrument Detection Limits (IDL) - ug/L ICP/AA ID #: 9000	Furnace ID #: 1	2	3	4	Lab Control Sample ug/L True	Found	%R
Metals: 1. Aluminum.	100	100		6			990	1040	105
2. Antimony	5			6 5			505	NR ~~519~~	NR ~~103~~
3. Arsenic	5			5 ~~3~~	3	4	49	NR	NR
4. Barium	50	5					990	1050	106
5. Beryllium	5	2				6	240	262	109
6. Cadmium	0.5	5				0.5	244	NR ~~271~~	NR ~~111~~
7. Calcium	1000	500					24900	26200	105
8. Chromium	10	4					253	261	103
9. Cobalt	10	6					237	260	110
10. Copper	10	9					271	284	105
11. Iron	100	100				6	995	1090	110
12. Lead	2		3	3	3	~~1~~ 2	49	NR	NR
13. Magnesium	1000	500					12500	13300	106
14. Manganese	10	7					256	268	105
15. Mercury	0.2	0.15					5.2		NR
16. Nickel	20	11					248	260	105
17. Potassium	2000	500*		6			10000	10400	104
18. Selenium	2			✓2	2	4	104	NR	NR
19. Silver	5	5					254	255	100
20. Sodium	1000	597				6	25350	26500	104
21. Thallium	2		7	2	2	✓2	49	NR	NR
22. Vanadium	10	4					256	271	106
23. Zinc	20	7					1550	1620	104
Other Lead(P)	5	21					2255	2380	106
Cyanide	10	NR		NR			100	106	106

NR- Not required

AA ID # 1. Hitachi
2. P.E. 30/30
3. P.E. 5000
4. P.E. 30/30Z

* Hitachi Flame