TESTING LABORATORIES inc.

Chemists
Engineers
Metallurgists

2350 Seventh Blvd. • St. Louis, Missouri 63104 | 314/PRospect 1-7111

ALLAN M. SIEGEL, Director

US EPA RECORDS CENTER REGION 5
486312

Report No. 25-3-5 April 15, 1971

Examination of paint sludge submitted marked, "Chrysler Assembly Plant, St. Louis".

LaMear-United Disposal Inc.
1838 North Broadway
St. Louis, Missouri 63102 Attn: Mr. Don Drier

TEST REPORT

pH, %	7.85
Solubility in water, %	0.10
Toxicity	non-toxic

TOXICITY STUDY

Summary:

The acute oral LD_{50} of Paint Sludge (gummy, semisolid portion of test sample) when administered as a 50% w/v suspension in corn oil to male and female SASCO rats weighing 205 to 270 grams was found to be greater than 20.00 gm./kg. of body weight.

Experimental Procedure:

Male and female albino rats (SASCO strain - Holtzman derived) weighing 205 to 270 grams were used to evaluate the acute (single-dose) oral toxicity produced by Paint Sludge.

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ALLAN M. SIEGEL, Director

Experimental Procedure (continued):

Each animal was examined and only healthy animals were used on this study. The animals were individually housed in metal, wire-bottomed cages. Prior to dosing, the animals were fasted overnight; otherwise, feed, consisting of Purina Laboratory Chow and water were freely available at all times.

Prior to the actual LD_{50} determination, exploratory doses were administered to six rats to estimate the order of toxicity of the test material. Based on the preliminary estimation, groups of 4 to 6 rats were dosed at levels designed to provide data for the determination of an approximate LD_{50} value as follows: 5.02, 7.10, 10.02, 14.16, and 20.00 gm./kg. of body weight. Doses were administered by means of a plastic intubation catheter attached to a hypodermic syringe. The test material (gummy, semisolid portion of test sample; the aqueous phase of the test sample was removed and not used for this study) was prepared as a 50% weight/volume suspension.

The animals were observed for gross effects at regular intervals on the day of dosing and daily thereafter for 14 days. Animals which succumbed were necropsied. Following the observation period, all surviving animals were weighed, sacrificed and gross necropsies performed.

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ALLAN M. SIEGEL, Director

Results:

Oral LD_{50} Mortality Data

Dosage Level gm./kg.	Mortality/No. Animals	% Mortality
5.02	0/4	0
7.10	0/6	0
10.02	0.6	0
14.16	0/6	0
20.00	0/6	0

There were no mortalities at any dosage level tested. The acute oral LD_{50} of Paint Sludge (gummy, semisolid portion of test sample) when administered as a 50% w/v suspension in corn oil to male and female SASCO rats weighing 205 to 270 grams is, therefore, greater than 20.00 gm./kg. of body weight (highest dosage level tested).

On the day of dosage, all animals at the three highest test levels displayed oily mucoid feces accompanied by oiliness and clumping of fecal matter on the skin and fur of the ventral posterior region of the body. All animals grossly appeared normal within 48 hours following dosage. No other signs of gross acute effects related to oral administration of the test material were observed during the 14 day observation period.

Final body weight records of survivors at termination (14 days) showed gains within normal limits in all.

TESTING LABORATORIES inc.

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ALLAN M. SIEGEL, Director

Results (continued):

Gross necropsy of the animals sacrificed at 14 days showed in the majority, a slight, greenish-yellow coloration of the skin and fur of the ventral posterior region of the body; otherwise, findings were unremarkable.

Respectfully submitted,

INDUSTRIAL TESTING LABORATORIES, INC.

Allan M. Siegel

Allan M. Siegel, Director

AMS/ec

Illinois Southern Region
Richard H. Briceland, Director
Environmental Protection Agency
2200 Churchill Road, Springfield, Illinois 62706

RECEIVED
FEB 13 1976
ILL. E.P.A. – D.L.P.C.
STATE OF ILLINOIS

Telephone:
217/782-6760

February 6, 1976

IN REPLY REFER TO: 16303401
ST. CLAIR COUNTY - Land Pollution Control
East St. Louis/Mal-Milam
Permit No. 1974-13-OP

Mal Landfill Corporation
401 Madison Avenue
Madison, Illinois 62060

Gentlemen:

The Agency has on a hand a supplemental permit application to accept waste filter cake generated by Amax Zinc Company, Inc.

The application was received on November 12, 1975 and (to re-cap a series of events) would have been denied because your site was not in general compliance with the Solid Waste Rules and Regulations. However, at your request, the denial was not immediately issued so as to allow time for you to correct the violations and also, to avoid the paperwork involved in submitting a second application.

In the interim, Agency personnel began a preliminary sampling (November 25, 1975) of your site's monitor wells. The results (received December 16, 1975) tend to indicate the on-going occurence of significant groundwater pollution.

Our suspicion was raised some time ago on the basis of your quarterly monitoring results and, at this point, has been confirmed by the receipt of your latest analyses (January 13, 1976). The following is a pertinent summary of the foregoing data:

WELL #27 (UPGRADIENT)

Parameter	Sample Date				
	7-2-73	1-14-75	10-1-75	11-25-75	12-29-75
TDS(mg/1)	943	588	113	-	604
CL(mg/1)	18	-	-	65	-
Fe(mg/1)	0.034	-	-	8.9	-

DM
KM
RMM

WELL #2 (DOWNGRADIENT)

Parameter	Sample Date			
	1-14-75	10-1-75	11-25-75	12-29-75
TDS(mg/1)	3916	4544	-	5399
CL(mg/1)	990	1250	1800	1430
Fe(mg/1)	-	-	76	-

The above (Well #2) are all violations of the general water quality standards of the Illinois Water Pollution Regulations. In addition, the E.P.A. sample of December 29, 1975 indicated violations of the same standards relative to Barium, Boron, Lead, Manganese and Silver.

Under the circumstances and in reference to Rules 207(a), 313, 314(e) and 315 of the Solid Waste Rules and Regulations, it is not presently possible for the Agency to issue additional special waste permits. On this basis your application is hereby denied. This is also in accord with the meeting held in our office on February 3, 1976.

If you have any questions, please advise.

Sincerely,

Michael W. Rapps
Permit Unit
Division of Land/Noise Pollution Control

MWR:bd
cc: Southern Region
C. E. Clark
John Rein
Barttelbort & Rhutasel
Andrews Engineering
(Doug Andrews)

Illinois Environmental
Protection Agency 2200 Churchill Road, Springfield, Illinois 62706

MEMORANDUM

DATE: April 14, 1978

TO: Del Haschemeyer

FROM: Rauf Piskin and Tom Cavanagh

SUBJECT: East St. Louis Mal/Milam Landfill

The file on the above subject has been reviewed by us. The following conclusions are pertinent to that review:

1. In general, TDS, CL, B, and NH_3 concentrations are increasing in ground water in the vicinity of Monitoring Wells G12S, G12D, G112 and G122. This increase would come from the operations of landfill. In the vicinity of G12S and G12D, waste is placed on sand and gravel aquifer.

2. The east site and west site should be addressed separately due to their different geological conditions.

3. Geology in the east part seems to be adequate. However, a minimum of 10 ft. clay thickness must be maintained at the bottom and sides of the eastern part.

4. The eastern site may continue to operate under the permitted conditions.

5. According to permit conditions and Chapter 7 R & R, the west side must be covered with a minimum of 2 ft. suitable final cover.

RP:dw/2993/5

6. $90,000 penalty

7. performance bond.

3N10W-13.8g

January 5, 1979

MINERAL ANALYSIS

Sample of water collected November 7, 1978, from a well owned by Apex Oil, Granite City, Illinois, in Madison County. Location of well: Section 13.8g, T3N, R10W. Depth of well: 60 feet. water temp. 63°

LABORATORY NO. 209545

		mg/l	me/l
Iron(total)	Fe	0.0	
Manganese	Mn	.03	
Calcium	Ca	53.6	2.67
Magnesium	Mg	20.1	1.65
Strontium	Sr	.20	.00
Sodium	Na	27.0	1.17
Potassium	K	3.5	.09
Ammonium	NH_4	0.1	.01
Barium	Ba	<0.1	
Cadmium	Cd	.00	
Chromium	Cr	.00	
Copper	Cu	.08	
Lead	Pb	<.05	
Lithium	Li	.01	
Nickel	Ni	<.05	
Zinc	Zn	.17	.01
Silver	Ag	.00	

		mg/l	me/l
Phosphate(filt)	P	0.0	
(unfilt)	P	0.0	
Silica	SiO_2	7.5	
Fluoride	F	0.9	
Boron	B	0.2	
Nitrate	NO_3	11.0	.18
Nitrite	NO_2	.03	.00
Chloride	Cl	27	.76
Sulfate	SO_4	77.1	1.60
Alkalinity	(as $CaCO_3$)	150	3.00

Turbidity	8
Color	0
Odor	0
Temp.(reported)	63°

Hardness	(as $CaCO_3$)	216	4.32
Total Dissolved Minerals		310

mg/l = milligrams per liter
me/l = milliequivalents per liter
mg/l x .0583 = grains per gallon

ILLINOIS STATE WATER SURVEY

James C. Whitney
Head, Analytical Laboratory
217/333-0802

JCW/pcb

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

DATE: October 4, 1979

TO: Division File

FROM: Perry Mann

SUBJECT: St. Clair County - LPC 163 045 01 - East St. Louis/SCA-Milam

The following concerns the SCA-Milam site near East St. Louis, Illinois. Attention should be drawn to current violations of the water quality standards for groundwater which currently exist at the subject site.

The SCA-Milam site presently has 19 monitoring points; 17 monitor wells and 2 surface points on Old Cahokia Creek. Monitor well G127 serves as the background for the groundwater entering the site. G112, G111, and G118 serve as monitoring points for the groundwater passing through and leaving the presently operating phase. These wells are located just outside the perimeter berm which runs parallel along the margin of Old Cahokia Creek. Local drainage of the area suggests G118 is slightly above gradient from G111, which is slightly higher than G112. G112 is located near where the Old Cahokia Creek flows into the Cahokia Canal.

Reviewing the water analysis received since June 1977, G127 has yielded samples well within the range of the standards for groundwater quality.

Wells G118, G111, and G112, however, have been yielding samples which have exceeded the standards repeatedly and have maintained a generally increasing trend. (see attached chart) G111 and G112 have yielded consistently higher results than G118 in the parameters shown. Iron is the only exception in which the background result (G127) has been much higher than in the other wells.

The stream samples also reflect degradation although not to the same extent as do wells G111 and G112. This may be attributed to the effects of flow velocity and stream level which cause dilution.

Therefore, the present information seems to reflect the site is not in compliance with regards to its effect on the groundwater quality of the area. This site presently is the largest in the Southern Region and has accepted more special wastes than any other site within the region.

It is for this reason that any other supplemental permit for a special waste must be evaluated under the premise that this site has indicated a pollution potential. Any waste which could further degrade the groundwater to a significant extent should not be disposed of at this site.

PCM:jlr

cc: Southern Region
Bill Child
Rauf Piskin
Rod Bloese

	ROE			Ammonia			Boron			Chloride			COD		
	low	mean	high	low	mean	high	low	mean	high	low	mean	high	low	mean	high
G111	1332	2526	3430	.84	1.26	1.96	.2	4.58	8.5	70	302	535	16	61	100
G112	104	1740	3060	.20	3.18	5.15	.1	.45	.9	16	464	833	44	59	87
G118	616	1182	1430	.03	.55	1.62	.1	.199	.4	18	70.8	92	4	15.8	38
G127	436	608	730	.56	1.21	1.96	.1	.15	.2	4.3	12.2	24	8	16	63
SW1	252	474	736										24	46.5	95
SW2	250	691.6	1608										28	77	203

ROE	500
Chloride	250
Ammonia	1.5
Boron	1.0
Iron	≥ 1.0
COD	—

MEMORANDUM

DATE: December 7, 1979

TO: Division File

FROM: Rod Bloese RJB

SUBJECT: St. Clair County -- 16304501 -- East St. Louis/SCA-Milam

A brief review of the subject site was conducted through the use of Division Files to determine the need, if any, of additional water monitoring.

At present, Cahokia Creek is monitored at two points, S101 and S301, on a quarterly basis for COD, pH, R.O.E. and sulfate. The major indicator parameters at general refuse sites are ammonia, boron, COD, chloride, iron, R.O.E. and sulfate. Furthermore, in the past an oil film has been observed on the creek water. Therefore, it is recommended that in addition to the present Cahokia Creek water monitoring program, the monitor points S101 and S301, should be sampled and analyzed quarterly for ammonia, boron, chloride, iron, and oil and grease.

The monitor wells on the east side of Cahokia Creek are adequately located for upgradient ground water monitoring (G127 and G133) and downgradient for the "Old Barrel Fill Area" and Phase I (G112, G111, and G118), Phase III (G129), and the "New Barrel Fill Area" (G131 and G132). However, downgradient ground water monitoring of Phase II (the present active area) is inadequate. Presently, no monitor wells specifically monitor Phase II downgradient ground water.

It is recommended that two monitor wells be installed for monitoring downgradient ground water quality for Phase II. One well should be located on the levee flanking Cahokia Creek approximately 100 to 150 feet northwest of the site's southern boundary. The second well should be located within 50 feet of the Phase II southern fill boundary. These wells should be sampled and analyzed for background and then quarterly for ammonia, boron, COD, chloride, iron and R.O.E.

Implementation of the aforementioned recommendations can be obtained through the use of Special Condition No. 14 of the subject site's Operating Permit No. 1978-23, which states the following:

KM
PCM ✓
PMM ✓

This Agency reserves the right to require installation of additional monitoring devices, to alter the selection of parameters to be analyzed and to alter monitoring frequencies as may be necessary to fulfill the intent of the Environmental Protection Act.

RB:blb/0063B/6-7

cc: Southern Region
Rauf Piskin
Tom Cavanagh

IL-40-08

August 3, 1982

Sherry Otto

Perry C. Mann PCM

Request for certification check utilizing the drill rig unit at the East St. Louis/SCA-Milam Site.

This memo is a request for the use of the drill rig to check an area at the subject site certified by D. Andrews Engineering. The area, Phase IIB, was originally certified in November 1981 as having a 10 ft. clay liner. Inspections in the recent past have discovered that excavation of portions in the certified area had occurred, necessitating re-certification. Application for the re-certification of the liner is being prepared currently, according to Rich Volanino, SCA.

During its operational history, the site has achieved considerable notoriety for hydrogeologic problems, as well as for its non-compliance with the daily operating requirements. An enforcement brochure that alleges gross operating violations and hydrogeologic concerns has just been prepared by Enforcement Services. Revocation of the site's Operating Permit is being sought.

A memo dated October 29, 1981 by Ken Mensing (enclosed) had requested the drill rig to resume the study that had begun under Ron St. John's supervision. This study, which had begun in 1980, was suspended by Rauf Piskin because of other drill rig commitments.

Enclosed with this memo is a copy of the November 1981 certification information, which includes boring data and water level readings. Water was encountered at no greater depth than 8.5 ft. from the proposed fill-liner elevation, and as shallow as 4.5 ft. This phenomena is caused by a shallow silty sand unit which was observed throughout all site borings; Agency and private borings alike. Small hand auger borings conducted by Ron St. John, myself, and the drill crew members (and logged) in Phase IIB and Phase III also support the presence of a shallow permeable unit in these areas.

It is hoped that after a thorough review of the boring information already in existence (including the hand boring logs) the drill rig unit will be approved to place 3-4 shallow (10 ft. or less) borings at or near the D. Andrews Engineering borings (drilled by John Mathes and Associates) for grainsize, soil classification and permeability data to be obtained.

PCM:jlr

cc: Mike Nechvatal
Bill Child
Southern Region ✓
Tom Cavanagh
Joe Podlewski
John Student

October 29, 1981

Division File

Ken Hensing - Southern Region KGH

St. Clair County - LPC 163 045 01 - East St. Louis/SCA-Hilam

By letter dated October 9, 1981, Andrews Engineering certified the remaining portion of Phase II as having a minimum of ten (10) feet of clay in place. The boring logs indicate that water was encountered within the certified confining layer in all five (5) borings. The water was encountered from 4.5 feet to 7.5 feet from ground elevation. Upon completion of the borings in the sand layer, the water levels rose to between 1.8 feet and 3.4 feet of the surface elevation. Previous certifications, borings and excavations conducted by SCA and the Agency have revealed water bearing properties within the clay confining layer. It is obvious that this condition is not an isolated occurrence, since it has been encountered in the vast majority of borings ever made at the new site east of the creek. All observations, information, and studies made to this point indicate a large amount of water is present and available in the clay layer and that it is directly connected and influenced by the underlying main aquifer. I purport that we are not achieving the level of ground water protection that we originally had desired by having a minimum ten (10) foot clay barrier. We certainly wanted a ten (10) foot sealing clay layer between the refuse and the aquifer. We are not getting that level of protection which we thought we would be getting by requiring ten (10) feet of clay. It is obvious that we did not expect the hydrological conditions in the clay layer which we have subsequently encountered throughout the new site. The certification fulfills the requirement of the operating permit special condition, however, it does not realistically satisfy the requirement as we had intended it to be.

I would like for the drill rig to return to the site as soon as possible in order to proceed with our investigation of the site conditions.

KGH:jlr

cc: Southern Region ✓
Bill Child
Tom Cavanagh
Bob Mulvey
Rauf Piskin
Bill Seltzer

KM
PMM
PCM

JAMES DOUGLAS ANDREWS, P.E.
Environmental Engineering, Inc.
1320 SOUTH FIFTH STREET
SPRINGFIELD, ILLINOIS 62703
(217) 528-1545

November 6, 1981

Mr. Robert C. Mulvey, P.E.
Illinois Environmental Protection Agency
Div. of Land/Noise Pollution Control
Residual Management Section
2200 Churchill Road
Springfield, Illinois 62706

re: St. Clair County, Illinois
East St. Louis/SCA-Milam
Permit No. 1978-23-OP
Special Condition No. 8

Dear Mr. Mulvey:

Pursuant to your letter dated October 22, 1981, enclosed is a copy of that portion of Drawing No. 74-119A-MW1, 09/01/81, which shows the Phase IIB area of the subject facility. The shaded portion of the attached drawing references the area certified by our October 9, 1981 letter to the boundaries of the Phase IIB area, as requested. The certified area includes all portions of Phase IIB west of the haul road.

In addition, we are forwarding a copy of the October 9, 1981 certification letter to the Southern Region, as required by Special Condition No. 8 of Permit 1978-23-OP.

Should you have further questions or comments, please do not hesitate to contact our office at your earliest convenience.

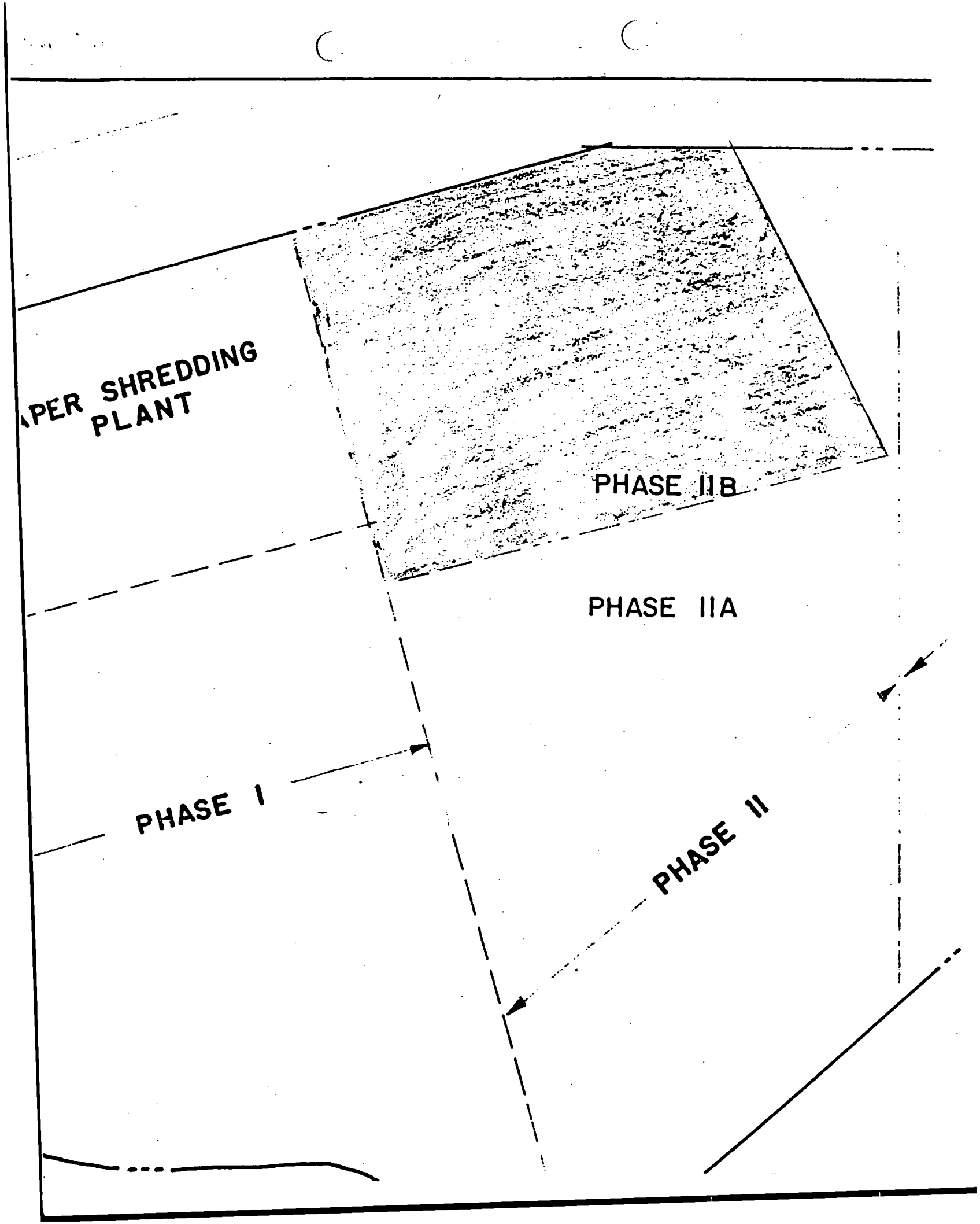
Sincerely,

Roberta L. Jennings,
Geologist

RLJ/ng
enclosure
cc: Peter Dunlap
Cecil Iglehart
Ron Ross
Dale Dille
Jim DeVoe
Don Boeger
IEPA-Southern Region

RECEIVED
NOV 09 1981
ILL. E.P.A. – D.L.P.C.
STATE OF ILLINOIS

KM
PMM ✓
PCM


APER SHREDDING
PLANT
PHASE IIB
PHASE IIA
PHASE I
PHASE II

FILE 74-119 d

JAMES DOUGLAS ANDREWS, P.E.
Environmental Engineering, Inc.
1320 SOUTH FIFTH STREET
SPRINGFIELD, ILLINOIS 62703
(217) 528-1545

October 9, 1981

Mr. Thomas E. Cavanagh, Jr., Manager
Residual Management Section
Division of Land/Noise Pollution Control
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

re: St. Clair County, Illinois
East St. Louis/SCA-Milam Landfill

"Phase II Certification"

Dear Mr. Cavanagh:

In accordance with permit conditions for the subject site, this is to certify that there is a minimum 10 feet of clay, as the attached boring logs indicate, in that area of Phase II shown on the attached site map.

Five (5) borings were conducted at the locations indicated, to the depth of the clay/sand contact. Each boring was securely back-compacted with clay auger cuttings mixed with bentonite.

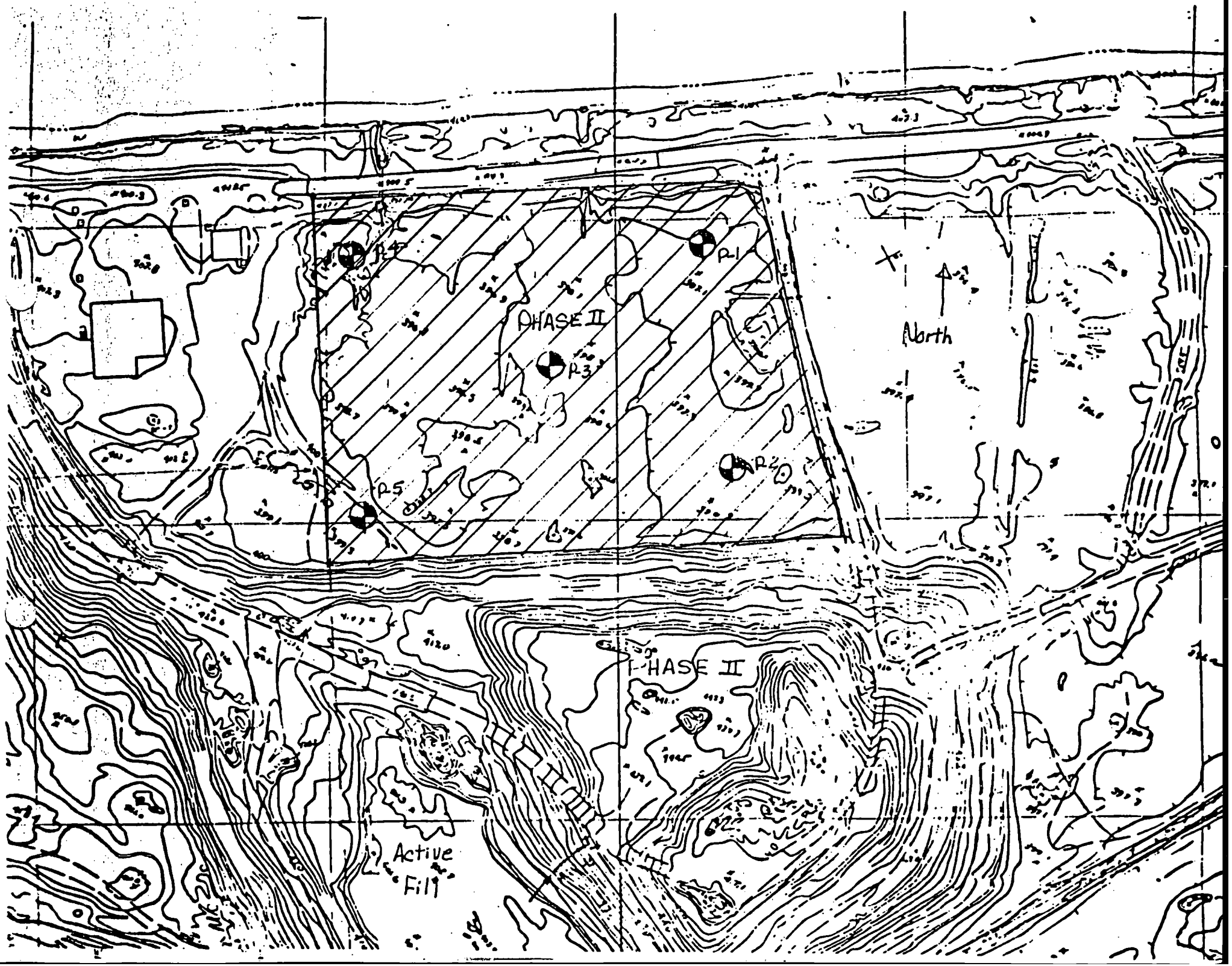
The area has been graded for proper drainage and is ready to begin accepting waste. Should you have any questions or comments in regard to this certification, please contact the undersigned.

Sincerely,

James Douglas Andrews, P.E.,
President

Roberta L. Jennings,
Geologist

JDA/RLJ/rdk:
cc: Mr. Peter Dunlap
Mr. Cecil Iglehart
Mr. Ron Ross
Mr. Dale Dilla
Mr. Jim De Voe
Mr. Don Boeger
w/attachments


PHASE II
R-1
R-2
R-3
R-4
R-5
North
PHASE II
Active
Fill

RECORD OF SUBSURFACE EXPLORATION

JOHN MATHES & ASSOCIATES, INC.

PROJECT Milam Landfill Test Drilling BORING P-1

CONTRACT 1107-81 DATE DRILLED 9-24-81 DRILLED BY Roberts

DRILLING METHOD Hollow Auger PIEZOMETER None LOGGED BY Maxeiner

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	NOTES	DESCRIPTION OF MATERIAL (SURFACE ELEVATION 398.81)	BLOWS	DRY UNIT WEIGHT PCF
	1	SS	Encountered water @ 4.5'	Gray CLAY w/Oxidized Stains -w/Oxidized Spots, Trace Organics @ 1.5'	1-2	
5	2	SS			1- 1/9"	
	3	SS		-Trace Oxidized Spots From 6.5'-10.5'	WH-1	
10	4	SS		-Trace Organics Below 9.0'	WH-2	
	5	SS			WH/18"	
15	6	SS			WH/15"-1	
	7	SS		Gray Fine SAND, Trace Medium	WH/18"	
20				T.O.B.		

SHEAR STRENGTH, TSF: BV (△) OP/2 (□) OU/2 (○) 0 0.5 1.0 1.5 2.0 2.

WATER CONTENT, % (●) 0 20 40 60 80 10

GROUND WATER DEPTH AT COMPLETION 2.1' AFTER _____ AFTER _____

SCALE 1" = 5.0'

JOHN MATHES & ASSOCIATES, INC.

RECORD OF SUBSURFACE EXPLORATION

JOHN MATHES & ASSOCIATES, INC.

PROJECT Milam Landfill Test Drilling BORING P-2

CONTRACT 1107-81 DATE DRILLED 9-24-81 DRILLED BY Roberts

DRILLING METHOD Hollow Auger PIEZOMETER None LOGGED BY Maxeiner

SURFACE ELEVATION 397.55

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	NOTES	DESCRIPTION OF MATERIAL	BLOWS	DRY UNIT WEIGHT PCF
				Gray CLAY		
	1	SS		-w/Oxidized Spots From 1.5'-5.5'	WH-2	
				-w/Oxidized Stains From 1.5'-8.0'		
5	2	SS		-Trace Root Holes @ 4.0'	1-1	
			Encountered water @ 6.0'	-Trace Organics From 4.0'-10.5'		
	3	SS			WH-1	
				-Trace Slickensides @ 9.0'		
10	4	SS			WH-1	
	5	SS			WH/18"	
				Gray Fine SAND		
15	6	SS		T.O.B.	WH/15"-1	
20						

SHEAR STRENGTH, TSF: SV — OP 2 — OU 2; 0 0.5 1.0 1.5 2.0

WATER CONTENT, %: PL + — ● ; 0 20 40 60 80

GROUND WATER DEPTH AT COMPLETION 3.4' AFTER ____ ____ AFTER ____ ____

SCALE 1" = 5.0'

JOHN MATHES & ASSOCIATES, INC.

RECORD OF SUBSURFACE EXPLORATION

JOHN MATHES & ASSOCIATES, INC.

PROJECT Milam Landfill Test Drilling BORING P-3

CONTRACT 1107-81 DATE DRILLED 9-24-81 DRILLED BY Roberts

DRILLING METHOD Hollow Auger PIEZOMETER None LOGGED BY Maxeiner

SURFACE ELEVATION 398.65

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	NOTES	DESCRIPTION OF MATERIAL	BLOWS	DRY UNIT WEIGHT PCF
				Gray CLAY, Trace Organics -w/Oxidized Spots, Trace Root Holes From 1.5'-5.5' -w/Oxidized Stains From 1.5'-8.0'		
	1	SS			1-2	
5	2	SS			1-1	
	3	SS	Encountered water @ 7.5'		WH-1	
10	4	SS			WH-1	
	5	SS			WH-1	
15	6	SS		Gray Fine SAND T.O.B.	4-7	
20						

SHEAR STRENGTH, TSF: SV △ — OP/2 ▭ — QU/2 ○; 0, 0.5, 1.0, 1.5, 2.0, 2.5

WATER CONTENT, %: +P ● +F; 0, 20, 40, 60, 80, 100

GROUND WATER DEPTH AT COMPLETION 2.8' AFTER ____ AFTER ____

SCALE 1" = 5.0'

JOHN MATHES & ASSOCIATES, INC.

RECORD OF SUBSURFACE EXPLORATION

JOHN MATHES & ASSOCIATES, INC.

PROJECT Milam Landfill Test Drilling BORING P-4

CONTRACT 1107-81 DATE DRILLED 9-24-81 DRILLED BY Roberts

DRILLING METHOD Hollow Auger PIEZOMETER None LOGGED BY Maxeiner

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	NOTES	DESCRIPTION OF MATERIAL (SURFACE ELEVATION 398.43)	BLOWS	DRY UNIT WEIGHT PCF
				Gray CLAY -w/Oxidized Stains, Trace Organics @ 1.5'		
	1	SS			1-2	
5	2	SS	Encountered water @ 5.5'		1-1	
	3	SS		-Trace Organics From 6.5'-10.5'	WH-1	
10	4	SS			1-1	
	5	SS			WH/18"	
15	6	SS			WH/18"	
	7	SS		Gray Fine SAND w/Medium	1-2	
				T.O.B.		
20						

SHEAR STRENGTH, TSF — BV (△), QP/2 (□), QU/2 (○) — 0, 0.5, 1.0, 1.5, 2.0, 2.5

WATER CONTENT, % — 0, 20, 40, 60, 80, 100

GROUND WATER DEPTH AT COMPLETION 1.8' AFTER ____ ____ AFTER ____ ____

SCALE 1" = 5.0'

JOHN MATHES & ASSOCIATES, INC.

RECORD OF SUBSURFACE EXPLORATION

JOHN MATHES & ASSOCIATES, INC.

PROJECT Milam Landfill Test Drilling BORING P-5

CONTRACT 1107-81 DATE DRILLED 9-24-81 DRILLED BY Roberts

DRILLING METHOD Hollow Auger PIEZOMETER None LOGGED BY Maxeiner

DEPTH (FT.)	SAMPLE NUMBER	SAMPLE TYPE	NOTES	DESCRIPTION OF MATERIAL (SURFACE ELEVATION 398.89)	BLOWS	DRY UNIT WEIGHT PCF
				Gray CLAY		
				-w/Oxidized Spots @ 1.5'		
	1	SS		-w/Oxidized Stains, Trace Organics From 1.5'-5.5'	1-1	
5	2	SS	Encountered water @ 6.0'		1-1	
				-w/Organics @ 6.5'		
	3	SS			WH-1	
				-Trace Organics Below 9.0'		
10	4	SS			WH/18"	
	5	SS			WH-2	
				Gray Fine SAND		
				T.O.B.		
15						

SHEAR STRENGTH, TSF — SV △ — OP/2 □ — OU/2 ○ — 0 0.5 1.0 1.5 2.0 2.5

WATER CONTENT, % — PL + — ● — LL + — 0 20 40 60 80 100

GROUND WATER DEPTH AT COMPLETION 3.0' AFTER ____ AFTER ____

SCALE 1" = 5.0'

JOHN MATHES & ASSOCIATES, INC.

Illinois Institute of Natural Resources

State Geological Survey Division

Natural Resources Building
615 East Peabody Drive
Champaign, IL 61820

ST. CLAIR CO.
E. ST. LOUIS/SCA-MILAM

RECEIVED
AUG 2 - 1981
ILL. E.P.A. - D.L.P.C.
STATE OF ILLINOIS

August 19, 1981

Mr. Kenneth G. Mensing
Division of Land Pollution Control
Illinois Environmental Protection Agency
113 West Main Street
Collinsville, IL 62234

Dear Mr. Mensing:

This is in response to your request for a hydrogeologic evaluation of the East St. Louis/SCA-Milam landfill site in St. Clair County to supplement the hydrogeologic study the IEPA had conducted at the site. The legal description is given as the NW¼ NW¼ Section 4 and the N½ Section 5, T. 2 N., R. 9 W., St. Clair County. I apologize for the delay in answering your request; however, recent staff reductions and increases in requests for information have prevented an earlier response. I hope that the information supplied herein will be beneficial. This evaluation is based on the following sources of information: 1) the results of boring logs from subsurface studies at the site included with your request; 2) descriptions of subsurface investigations conducted in 1973 on file at the Geological Survey; 3) numerous letter reports from the Geological Survey providing preliminary hydrogeologic evaluations of proposed and existing waste disposal sites involving field inspections in the immediate vicinity of the subject site; 4) ~~an published discussion by Thomas Clark, IEPA (Ground Water)~~, of the hydrogeology of the subject site; and 5) a personal visit November 6, 1975, and extensive evaluation of the site with regard to possible inclusion in a study by the Geological Survey of the effects of waste disposal in the unsaturated zone. Enclosed are copies of correspondence from Survey files describing hydrogeologic conditions in the area and several diagrams illustrating, specifically, geologic conditions at the site.

The landfill site has reportedly been in operation for a number of years and accepts both general refuse and liquid/solid special wastes. The method of operation has been primarily by cut and fill with the trench method used for the special wastes. The approximate reported limit of landfilled area as of June 1981 is shown on figure 1. The older portion of the fill to the west of the creek reportedly extends only about 30 feet above ground surface while the fill to the east reportedly reaches 60 feet above ground surface. In 1978, a trench area in the northeast corner of the site was approved for disposal of special waste. Upon excavation ground water reportedly filled the trench below a depth of 5 feet and subsequent attempts to limit ground-water inflow were reported to be ineffectual. Disposal in the trench area was then suspended. Concern regarding possible contamination of ground water by the landfill is the basis for the current hydrogeological study.

The site is located in the Mississippi River flood plain northeast of East St. Louis, Illinois at an elevation, prior to filling, of approximately 400 to 410 feet above sea level.

KM
PCN
AMM

The site is underlain by an average thickness of 120 feet of alluvium and glacial outwash. Test drilling indicates that fine-grained alluvium is present over a large portion of the site. Beneath the fine-grained alluvium is a substantial thickness of fine to medium sand which grades into coarse sand and gravel with depth.

To the west of the creek, test drilling in 1973 encountered up to 25 feet of older fill material consisting of alternating layers of refuse and compacted soil. Fine-grained alluvium, less than 10 feet thick, was encountered beneath the older fill at several locations; however, in some areas the entire thickness of fine-grained material was apparently removed prior to disposal resulting in disposal directly into the underlying sand. The enclosed letter reports describe hydrogeologic conditions in the vicinity of the landfill. The enclosed cross sections, A-A' and B-B', show the sequence of materials thought to exist beneath the site. It should be noted that the sandy clay encountered in boring 8 is not likely continuous beneath the fill but is probably a lense of material within the surrounding sand. This means that a significant portion of the refuse in the older fill area is probably in direct contact with the underlying permeable sand.

Test drilling indicates that fine-grained alluvium consisting primarily of clay underlies the entire area east of the creek. It is this area which was proposed in 1973 for development as an extension to the existing landfill. Clayey alluvium was encountered to depths of 9 to 24 feet. It was proposed that approximately 5 feet of clay would be excavated and stockpiled for use as cover material. ~~The final elevation of the bottom of the fill east of the creek was to be approximately 400 feet. After excavation, the thickness of clay beneath the fill would, therefore, be from 5 to 17 feet.~~ Fine to medium-grained sand directly underlies the alluvium. Cross section A-A' shows the sequence of materials beneath this portion of the site and the proposed base of the fill.

Large ground-water supplies have historically been obtained from wells finished in permeable sand and gravel deposits underlying the alluvium. Most of this water has been for industrial use. Until pumping was reportedly stopped in 1977 due to the availability of surface water, the site was located over a cone of depression created by heavy pumping in the National City area. An estimated 11.6 million gallons per day were withdrawn in this area in 1962. ~~As a result of the pumping the elevation of the piezometric surface was estimated to have lowered by about 15 feet. However, after pumping ceased in 1977 water levels had recovered such that by 1978 there was no longer any evidence of a cone of depression.~~ Most municipal water supplies in the area are obtained from the Mississippi River.

Ground-water levels are very shallow beneath the site, generally less than 5 feet. In the permeable sand underlying the fine-grained alluvium ground water occurs under confined conditions. The existence of a ground-water mound is indicated by the higher water levels present within the older fill area. The data indicate that ground-water flow in the sand beneath the site is away from the site in virtually all directions--north, west and south and eventually toward the river to the west. In 1973, prior to the cessation of heavy pumping in the National City area, a horizontal gradient of 3 feet per mile was measured to the southwest. There are not sufficient data to accurately indicate the magnitude of the vertical component of ground-water flow; however, it appears that there is a predominantly downward gradient in the clayey alluvium and a primarily lateral component of flow in the underlying sand.

Laboratory tests indicated that the hydraulic conductivity of the fine-grained alluvium varied from 1×10^{-7} to 9×10^{-9} cm/sec. The underlying fine to medium sand yielded values of 7×10^{-3} to 2×10^{-5} cm/sec. The hydraulic conductivity of the deeper sand and gravel aquifer was estimated by the State Water Survey to be about 1×10^{-2} cm/sec. Initial estimates of ground-water flow velocity beneath the site made in 1973 indicated that with an average hydraulic conductivity of 5×10^{-8} cm/sec, a vertical gradient of 0.086 ft/ft and a porosity of 50 percent, the velocity of vertical flow through the clay layer will be approximately 8.8×10^{-3} ft/yr. With a horizontal gradient of 0.0007 ft/ft across the clay, horizontal flow was estimated to be 7.4×10^{-5} ft/yr. However, it is not reasonable to use the measured total porosity to calculate the average linear ground-water velocity through a fine-grained material. It has been found that the effective porosity, the percent volume of interconnected pore space contributing to flow, is the proper parameter. The effective porosity of fine-grained alluvium is approximately 15 percent. Vertical gradients in fine-grained materials, also found to be somewhat greater than the initial estimate of 0.086, generally approach unity. The estimated value for hydraulic conductivity was also only an average. With these considerations calculations were made of ground-water velocity in the alluvium using a hydraulic conductivity of 1×10^{-7} cm/sec, an effective porosity of 0.15 and a vertical gradient of 1.0. The resulting estimated vertical velocity is .7 ft/yr. With the minimum estimated thickness of 5.5 feet of clayey alluvium between the base of the fill and the underlying sand, an estimated 7.9 years would be required for ground water or a conservative solute to penetrate the clay. If interconnected lenses of more permeable material are present this time would be considerably less.

The ion exchange capacity of the clayey alluvium has been measured to be 36.1 to 43.5 meq/100 g dry soil. Initial estimates of the total potential exchange capacity of the clayey material also used average thicknesses of material and assumed that all the exchange capacity of the soil is available to the dissolved ions. Current research indicates that ion exchange capacity is not an accurate indicator of the total attenuation potential of soil.

There is concern regarding the adverse effects on ground water by the landfill. Ground water from several monitoring wells on the site has had significantly elevated concentrations of chloride, dissolved solids, boron, and several metals. Concentrations of chloride of 1400 mg/L have been measured in P-10 as compared to background levels of 10 gm/L from P-27. The susceptibility of the shallow sand aquifer to contamination and the long history of industrial development and waste disposal in this area, has resulted in widespread ground-water contamination. Substantial amounts of pollutants have originated from stockyards and local industries. It is frequently difficult to evaluate the effect of pollutants derived from a single source.

The enclosed figures were developed in an attempt to understand hydrogeological conditions beneath the site and to suggest possible reasons for the observed distribution of ground-water quality. Figure 1 is a map of the site with the locations of the borings and the locations of the cross sections. Figure 2 indicates the thickness of the upper clay alluvium prior to development of the area east of the creek. It should be noted that the clayey alluvium is absent in the southwest

portion of the site and becomes thicker to the northeast. West of the creek, excavation prior to waste disposal was probably responsible for the removal of much of the clayey alluvium. It is evident that a portion of the older fill is in direct contact with the underlying sand. Several borings west and southwest of the old fill area encountered clayey silt which is more permeable and less uniform than the clayey alluvium to the northeast. Because the proposed base of the landfill east of the creek was reported to be 400 feet in elevation, figure 3 was prepared to show the thickness of the upper clay alluvium below 400 feet in elevation and, therefore, the thickness of clay which would underlie the landfill. Note that the central portion of the site has considerably less than 10 feet of clay if the base of the fill is at 400 feet in elevation. This is also shown on cross section A-A'. There is little or no information on the significance of the silty, more permeable materials reportedly encountered in the five additional borings in the central portion of the site.

The ground-water contamination indicated by samples from P-10 appears to be traceable only to the landfill. Ground-water flow beneath the northern part of the site is probably toward the canal along the north edge of the site especially if a ground-water mound is present within the fill. It has been shown that the potential exists for pollutant migration through the clayey alluvium into the underlying sand. It is likely, however, that the primary source of contamination is probably the older portion of the fill not underlain by clayey alluvium. It should be realized, however, that with the multitude of potential sources of contaminants in this area it is very difficult to ascertain exactly the source or the extent of contamination from a single source.

If you have any questions, please contact me and I will respond immediately. I apoligize again for the unavoidable delay in answering your initial request.

Very truly yours,

Thomas M. Johnson

Thomas M. Johnson
Assistant Geologist
Hydrogeology and Geophysics Section

Enclosures

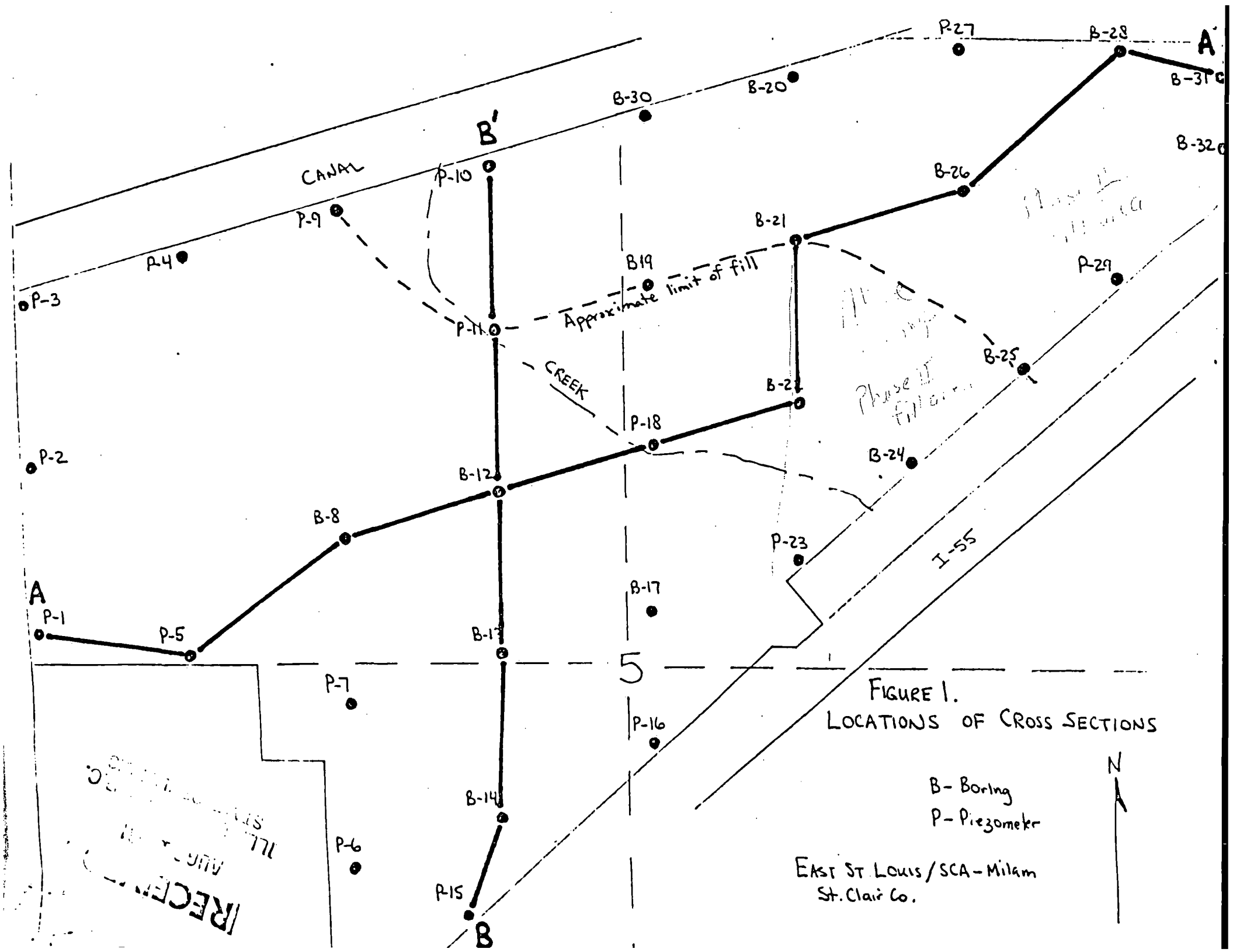


FIGURE 1.
LOCATIONS OF CROSS SECTIONS

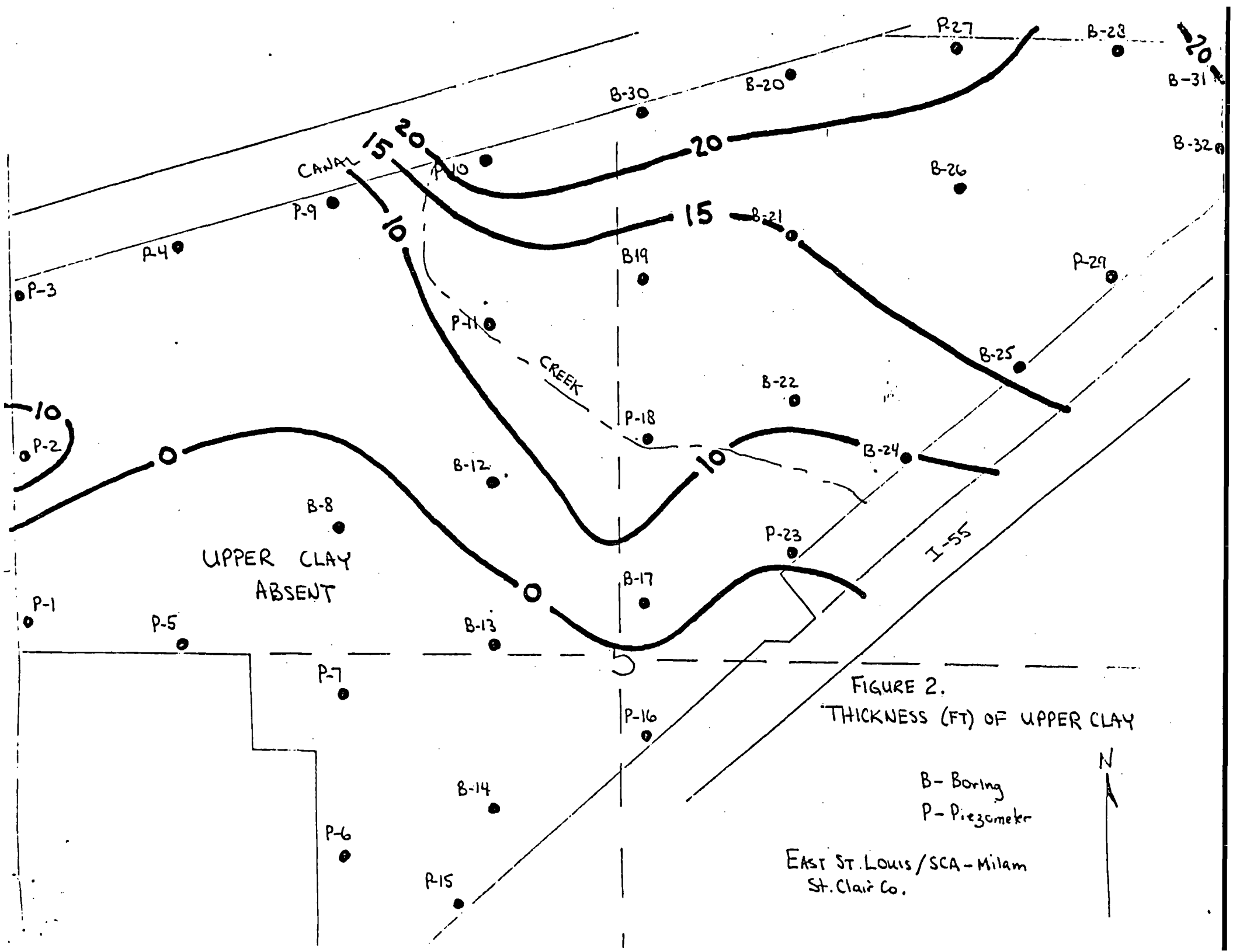


FIGURE 2.
THICKNESS (FT) OF UPPER CLAY

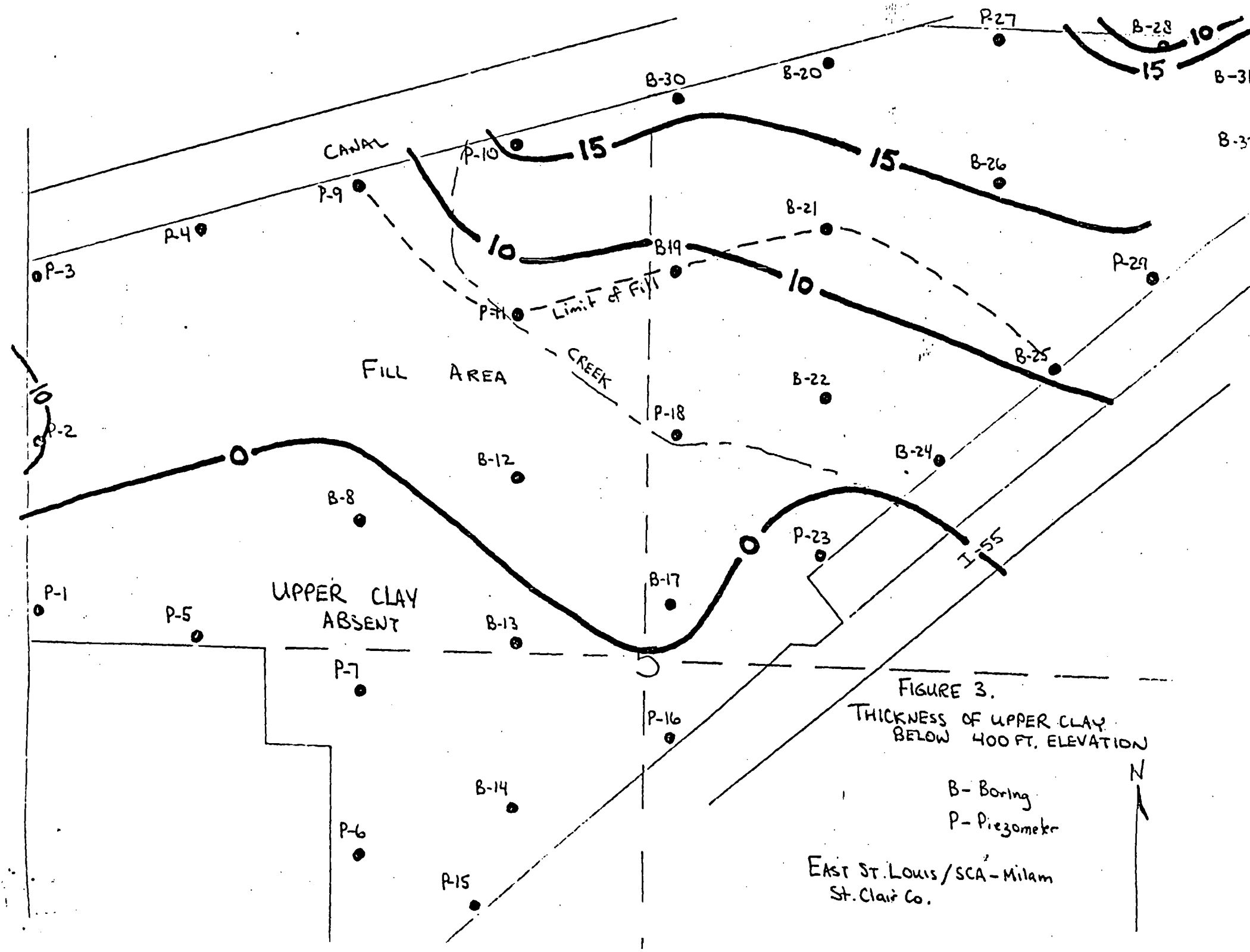


FIGURE 3.
THICKNESS OF UPPER CLAY
BELOW 400 FT. ELEVATION

B- Boring
P- Piezometer

EAST ST. LOUIS / SCA - Milam
St. Clair Co.

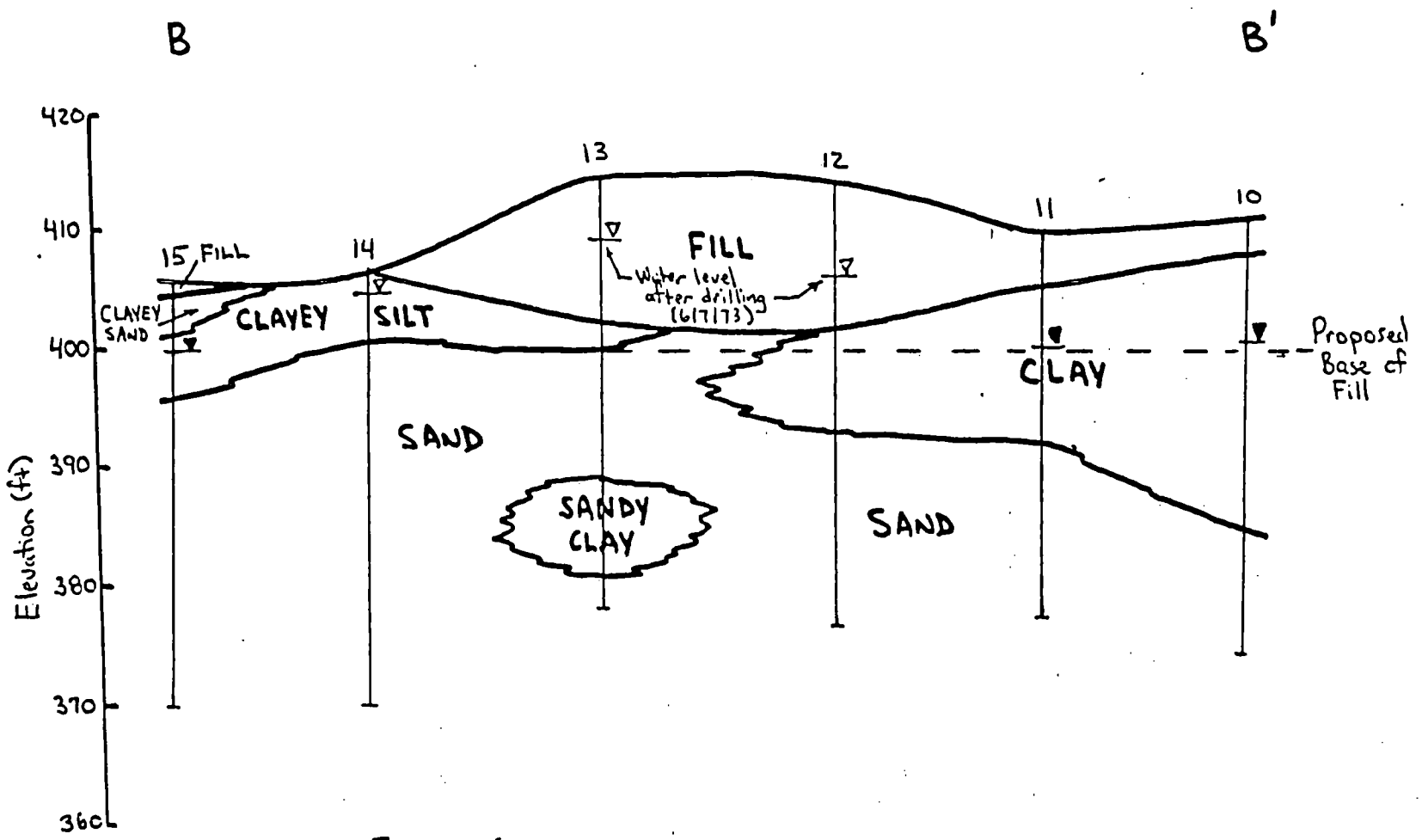


FIGURE 4.

Schematic north-south cross section of SCA-Milam landfill site, St. Clair Co.

(T. Johnson, Il. St. Geol. Survey, 6/4/81)

▼ Water level in sand (8/9/73)

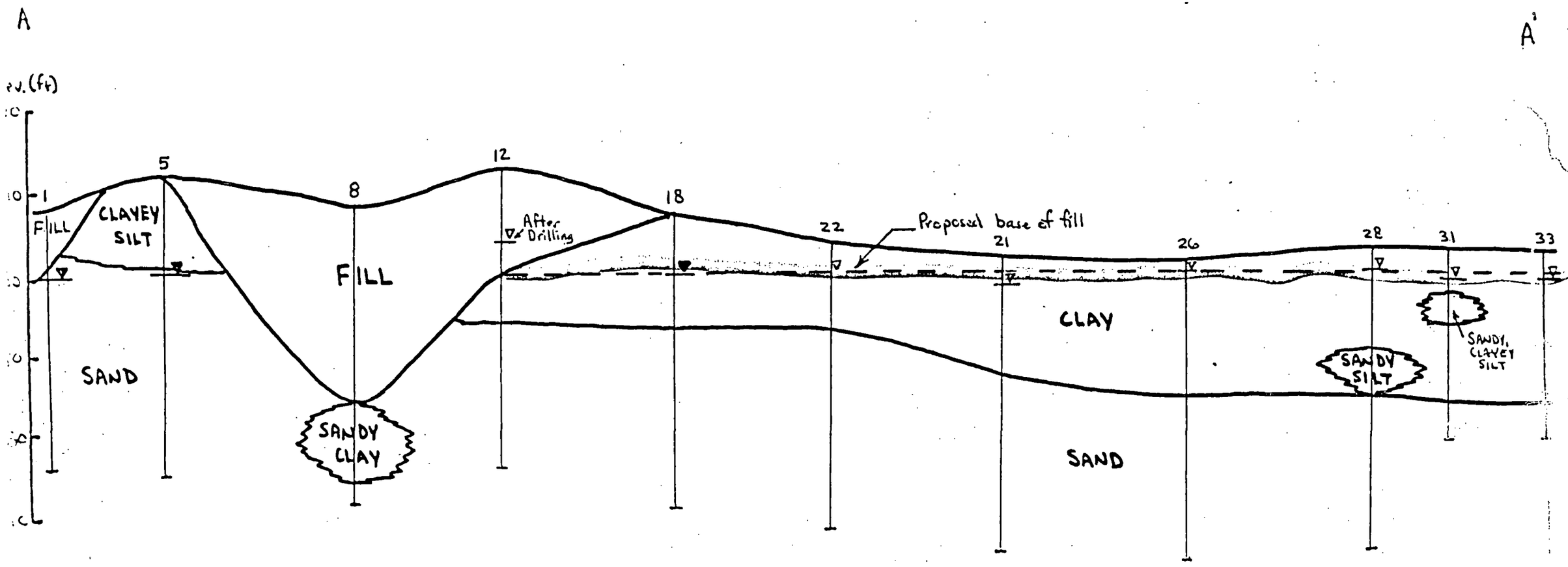


FIGURE 5. Schematic SW-NE cross section of East St. Louis/SCA-Milam landfill, St. Clair Co.
(T. Johnson, IL. St. Geol. Survey, 6/4/81)

Water level in sand (8/9/77)

~~Water~~ after

6

SCA SERVICES, INC.
1838 N BROADWAY
ST. LOUIS MO 63102

MILAM

SCA SERVICES

August 31, 1982

REFERENCE 6
SITE NAME SCA Milam
SITE ID ILTIR001496

Illinois Environmental Protection Agency
Division of Land Pollution Control
113 W. Main St.
Collinsville, IL 62234

Attn: Ken Mensing-Southern Region Manager

Dear Mr. Mensing,

As per our phone discussion of 8-30-82 I am enclosing copies of the boring logs for the two monitering wells at Milam which we recently had re-drilled. As the logs indicate, we were attempting to reconstruct the original piezameters (P2A & P10A) that had been installed by Layne-Western years ago. These two new wells are located within five ft. of the old wells and are constructed identically to the wells they are replacing. Unfortunately, we discovered only recently that G112 and G12S had been destroyed and were not suitable for sampling. The need to meet our 4th quarter sampling deadline necessitated the quick replacement of these two wells.

I trust the above clarifies our reasons for the recent drilling at Milam. Should you have any further questions, please do not hesitate to call.

Sincerely,

Richard T. Kogler
Environmental Manager
Central Landfill Division

RTK/pb
Enclosure

cc: R. Volonino
G. O'Bryan

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SEP 02 1982
ILL. E.P.A. - D.L.P.C.
STATE OF ILLINOIS

KM
PCM
PMM

RECYCLED PAPER

Layne-Western Company, Inc. A Marley Company
2399 Cassens Drive • P.O. Box 1146 • St. Louis, Missouri 63026 • 314/343-3700

August 30, 1982

SCA Services
1838 North Broadway
St. Louis, Missouri 63102

Att: Mr. Richard Kogler

Re: Milam Landfill

Dear Mr. Kogler;

We enclose one copy each of the boring logs at Boring 2 and 10 of Milam Landfill on Highway 70 in St. Clair County.

The piezometers were constructed as duplicates to the original piezometers.

Please advise if you need additional information.

Yours very truly,

John T. Ruester, P.E.
Contracting Engineer

JTR/bth

encl.

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STATE OF ILLINOIS

TEST HOLE REPORT

Layne-Western Company, Inc.

WATER SUPPLY SERVICES SINCE 1924

TEST DRILLING • WATER WELLS • PUMPS

Contract Name SCA Services (Milam Landfill)

Job No. G-2832 Date 8/24/82

City East St. Louis State Illinois

TEST HOLE No. 2

Driller Pettus

Location of Test Hole

¼ ¼ Sec. of T.

R , Co., .

Elevation of Test Hole

Static Water Level 4.5' below top of piezometer

Measured 24 Hours After Completic

From	To	Description of Strata	Water Bearin
0'	5.0'	Brown clayey silt	
5.0'	7.5'	Rubble	
7.5'	19.0'	Gray clay	
9.0'	29.0'	Gray fine to coarse silty sand	
29.0'	34.5'	Fine to coarse sand	
	34.5'	T.O.B.	
		Installed 35' of 2" plastic piezometer with bottom 7' slotted and bottom and top capped.	
		Piezometer was sealed above the screen with bentonite to approximately 3' of surface. Top 3' sealed with neet cement.	

RECEIVED

SEP 02 1982

ILL. E.P.A. – D.L.P.C.

STATE OF ILLINOIS

emarks:

W-62

TEST HOLE REPORT

Layne-Western Company, Inc.

WATER SUPPLY SERVICES SINCE 1924

TEST DRILLING • WATER WELLS • PUMPS

Contract Name: SCA Services (Milam Landfill)

Job No.: G-2832 Date: 8/24/82

City: East St. Louis State: Illinois

TEST HOLE No. 10

Driller: Pettus

Location of Test Hole

¼ ¼ Sec. of T, R, Co.,

Elevation of Test Hole

Static Water Level 9.6' below top of piezometer

Measured 24 Hours After Completi

From	To	Description of Strata	Water Bearin
0'	5.0'	Brown clayey silt with crushed stone or gravel	
5'	22.5'	Gray clay	
22.5'	30.0'	Silty fine to coarse sand	
30.0'	34.5'	Fine to coarse sand	
	34.5'	T.O.B.	
		Installed 37' of 2" plastic piezometer with bottom 10' slotted and bottom and top capped. Piezometer was sealed above the screen with bentonite to approximately 3' of surface. Top 3' sealed with neet cement.	

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SEP 02 1982
ILL. E.P.A. – D.L.P.C.
STATE OF ILLINOIS

Remarks:

A-62

IL-40-09

ILLINOIS EPA

Environmenta Protection Agency

2200 Churchill Road, Springfield, Illinois 62706

217/782-6760

DECEMBER 16, 1982

SCA SERVICES OF ILL
P.O. BOX 698
GRANITE CITY , IL 62040

REFER TO: ST CLAIR COUNTY
SITE 16304501
E ST LOUIS/SCA MILAM

GENTLEMEN:

THIS LETTER IS WRITTEN IN REGARD TO YOUR WATER MONITORING PROGRAM AS OUTLINED BY THE FOLLOWING:

OPERATING PERMIT NUMBER 1978-23-OP ISSUED 12/08/78
SPECIAL CONDITION NUMBER 12
SUPPLEMENTAL PERMIT NUMBER 1981-96 ISSUED 10/26/81

THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY HAS NOTED THAT YOUR WATER MONITORING PROGRAM HAS NOT BEEN CONDUCTED IN ACCORDANCE WITH THE ABOVE PERMIT CONDITIONS AND AGENCY REQUIREMENTS. THE FOLLOWING DEFICIENCIES WERE NOTED:

MONITOR POINT	REPORTING QUARTER	DEFICIENCIES NOTED	PARAMETERS NOT REPORTED
G135	10/15/82	A QUARTERLY ANALYSIS REPORT WAS NOT FILED	

WE ASK THAT YOU CORRECT THE ABOVE DEFICIENCIES IMMEDIATELY. ALSO, YOU ARE REMINDED THAT QUARTERLY WATER MONITORING REPORTS ARE DUE IN THIS OFFICE BY THE 15TH OF JANUARY, APRIL, JULY AND OCTOBER. YOUR COMPLIANCE WITH THE ABOVE DATES WILL BE APPRECIATED.

PLEASE DIRECT ALL RESPONSES AND QUESTIONS TO MARY REMMERS OR PAT GIORDANO OF MY STAFF.

VERY TRULY YOURS,

MICHAEL F. NECHVATAL, MANAGER
COMPLIANCE MONITORING SECTION
DIVISION OF LAND POLLUTION CONTROL

JK

CC: DIVISION FOS FILE
SOUTHERN REGION

RECEIVED
DEC 30 1982
ILL. E.P.A. – D.L.P.C.
STATE OF ILLINOIS

DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

RECEIVED
OCT 15 1982
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 P-11 (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 6 3 0 4 5 0 1 (16)

MONITOR POINT NUMBER (17) G111 (20) DATE COLLECTED (21) 0 9 1 5 8 2 (26)

St. Clair Co. - LPC REGION (27) S

East St. Louis (Location) / SCA - Milam (Responsible Party)

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

Time Collected 8:00 a.m. ~~p.m.~~ Unable to collect sample (X) (30)

Stick-up (31) 1.7 (33) ft. Depth to water (from T.O.C.) (34) 2.4 (36) ft.

Sample temp. (37) 6 4 (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: depth of well 24.4'
Fast recharge

S. A. Meierotto — Collected by
Laclede Gas Laboratory — Div. or Company
S. A. Meierotto — Transported by
Laclede Gas Laboratory — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 9/15/82

Rec'd by ARM Time 4:00 ~~a.m.~~ p.m.

Sample temp. acceptable YES ~~NO~~
Sample properly preserved YES ~~NO~~
Date completed 10/4/82
Date forwarded 10/8/82

Allan R. Maurer
Supervisor Signature

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

LPCSM020
Lab Comments:

(27) (36)
(37) (46)
(47) (56)
(57) (66)
(67) (76)
Private Well (X) (77)
IEPA Lab (X) (78)

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NOV 02 1982
ILL. EPA
STATE OF ILLINOIS

LPCSM030

		PARAMETERS*	PPM*
27		Alkalinity[1]	
31	X	Ammonia as N	2.00
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	X	Boron B	0.9
58		Cadmium Cd	
64		Calcium Ca	
69	X	COD	165
73	X	Chloride Cl	293

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	0.2
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)	2147
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 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

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

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I.E.P.A.
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) Water
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

P-10A

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

L P C S M 0 1 0 (1)–(8) SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (9)–(16)

MONITOR POINT NUMBER G 1 1 2 (17)–(20) DATE COLLECTED 0 9 1 4 8 2 (21)–(26)

St. Clair Co. - LPC REGION S (27)

East St. Louis / SCA - Milam
(Location) (Responsible Party)

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

Time Collected 1:45 a.m. p.m. Unable to collect sample (X) (30)

Stick-up 2.0 ft. (31)–(33) Depth to water 11.9 ft. (from T.O.C.) (34)–(36)

Sample temp. 62 °F (37)–(39) Background (X) (40)

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

Sample Appearance: cloudy gray - no odor

Collector comments: well depth 30.4'
fast recharge

S. A. Meierotto — Collected by
Laclede Gas Laboratory — Div. or Company
S. A. Meierotto — Transported by
Laclede Gas Laboratory — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 9/14/82

Rec'd by ARM Time 3:15 a.m. p.m.

Sample temp. acceptable YES NO
Sample properly preserved YES NO
Date completed 10/4/82
Date forwarded 10/8/82

Alan R. Maurer
Supervisor Signature

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

LPCSM020
Lab Comments:

(27)–(36)
(37)–(46)
(47)–(56)
(57)–(66)
(67)–(76)

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

RECEIVED
NOV 05 1982
ILL. EPA
STATE OF ILLINOIS

LPCSM030

		PARAMETERS*	PPM*
27		Alkalinity[1]	
31	X	Ammonia as N	2.40
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	X	Boron B	0.2
58		Cadmium Cd	
64		Calcium Ca	
69	X	COD	865
73	X	Chloride Cl	21

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	4.4
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)	606
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 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

RECEIVED
OCT 15 1982
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		

P-18

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

L P C S M 0 1 0 (1)–(8) SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (9)–(16)

MONITOR POINT NUMBER G 1 1 8 (17)–(20) DATE COLLECTED 0 9 1 5 8 2 (21)–(26)

St. Clair Co. - LPC REGION S (27)

East St. Louis (Location) / SCA - Milam (Responsible Party)

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

Time Collected 8:45 a.m. p.m. Unable to collect sample (X) (30)

Stick-up 1.0 ft. (31)(33) Depth to water 7.9 ft. (from T.O.C.) (34)(36)

Sample temp. 62 °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 15.5'
fash recharge

S. A. Meierotto — Collected by — Laclede Gas Laboratory — Div. or Company

S. A. Meierotto — Transported by — Laclede Gas Laboratory — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 9/15/82

Rec'd by ARM Time 4:00 a.m. p.m.

Sample temp. acceptable YES NO
Sample properly preserved YES NO
Date completed 10/4/82
Date forwarded 10/8/82

Alan R. Maurer
Supervisor Signature

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

LPCSM020
Lab Comments:

(27)–(36)
(37)–(46)
(47)–(56)
(57)–(66)
(67)–(76)

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

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ILL. E.P.A.
I.D.P.C.
STATE OF ILLINOIS

LPCSM030

		PARAMETERS*	PPM*
27		Alkalinity[1]	
31	X	Ammonia as N	0.32
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	X	Boron B	0.3
58		Cadmium Cd	
64		Calcium Ca	
69	X	COD	74
73	X	Chloride Cl	170

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	0.2
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)	1920
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 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

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		

RECEIVED OCT 15 1982 STATE OF ILLINOIS

P-2A
Name (Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0 (1)(8) SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (9)(16)

MONITOR POINT NUMBER G 1 2 S (17)(20) DATE COLLECTED 0 9 1 5 8 2 (21)(26)

St. Clair Co. - LPC REGION S (27)

East St. Louis / SCA - Milam
(Location) (Responsible Party)

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

Time Collected 2:05 ~~a.m.~~ p.m. Unable to collect sample (X) (30)

Stick-up 2.0 ft. (31)(33) Depth to water (from T.O.C.) 6.9 ft. (34)(36)

Sample temp. 6 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 gray - septic odor

Collector comments: well depth 17.9'
fast recharge

S. A. Meierotto — Collected by
Laclede Gas Laboratory — Div. or Company
S. A. Meierotto — Transported by
Laclede Gas Laboratory — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 9/15/82

Rec'd by ARM Time 4:00 ~~a.m.~~ p.m.

Sample temp. acceptable YES ~~NO~~
Sample properly preserved YES ~~NO~~
Date completed 10/4/82
Date forwarded 10/8/82

Alan R. Mauer
Supervisor Signature

Name Laclede Gas Lab
Address 4118 Shrewsbury
of Lab 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)

RECEIVED NOV 04 1982 ILLINOIS EPA

LPCSM030

		PARAMETERS*	PPM*
27		Alkalinity[1]	
31	X	Ammonia as N	2.70
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	X	Boron B	0.1
58		Cadmium Cd	
64		Calcium Ca	
69	X	COD	41
73	X	Chloride Cl	62

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	6.3
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)	784
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 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

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		

RECEIVED OCT 15 1982 STATE OF ILLINOIS

P-27

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

LPCSM010 (1) (8)

SITE INVENTORY NUMBER 16304501 (9) (16)

MONITOR POINT NUMBER G127 (17) (20)

DATE COLLECTED 091582 (21) (26)

St. Clair Co. - LPC

REGION S (27)

East St. Louis (Location) / SCA-Milam (Responsible Party)

Legal (1); Illegal (2); Indicate One: 1 (28)

Board Order (X) (29)

Time Collected 9:45 a.m. p.m.

Unable to collect sample (X) (30)

Stick-up 1.0 ft. (31) (33)

Depth to water (from T.O.C.) 5.9 ft. (34) (36)

Sample temp. 66 °F (37) (39)

Background (X). . . . (40)

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

Sample Appearance: turbid - septic odor

Collector comments: well depth 24.7'

fash recharge

S. A. Meierotto — Collected by

Laclede Gas Laboratory — Div. or Company

S. A. Meierotto — Transported by

Laclede Gas Laboratory — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 9/15/82

Rec'd by ARM Time 4:00 a.m. p.m.

Sample temp. acceptable YES NO

Sample properly preserved YES NO

Date completed 10/4/82

Date forwarded 10/8/82

Alan R. Maurer

Supervisor Signature

Name Laclede Gas Lab

Address of Lab 4118 Shrewsbury St. Louis, MO

LPCSM020

Lab Comments:

(27) Bless tha (36)

(37) (46)

(47) (56)

(57) (66)

(67) (76)

Private Lab (X) (77)

IEPA Lab ( ) (78)

RECEIVED NOV 04 1982 ILL. E.P.A. - D.L.P.C. STATE OF ILLINOIS

LPCSM030

		PARAMETERS*	PPM*
27		Alkalinity[1]	
31	X	Ammonia as N	3.00
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	X	Boron B	0.1
58		Cadmium Cd	
64		Calcium Ca	
69	X	COD	78
73	X	Chloride Cl	10

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	0.4
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)	536
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 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 OCT 13 1982 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		

P-29

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

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 6 3 0 4 5 0 1 (16)

MONITOR POINT NUMBER (17) G 1 2 9 (20) DATE COLLECTED (21) 0 9 1 5 8 2 (26)

St. Clair Co. - LPC REGION (27) S

East St. Louis / SCA - Milam
(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) 1.5 (33) ft. Depth to water (from T.O.C.) (34) 4.0 (36) ft.

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

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

Sample Appearance: slime green turbid - no odor

Collector comments: well depth 12.0'
fast recharge

S. A. Meierotto — Collected by
Laclede Gas Laboratory — Div. or Company
S. A. Meierotto — Transported by
Laclede Gas Laboratory — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 9/15/82

Rec'd by ARM Time 4:00 a.m. p.m.

Sample temp. acceptable YES NO

Sample properly preserved YES NO

Date completed 10/4/82

Date forwarded 10/8/82

Alan R. Maurer
Supervisor Signature

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

LPCSM020
Lab Comments:

(27) B 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)

RECEIVED NOV 10 1982 I.E.P.A. - D.L.P.C. STATE OF ILLINOIS

LPCSM030

		PARAMETERS*	PPM*
27		Alkalinity[1]	
31	X	Ammonia as N	3.00
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	X	Boron B	0.1
58		Cadmium Cd	
64		Calcium Ca	
69	X	COD	103
73	X	Chloride Cl	10

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	2.2
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)	688
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 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

RECEIVED
OCT 15 1982
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: Special Waste Area (Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0 (1) (8) SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (9) (16)

MONITOR POINT NUMBER G 1 3 1 (17) (20) DATE COLLECTED 0 9 1 5 8 2 (21) (26)

St. Clair Co. - LPC REGION X S (27)

East St. Louis / SCA Milam
(Location) (Responsible Party)

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

Time Collected 11:00 a.m. p.m. Unable to collect sample (X) (30)

Stick-up 1.5 ft. (31) (33) Depth to water (from T.O.C.) 4.5 ft. (34) (36)

Sample temp. 67 °F (37) (39) Background (X). . . . (40)

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

Sample Appearance: turbid gray - no odor

Collector comments: well depth 30.0'
fast recharge

S. A. Meierotto — Collected by
Laclede Gas Laboratory — Div. or Company
S. A. Meierotto — Transported by
Laclede Gas Laboratory — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 9/15/82

Rec'd by ARM Time 4:00 a.m. p.m.

Sample temp. acceptable YES NO
Sample properly preserved YES NO
Date completed 10/4/82
Date forwarded 10/8/82

Alan R. Maurer
Supervisor Signature

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

LPCCM020
Lab Comments:

(27) (36)
(37) (46)
(47) (56)
(57) (66)
(67) (76)

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

LPCCM030

		PARAMETERS*	PPM*
27		Alkalinity[1]	
31	X	Ammonia as N	0.58
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	X	Boron B	0.1
58		Cadmium Cd	
64		Calcium Ca	
69	X	COD	45.
73	X	Chloride Cl	5.

LPCCM040

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	1.8
70		Lead Pb	

LPCCM050

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	

LPCCM060

27	X	B.O.D. (180°C)	564.
31		Selenium Se	
36		Silver Ag	
44		Sodium Na	
49		SC (µmhos/cm.)	
53		Sulfate SO_4	
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 as $CaCO_3$ at pH 4.5.

IL 532-0313
LPC 8 3/77

CHEMICAL ANALYSIS FORM

RECEIVED OCT 15 1982 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 Special Waste Area (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 6 3 0 4 5 0 1 (16)

MONITOR POINT NUMBER (17) G 1 3 2 (20) DATE COLLECTED (21) 0 9 1 5 8 2 (26)

St. Clair Co. - LPC REGION (27) S

East St. Louis (Location) / SCA - Milam (Responsible Party)

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

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

Stick-up (31) 1.5 (33) ft. Depth to water (from T.O.C.) (34) 3.0 (36) ft.

Sample temp. (37) 6 7 ° (39) F Background (X). . . . (40)

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

Sample Appearance: turbid gray - no odor

Collector comments: well depth 22.0'
fast recharge

Collected by	Div. or Company
S. A. Meierotto	Laclede Gas Laboratory
Transported by	**Div. or Company**
S. A. Meierotto	Laclede Gas Laboratory

LAB USE ONLY

Lab No.

Date Rec'd 9/15/82

Rec'd by ARM Time 4:00 a.m. p.m.

Sample temp. acceptable YES ~~NO~~

Sample properly preserved YES ~~NO~~

Date completed 10/4/82

Date forwarded 10/8/82

Alan R. Maurer
Supervisor Signature

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

LPCSM020
Lab Comments:

(27) (36)
(37) (46)
(47) (56)
(57) (66)
(67) (76)
Private Lab (X) (77)
IEPA Lab (78)

RECEIVED NOV 9 1982 ILL. E.P.A. STATE OF ILLINOIS

LPCSM030

		PARAMETERS	PPM*
27		Alkalinity[1]	
31	X	Ammonia as N	2.10
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	X	Boron B	0.3
58		Cadmium Cd	
64		Calcium Ca	
69	X	COD	70
73	X	Chloride Cl	3

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	1.2
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	B.O.D. (180°C)	552
31		Selenium Se	
36		Silver Ag	
44		Sodium Na	
49		SC (µmhos/cm)	
53		Sulfate SO_4	
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.

IL 532-0313
LPC B 3/77

CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(G) 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		

RECEIVED OCT 15 1982 STATE OF ILLINOIS

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

L P C S M 0 1 0 (1) (8) SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (9) (16)

MONITOR POINT NUMBER G 1 3 3 (17) (20) DATE COLLECTED 0 9 2 4 8 2 (21) (26)

St. Clair Co. - LPC REGION S (27)

East St. Louis / SCA - Milam
(Location) (Responsible Party)

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

Time Collected 11:00 a.m. p.m. Unable to collect sample (X) (30)

Stick-up 1.5 ft. (31) (33) Depth to water 2.5 ft. (from T.O.C.) (34) (36)

Sample temp. 68 o F (37) (39) Background (X). . . . (40)

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

Sample Appearance: CLOUDY - slight odor

Collector comments: well depth 27.0'
fast recharge

Richard Kogler — Collected by
SCA Services — Div. or Company

Richard Kogler — Transported by
SCA Services — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 9/24/82

Rec'd by ARM Time 2:00 a.m. p.m.

Sample temp. acceptable YES NO
Sample properly preserved YES NO
Date completed 10/4/82
Date forwarded 10/8/82

Alan R. Marvin
Supervisor Signature

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

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	0.77
37		Arsenic As	
44		Barium Ba	
49		BOD -5	
53	X	Boron B	0.7
58		Cadmium Cd	
64		Calcium Ca	
69	X	COD	37
73	X	Chloride Cl	4

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	0.9
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	XX	R.O.E. (180°C)	481
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 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

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		

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

L P C S M 0 1 0 (1) (8) SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (9) (16)

MONITOR POINT NUMBER G/34 (17) (20) DATE COLLECTED 0 9 1 4 8 2 (21) (26)

St. Clair Co. - LPC REGION S (27)

East St. Louis / SCA-Milam
(Location) (Responsible Party)

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

Time Collected 1:45 ~~a.m.~~ p.m. Unable to collect sample (X) (30)

Stick-up 1.5 ft. (31) (33) Depth to water (from T.O.C.) 1.5 ft. (34) (36)

Sample temp. 71 °F (37) (39) Background (X). . . . (40)

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

Sample Appearance: BIPHASE OILY LAYER AND WATER LAYER

cloudy gray - no odor

Collector comments: well depth 25.0'

fast recharge

S. A. Meierotto — Collected by
Laclede Gas Laboratory — Div. or Company

S. A. Meierotto — Transported by
Laclede Gas Laboratory — Div. or Company

LAB USE ONLY

Lab No. _____

Date Rec'd 9/14/82

Rec'd by ARM Time 3:15 ~~a.m.~~ p.m.

Sample temp. acceptable YES ~~NO~~
Sample properly preserved YES ~~NO~~
Date completed 10/4/82
Date forwarded 10/8/82

Alan R. Mauer
Supervisor Signature

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

LPCSM020
Lab Comments:

(27) (36)
(37) (46)
(47) (56)
(57) (66)
(67) (76)

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

RECEIVED NOV 0 8 1982 E.P.A. — D.L.P. STATE OF ILLINOIS

LPCSM030

		PARAMETERS*	PPM*
27		Alkalinity[1]	
31	X	Ammonia as N	2.30
37		Arsenic As	
44		Barium Ba	
49		BOD-5	
53	XX	Boron B	0.3
58		Cadmium Cd	
64		Calcium Ca	
69	X	COD	132
73	X	Chloride Cl	180

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	21.8
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)	1836
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 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

RECEIVED
OCT 15 1982
EPA

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(T) Tank
(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) SW - 1

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 6 3 0 4 5 0 1 (16)

MONITOR POINT NUMBER (17) S 1 0 1 (20) DATE COLLECTED (21) 0 9 1 5 8 2 (26)

St. Clair Co. - LPC REGION (27) S

East St. Louis (Location) / SCA - Milam (Responsible Party)

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

Time Collected 9:00 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) 7 4 (39) ° F Background (X). . . . (40)

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

Sample Appearance: muddy brown - no odor

Collector comments:

S. A. Meierotto — Collected by — Laclede Gas Laboratory — Div. or Company

S. A. Meierotto — Transported by — Laclede Gas Laboratory — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd Sept. 15, 1982

Rec'd by ARM Time 4:00 a.m. p.m.

Sample temp. acceptable YES NO

Sample properly preserved YES NO

Date completed 10/4/82

Date forwarded 10/8/82

Alan R. Maurer
Supervisor Signature

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

LPCSM020
Lab Comments:

(37) (36)
(37) (46)
(47) (56)
(57) (66)
(67) (76)

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

RECEIVED NOV 0 7 1982 ILL. E.P.A. - DIV. OF LAND 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	X	COD	4 3 3
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	X	pH (Units)	6 . 9
63		Phenolics	
70		Phosphorus P	
76		Potassium K	

LPCSM060

27	X	R.O.E. (180°C)	3 6 5
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (µmhos/cm)	
53	X	Sulfate SO_4	3 2 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.

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	(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		

RECEIVED OCT 15 1982 STATE OF ILLINOIS

Name SW-2 (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 6 3 0 4 5 0 1 (16)

MONITOR POINT NUMBER (17) S 3 0 1 (20) DATE COLLECTED (21) 0 9 1 4 8 2 (26)

St. Clair Co. - LPC REGION (27) S

East St. Louis (Location) / SCA - Milam (Responsible Party)

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

Time Collected 2:00 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) 7 4 (39) o F Background (X). . . . (40)

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

Sample Appearance: muddy brown - no odor

Collector comments:

S. A. Meierotto — Collected by — Laclede Gas Laboratory — Div. or Company

S. A. Meierotto — Transported by — Laclede Gas Laboratory — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd Sept. 14, 1982

Rec'd by ARM Time 3:15 a.m. p.m.

Sample temp. acceptable YES ~~NO~~

Sample properly preserved YES ~~NO~~

Date completed 10/4/82

Date forwarded 10/8/82

Alan R. Maurer — Supervisor Signature

Name Laclede Gas Lab

Address of Lab 4118 Shrewsbury St. Louis, MO.

LPCSM020 Lab Comments:

(27) (36)

(37) (46)

(47) (56)

(57) (66)

(67) (76)

Private lab (X) (77)

IEPA Lab (X) (78)

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		PARAMETERS*	PPM*
		LPCSM030	
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	X	COD	4 4 1
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	X	pH (Units)	7 . 7
63		Phenolics	
70		Phosphorus P	
76		Potassium K	
		LPCSM060	
27	X	R.O.E. (180°C)	4 2 6
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (umhos/cm)	
53	X	Sulfate SO_4	5 0 . 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.

IL 532-0313
LPC 8 3/77

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) Special Waste Area

SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (9) (16)

MONITOR POINT NUMBER G 1 3 1 (17) (20)

DATE COLLECTED 09 15 82 (21) (26)

St. Clair Co. - LPC

East St. Louis / SCA/Milam
(Location) (Responsible Party)

LPCSM070

		Parameter	PPM
27		Aldrin	
35		Chlordane	
43		DDT	
50		Dieldrin	
58		Endrin	
66		Gross Alpha	0 0 0
70		Gross Beta	0 0 0

LPCSM080

27		Heptachlor	
35		Heptac Epox	
43		Lindane	
51		Methoxychlor	0
57		Parathion	0
63		PCB's	
71		Radium	0 0

LPCSM090

27		Tot Org C	
35		Tot Org Hal	
43		Toxaphene	
51		Turbidity	0 0 0
55		2, 4-D	0
61		Silvex	
68			

LPCSM100

27	X	A C M O N	
40	X	P H I H A	
53	X	P L H Y D	
66	X	I O R A C	

Supplemental Chemical Analysis Form

Parameters	Method	Results
Acrylonitrile	ASTM/EEI Meth #14	*0.32 ppm
Di-butyl Phthalate	Method 606	*0.01 "
Di-benzyl Phthalate	"	*0.01 "
Di-octyl Phthalate	"	*0.01 "
Myristic acid	Methylene chloride ext	*0.01 "
Palmitic acid	"	*0.01 "
Stearic acid	"	*0.01 "
Oleic acid	"	*0.01 "
Sorbitol	Direct inj.	*10

*less than

All units in ppm except:

Radium - pCi/l
Cross Alpha - pCi/l
Gross Beta - millirem/yr
Turbidity - JTU

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E.P.A.
STATE OF ILLINOIS

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NOV 02 1982
E.P.A. - D.W.P.C.
STATE OF ILLINOIS

Four replicate measurements

	pH No. 1	0 0		0 0 0	
	No. 2	0 0		0 0 0	
	No. 3	0 0		0 0 0	
	No. 4	0 0		0 0 0	
	SC No. 1			0 0 0 0	
	No. 2			0 0 0 0	
	No. 3			0 0 0 0	
	No. 4			0 0 0 0	

	TOC No. 1	
	No. 2	
	No. 3	
	No. 4	
	TOX No. 1	
	No. 2	
	No. 3	
	No. 4	

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		

Special Waste Area

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

SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (9) (16)

MONITOR POINT NUMBER G 1 3 2 (17) (20)

DATE COLLECTED 0 9 1 5 8 2 (21) (26)

St. Clair Co. - LPC

East St. Louis / SCA-Milam

(Location) (Responsible Party)

	Parameter	Time
27	Aldrin	
35	Chlordane	
43	DDT	
50	Dieldrin	
58	Endrin	
66	Gross Alpha	
70	Gross Beta	

LPCSM080

27	Heptachlor	
35	Heptac Epox	
43	Lindane	
51	Methoxychlor	
57	Parathion	
63	PCB's	
71	Radium	

LPCSM090

27	Tot Org C	
35	Tot Org Hal	
43	Toxaphene	
51	Turbidity	
55	2, 4-D	
61	Silvex	
68		

LPCSM100

27		
40		
53		
66		

Supplemental Chemical Analysis Form

Parameters	Method	Results	
Acrylonitrile	ASTM/EEI Meth #14	*0.32	ppm
Di-butyl Phthalate	Method 606	*0.01	"
Di-benzyl Phthalate	"	*0.01	"
Di-octyl Phthalate	"	*0.01	"
Myristic acid	Methylene chloride ext	*0.01	"
Palmitic acid	"	*0.01	"
Stearic acid	"	*0.01	"
Oleic acid	"	*0.01	"
Sorbitol	Direct inj.	*10	"

*less than

All units in ppm except:

Radium - pCi/l
Gross Alpha - pCi/l
Gross Beta - millirem/yr
Turbidity - JTU

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E.P.A. - D.P.C.
STATE OF ILLINOIS

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E.P.A. - D.P.C.
STATE OF ILLINOIS

Four replicate measurements

pH	No. 1		TOC	No. 1
	No. 2			No. 2
	No. 3			No. 3
	No. 4			No. 4
SC	No. 1		TOX	No. 1
	No. 2			No. 2
	No. 3			No. 3
	No. 4			No. 4

Key for Intersection Type [illegible] Other Point

(5) Surface Water	(2) Ground Water	(1) Leachate	(3) 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		

Special Waste Area

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

SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (9) (16)

MONITOR POINT NUMBER G 1 3 3 (17) (20)

DATE COLLECTED 09 24 82 (21) (26)

St. Clair Co. - LPC

East. St. Louis / SCA-Milam
(Location) (Responsible Party)

	Parameter	ppm
27	Aldrin	
35	Chlordane	
43	DDT	
50	Dieldrin	
58	Endrin	
66	Gross Alpha	
70	Gross Beta	

LPCSM080

27	Heptachlor	
35	Heptac Epox	
43	Lindane	
51	Methoxychlor	
57	Parathion	
63	PCB's	
71	Radium	

LPCSM090

27	Tot Org C	
35	Tot Org Hal	
43	Toxaphene	
51	Turbidity	
55	2, 4-D	
61	Silvex	
68		

LPCSM100

27		
40		
53		
66		

Supplemental Chemical Analysis Form

Parameters	Method	Results
Acrylonitrile	ASTM/EEI Meth #14	*0.32 ppm
Di-butyl Phthalate	Method 606	*0.01 "
Di-benzyl Phthalate	"	*0.01 "
Di-octyl Phthalate	"	*0.01 "
Myristic acid	Methylene chloride	*0.01 "
Palmitic acid	ext.	*0.01 "
Stearic acid	"	*0.01 "
Oleic acid	"	*0.01 "
Sorbitol	Direct inj.	*10 "

*less than

All units in ppm except:

Radium - pCi/l
Gross Alpha - pCi/l
Gross Beta - millirem/yr
Turbidity - JTU

RECEIVED
OCT 15 1982
I.E.P.A. — D.L.P.C.
STATE OF ILLINOIS

RECEIVED
NOV 04 1982
I.E.P.A. — D.L.P.C.
ILL. STATE OF ILLINOIS

Four replicate measurements

pH	No. 1		TOC	No. 1
	No. 2			No. 2
	No. 3			No. 3
	No. 4			No. 4
SC	No. 1		TOX	No. 1
	No. 2			No. 2
	No. 3			No. 3
	No. 4			No. 4

217/785-3912

Refer to: [redacted]

September 9, 1982

Mr. Richard Kogler
SCA Services
1838 North Broadway
St. Louis, Missouri 63102

Dear Mr. Kogler:

Enclosed please find copies of all groundwater monitoring data from Agency conducted sampling at the Milam facility. Also included is a hydrogeologic evaluation performed by the ISGS in 1981. The hydrogeologic study which we discussed in a telephone conversation September 7, 1982, was conducted by the Agency in 1980. However, it is not yet completed and for obvious reasons, is not included.

As we discussed earlier, there is a $.25 per copy charge for these materials. Since 164 copies were made, please remit a check payable to Treasurer, State of Illinois in the amount of $41.00.

If you have any questions or need more information, please feel free to call me at the above number.

Very truly yours,

Mark A. Haney, Acting Manager
Compliance Sub-Unit
Compliance Monitoring Section
Division of Land Pollution Control

MAHimad/3

Enclosure.

cc: Joe Podlewski
Division File
Southern Region
Greg Zak

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SEP 10 1982
ILL. E.P.A. - D.L.P.C.
STATE OF ILLINOIS

KM
PMM
PCM

ILLINOIS EPA

Environmental Protection Agency

2200 Churchill Road, Springfield, Illinois 62706

217/782-6760

SEPTEMBER 2, 1982

SCA SERVICES OF ILL
P.O. BOX 698
GRANITE CITY , IL 62040

REFER TO: ST CLAIR COUNTY
SITE 16304501
E ST LOUIS/SCA MILAM

GENTLEMEN:

THIS LETTER IS WRITTEN IN REGARD TO YOUR WATER MONITORING PROGRAM AS OUTLINED BY THE FOLLOWING:

OPERATING PERMIT NUMBER 1978-23-OP ISSUED 12/08/78
SPECIAL CONDITION NUMBER 12
SUPPLEMENTAL PERMIT NUMBER 1981-96 ISSUED 10/26/81

THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY HAS NOTED THAT YOUR WATER MONITORING PROGRAM HAS NOT BEEN CONDUCTED IN ACCORDANCE WITH THE ABOVE PERMIT CONDITIONS AND AGENCY REQUIREMENTS. THE FOLLOWING DEFICIENCIES WERE NOTED:

MONITOR POINT	REPORTING QUARTER	DEFICIENCIES NOTED	PARAMETERS NOT REPORTED
G134	07/15/82	A QUARTERLY ANALYSIS REPORT WAS NOT FILED	
G135	07/15/82	A QUARTERLY ANALYSIS REPORT WAS NOT FILED	

WE ASK THAT YOU CORRECT THE ABOVE DEFICIENCIES IMMEDIATELY. ALSO, YOU ARE REMINDED THAT QUARTERLY WATER MONITORING REPORTS ARE DUE IN THIS OFFICE BY THE 15TH OF JANUARY, APRIL, JULY AND OCTOBER. YOUR COMPLIANCE WITH THE ABOVE DATES WILL BE APPRECIATED.

PLEASE DIRECT ALL RESPONSES AND QUESTIONS TO MARY REMMERS OR PAT GIORDANO OF MY STAFF.

VERY TRULY YOURS,

MICHAEL F. NECHVATAL, MANAGER
COMPLIANCE MONITORING SECTION
DIVISION OF LAND POLLUTION CONTROL

CC: DIVISION FOS FILE
SOUTHERN REGION

RECEIVED
SEP 10 1982
ILL. E.P.A. – D.L.P.C.
STATE OF ILLINOIS

KM
PCM

inois Environmental
Protection Agency 2200 Churchill Road, Springfield, Illinois 62706

217/782-6760

FEBRUARY 23, 1982

SCA SERVICES OF ILL
P.O. BOX 694
GRANITE CITY , IL 62040

REFER TO: ST CLAIR COUNTY
SITE 16304501
E ST LOUIS/SCA-MILAM

GENTLEMEN:

THIS LETTER IS WRITTEN IN REGARD TO YOUR WATER MONITORING PROGRAM AS OUTLINED BY THE FOLLOWING:

OPERATING PERMIT NUMBER 1978-23-OP ISSUED 12/08/78
SPECIAL CONDITION NUMBER 12

THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY HAS NOTED THAT YOUR WATER MONITORING PROGRAM HAS NOT BEEN CONDUCTED IN ACCORDANCE WITH THE ABOVE PERMIT CONDITIONS AND AGENCY REQUIREMENTS. THE FOLLOWING DEFICIENCIES WERE NOTED:

MONITOR POINT	REPORTING QUARTER	DEFICIENCIES NOTED	PARAMETERS NOT REPORTED
6115	01/15/82	A QUARTERLY ANALYSIS REPORT WAS NOT FILED	

WE ASK THAT YOU CORRECT THE ABOVE DEFICIENCIES IMMEDIATELY. ALSO, YOU ARE REMINDED THAT QUARTERLY WATER MONITORING REPORTS ARE DUE IN THIS OFFICE BY THE 15TH OF JANUARY, APRIL, JULY AND OCTOBER. YOUR COMPLIANCE WITH THE ABOVE DATES WILL BE APPRECIATED.

IF YOU HAVE ANY QUESTIONS, PLEASE FEEL FREE TO CONTACT ME.

VERY TRULY YOURS,

Rauf Piskin

RAUF PISKIN, MANAGER
GROUND WATER MANAGEMENT SECTION
DIVISION OF LAND/NOISE POLLUTION CONTROL

CC: DIVISION FOS FILE
SOUTHERN REGION

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MAR 05 1982
ILL. E.P.A. – D.L.P.C.
STATE OF ILLINOIS

SCA SERVICES, INC.
1838 N. BROADWAY
ST. LOUIS, MO. 63102
314-241-3710

SCA SERVICES

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FEB 15 1983
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

Illinois Environmental Protection Agency
Division of Land Polution Control
2200 Churchill Road
Springfield, Il 62706
Attn: Mark Haney

Dear Mr. Haney:

Please find enclosed the results for the organic test parameters at wells G131, 132 and 133 at the SCA/Milam Landfill. I apologize for the delay in submitting them and thank you for your patience.

Sincerely

Richard T. Kogler
Landfill Manager

RTK/tb
encl.

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RECYCLED PAPER

(1) Surface Water (6) Ground Water (1) Leachate (1) Sludge
(2) Effluent (1) Monitor Well (2) Flow or seep (1) Soil
(3) Wildlife (2) Private well (2) Pond (2) Water
(4) Drainage (3) Spring (3) Collection System (3) Other
(5) Run-off (4) Lysimeter
(6) Impounded (5) Public W S

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STATE OF ILLINOIS

Special Waste Area
Name (Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0 (77) (87) SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (77) (16)

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

St. Clair Co. - LPC REGION X S (27)

East St. Louis / SCA Milam
(Location) (Responsible Party)

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

Time Collected 10:05 a.m. #### Unable to collect sample (X) (30)

Stick-up 1.5 ft. (31) (33) Depth to water 15.0 ft. (from T.O.C.) (34) (36)

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

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

Sample Appearance: black - no odor

Collector comments: Well depth 29.5'
Fast recharge

SAM — Collected by
LACLEDE GAS LABORATORY — Div. or Company
SAM — Transported by
LACLEDE GAS LABORATORY — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 12/10/82

Rec'd by ARM Time 3:15 ## a.m. p.m.

Sample temp. acceptable YES ##
Sample properly preserved YES ##
Date completed 12/28/82
Date forwarded 1/6/83

Supervisor Signature

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

LPCSM020
Lab Comments:

(77) B l e s s t h a (96)
(37) (46)
(47) (56)
(57) (66)
(67) (76)
Private Lab (X) (77)
IEPA Lab (X) (78)

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STATE OF ILLINOIS

		Parameter	Data
27		Alkalinity[1]	
31	X	Ammonia as N	2.16
37		Arsenic As	
44		Barium Ba	
49		BOD-5	
53	X	Boron B	0.1
58		Cadmium Cd	
64		Calcium Ca	
69	X	COD	72
73	X	Chloride Cl	11

LPCSM030

27		Chromium Cr (tot)	
33		Chromium Cr^{+6}	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (Fiber ...)	
56		Fluoride F	
61		Hardness $CaCO_3$	
65	X	Iron Fe	2.9
70		Lead Pb	

LPCSM040

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	

LPCSM050

27	X	R.O.E. (IPCBC)	534
31		Selenium Se	
36		Silver Ag	
44		Sodium Na	
49		SC (Conductance)	
53		Sulfate SO_4	
58		Zinc Zn	
63			

*Analyses are to be performed on filtered samples. *Values exceeding no. of place 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 mg/l $CaCO_3$ at pH 4.5.

IL 532-0313
IPC R 9/77

(2) Private
(3) Spring
(4) Lysimeter
(5) Public W.S.

(2) Well
(3) Collection System

Special Waste Area

Name (Tributary Area, Stream, Spring, Impounded Water Body)

SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (9) (16)

LOCATION FORM NUMBER 6 1 3 1 (17) (20)

DATE COLLECTED 0 1 7 8 3 (27) (26)

St. Clair Co. - LPC

East St. Louis / SCA/Milam

(Location) (Responsible Party)

Supplemental Chemical Analysis Form

PARAMETERS	METHOD	RESULTS	
Acrylonitrile	ASTM/EEI#14	*0.3	ppm
di-butyl-phthalate	method 606	*0.1	"
di-benzyl-phthalate	" "	*0.1	"
di-octyl-phthalate	" "	*0.1	"
myristic acid	methylene chl.	*0.1	"
palmitic acid	extraction	*0.1	"
stearic acid	" "	*0.1	"
oleic acid	" "	*0.1	"
sorbital	direct inj.	*10	"

*less than

All units in ppm except:

Radium - pCi/l
Cross Alpha - pCi/l
Gross Beta - millirem/yr
Turbidity - JTU

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Four replicate measurements

	pH No. 1	
	No. 2	
	No. 3	
	No. 4	
	SC No. 1	
	No. 2	
	No. 3	
	No. 4	

	TOC No. 1	
	No. 2	
	No. 3	
	No. 4	
	TOX No. 1	
	No. 2	
	No. 3	
	No. 4	

		Chlordane	
43		DDT	
50		Dieldrin	
58		Endrin	
66		Gross Alpha	
70		Gross Beta	

LPCSM080

27		Heptachlor	
35		Heptac Epox	
43		Lindane	
51		Methoxychlor	
57		Parathion	
63		PCB's	
71		Radium	

LPCSM090

27		Tot Org C	
35		Tot Org Hal	
43		Toxaphene	
51		Turbidity	
55		2, 4-D	
61		Silvex	
68			

LPCSM100

27	X	A C H O N	
40	X	P H I H A	
53	X	P L H Y D	
66	X	I O R A C	

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(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: Special Waste Area (Private Well, Stream, Spring, Impounded Water only)

LPCSM010 (17) (26) SITE INVENTORY NUMBER 1630401 (9) (36)

MONITOR POINT NUMBER G132 (37) (38) DATE COLLECTED 121082 (21) (25)

St. Clair Co. - LPC REGION S (27)

East St. Louis (location) / SCA - Milam (Responsible Party)

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

Time Collected 10:15 a.m. ### Unable to collect sample (X) (30)

Stick-up 1.5 ft. (31) (33) Depth to water (from T.O.C.) 7.0 ft. (34) (36)

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

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

Sample Appearance: green - no odor

Collector comments: Well depth 22.0' fast recharge

SAM — LACLEDE GAS LABORATORY
Collected by — Div. or Company

SAM — LACLEDE GAS LABORATORY
Transported by — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 12/10/82

Rec'd by ARM Time 3:15 p.m. ###

Sample temp. acceptable YES ##
Sample properly preserved YES ##

Date completed 12/28/82
Date forwarded 1/6/83

Supervisor Signature

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

LPCSM020
Lab Comments:

B less tha (27) (35)
(37) (46)
(47) (56)
(57) (66)
(67) (76)

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

		PARAMETER	DATA
27		Alkalinity*	
31	X	Ammonia as N	0.92
32		Arsenic As	
34		Barium Ba	
42		BOD-5	
53	X	Boron B	0.1
54		Cadmium Cd	
64		Calcium Ca	
65	X	COD	72
71	X	Chloride Cl	5
		LPCSM030	
27		Chromium Cr (total)	
33		Chromium Cr^{+6}	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (Membrane Filter)	
56		Fluoride F	
61		Hardness $CaCO_3$	
65	X	Iron Fe	0.6
70		Lead Pb	
		LPCSM040	
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	
		LPCSM050	
27	X	R.O.E. ($18O_2$)	576
32		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SO (Sulfate)	
53		Sulfate SO_4	
59		Zinc Zn	

*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 described as ppm $CaCO_3$ at pH 4.5.

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IL 532-0313
LPC L 3/77

(1) Monitor Well (1) Well or Seep
(2) Reactor (2) Private Well (2) Pond (2) Waste
(3) Downstream (3) Spring (3) Collection System (3) Other
(4) Runoff (4) Lagoon
(5) Impounded (5) Public W S

Special Waste Area

Name (Tributary, Stream, Spring, Impounded Water Only)

SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (9) (10)

MONITOR POINT NUMBER G 1 3 2 (17) (20)

DATE COLLECTED (27) (26)

St. Clair Co. - DIC

East St. Louis / SCA-Milam
(Location) (Responsible Party)

	Chlordane	
43	DDT	
50	Dieldrin	
58	Endrin	
66	Gross Alpha	
70	Gross Beta	

LPCSM080

27	Heptachlor	
35	Heptac Epox	
43	Lindane	
51	Methoxychlor	
57	Parathion	
63	PCB's	
71	Radium	

LPCSM090

27	Tot Org C	
35	Tot Org Hal	
43	Toxaphene	
51	Turbidity	
55	2, 4-D	
61	Silvex	
68		

LPCSM100

27		
40		
53		
66		

Supplemental Chemical Analysis Form

PARAMETERS	METHOD	RESULTS	
Acrylonitrile	ASTM/ELI#14	*0.3	ppm
di-butyl phthalate	method 606	*0.1	"
di-benzyl phthalate	"	*1.0	"
di-octyl phthalate	"	*0.1	"
Myristic acid	methylene chloride	*0.1	"
Palmitic acid	extraction	*0.1	"
Stearic acid	" "	*0.1	"
Oleic acid	" "	*0.1	"
Sorbitol	direct injection	*10	"

*less than

All units in ppm except:

Radium - pCi/l
Gross Alpha - pCi/l
Gross Beta - millirem/yr
Turbidity - JTU

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STATE OF ILLINOIS

Four replicate measurements

pH	No. 1	
	No. 2	
	No. 3	
	No. 4	
SC	No. 1	
	No. 2	
	No. 3	
	No. 4	

TOC	No. 1	
	No. 2	
	No. 3	
	No. 4	
TOX	No. 1	
	No. 2	
	No. 3	
	No. 4	

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(G) Surface Water
(1) Upstream
(2) Mid-site
(3) Downstream
(4) Run-off
(5) Impounded

(G) Ground Water
(1) Monitor Well
(2) Private well
(3) Spring
(4) Lysimeter
(5) Public W.S.

(L) Leachate
(1) Flow or seep
(2) Pond
(3) Collection System

(X) Special (Specify)

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STATE OF ILLINOIS

Name (Private well, Stream, Spring, Impounded water only)

L P G S M 0 1 0 (1) (8) SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (9) (16)

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

St. Clair Co. - LPC REGION S (27)

East St. Louis / SCA - Milam
(Location) (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 1.5 ft. (31) (33) Depth to water 1 1 .0 ft. (from T.O.C.) (34) (36)

Sample temp. 4 0 ° 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 27.0'
Fast recharge

SAM — Collected by — LACLEDE GAS LABORATORY — Div. or Company

SAM — Transported by — LACLEDE GAS LABORATORY — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 12/10/82

Rec'd by ARM Time 3:15 p.m. ###

Sample temp. acceptable YES ###
Sample properly preserved YES ###

Date completed 12/28/82
Date forwarded 1/6/83

Supervisor Signature

Name Laclede Gas Lab
Address of Lab 4118 Shrewsbury Ave. St. Louis, Mo. 63110

LIGSMOC
Lab Comments:

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

Private Lab (X) X (77)
EPA Lab (X) (78)

27		Alkalinity[1]	
31	X	Ammonia as N	1.61
37		Arsenic As	
44		Barium Ba	
49		BOD-5	
53	X	Boron B	0.1
56		Cadmium Cd	
64		Calcium Ca	
69	X	COD	72
73	X	Chloride Cl	8

LIGSMOD

27		Chromium Cr (tot)	
33		Chromium Cr+6	
39		Copper Cu	
45		Cyanide CN	
52		Fecal Coli (Fecal Coli)	
56		Fluoride F	
61		Hardness CaCO3	
65	X	Iron Fe	4.4
70		Lead Pb	

LIGSMOD

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	

LIGSMOD

27	XX	R.O.E. (180°C)	468
31		Selenium Se	
38		Silver Ag	
44		Sodium Na	
49		SC (mhos/cm.)	
53		Sulfate SO_4	
54		Zinc Zn	
63			

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E.P.A. - D.L.P.C.
ILL. STATE OF ILLINOIS

* 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 [illegible] $CaCO_3$ at pH 4.5.

IL 532-0313
LPC 8 3/77

(2) Waste (2) Private (1) Land (2) Waste
(3) Downstream (3) Spring (3) Collection System (3) Other
(4) Runoff (4) Groundwater
(5) Impounded (5) Public W.S.

Special Waste Area

Name (Dump Site, Stream, Spring, Impounded Water Body)

SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (1-10)

MONITOR FORM NUMBER G 1 3 3 (17-20) DATE COLLECTED (21-26)

St. Clair Co. - LPC

East St. Louis / SCA-Milam
(Location) (Responsible Party)

	Chlordane	
43	DDT	
50	Dieldrin	
58	Endrin	
66	Gross Alpha	
70	Gross Beta	

LPCSM080

27	Heptachlor	
35	Heptac Epox	
43	Lindane	
51	Methoxychlor	
57	Parathion	
63	PCB's	
71	Radium	

LPCSM090

27	Tot Org C	
35	Tot Org Hal	
43	Toxaphene	
51	Turbidity	
55	2, 4-D	
61	Silvex	
68		

LPCSM100

27		
40		
53		
66		

Supplemental Chemical Analysis Form

PARAMETERS	METHOD	RESULTS	
Acrylonitrile	ASTM/EEI#14	*0.3	ppm
di-butyl phthalate	606	*0.1	"
di-benzyl phthalate	"	*1.0	"
di-octyl phthalate	"	*0.1	"
Myristic acid	Methylene chloride	*0.1	"
Palmitic acid	extraction	*0.1	"
Stearic acid	"	*0.1	"
Oleic acid	"	*0.1	"
Sorbitol	direct inject.	*10	"

*less than

All units in ppm except:

Radium - pCi/l
Gross Alpha - pCi/l
Gross Beta - millirem/yr
Turbidity - JTU

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FEB 15 1983
E.P.A. - D.L.P.C.
STATE OF ILLINOIS

Four replicate measurements

	pH No. 1	
	No. 2	
	No. 3	
	No. 4	
	SC No. 1	
	No. 2	
	No. 3	
	No. 4	

	TOC No. 1	
	No. 2	
	No. 3	
	No. 4	
	TOX No. 1	
	No. 2	
	No. 3	
	No. 4	

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MAR 08 1983
ILL. E.P.A. - D.L.P.C.
STATE OF ILLINOIS

SCA SERVICES, INC.
1838 N. BROADWAY
ST. LOUIS, MO. 63102
314-241-3710

E. ST. LOUIS / SCA-MILAM

SCA SERVICES

March 7, 1983

Mr. Kenneth G. Mensing
Southern Region Manager
Division of Land and Noise Pollution Control
113 West Main Street
Collinsville, Illinois 63323

RE: Permit Number 1978-23-OP, East St. Louis/SCA Services, Inc., Milam Landfill. Supplemental Permit Number 1982-77/Off-Site Borrow Area; Quality Sand

Dear Mr. Mensing:

I am forwarding the enclosed information for your file.

If you have any questions, please feel free to contact either Mr. Volonino or myself.

Very truly yours,

Charles E. Emde

Charles E. Emde
Manager
SCA Services of Illinois, Inc.

CDD/1

cc: Milam I.E.P.A. Permit File

RECEIVED
MAR 10 1983
ILL. E.P.A. – D.L.P.C.
STATE OF ILLINOIS

KM
PMM 3/18

RECYCLED PAPER

February

			Dirt Tons
1	Feb 1	Tue	
2	2	Wed	
3	3	Thur + 24' concrete	326.02
4	4	Fri	643.62
5	7	Mon	355.61
6	8	Tue	606.32
7	9	Wed	
8	10	Thurs	
9	11	Fri	
10	14	Mon	754.65
11	15	Tues	1360.80
12	16	Wed	1782.67
13	17	Thur	1083.72
14	18	Fri	462.99
15			
16			7376.40
17			
18	22	Tue	1278.61
19	23	Wed	1477.45
20	24	Thur	1383.86
21	25	Fri	880.86
22	28	Mon	536.99
23			12923.67
24			
25			
26			
27		12,923.67 tons ÷ 1.3 = 9941.28 yds³	
28		January Inv. 1500.00 yds³	
29		11441.28 yds³ available	
30		Total Filling Inv. Feb. 7000	
31		Total Cover used Feb. 4,441 yds³	
32			
33			
34			
35			
36			
37			
38			
39			
40			

St. Charles Co.
Milam Landfill

LACLEDE GAS COMPANY

Laboratory Division

4118 SHREWSBURY
ST. LOUIS, MISSOURI 63119
(314) 644-6577

March 11, 1983

SCA Services
Attn: Mr. Richard Kogler
1838 N. Braodway
St. Louis, Mo 63102

Dear Mr. Kogler:

This report covers sampling and analysis of water samples collected from the Cahokia Creek at Milam landfill on March 2, 1983. The samples were collected by Laclede Gas Laboratory personnel. ~~The samples were filtered prior to analysis~~, except for pH and specific conductivity.

The analytical results are as follows:

PARAMETERS		#1 downstream	#2 upstream	#3 down canal	#4 up canal
Mercury	mg/l	0.0056	0.0018	0.0030	0.0013
Barium	"	*0.4	*0.4	*0.4	*0.4
Cadmium	"	*0.03	*0.03	*0.03	*0.03
Chromium	"	*0.1	*0.1	*0.1	*0.1
Iron	"	0.3	*0.1	*0.1	*0.1
Lead	"	*0.1	*0.1	*0.1	*0.1
Magnesium	"	41.32	41.87	49.80	57.90
Calcium	"	133.33	133.33	100.0	116.67
Manganese	"	0.88	0.80	0.32	0.32

To continue

Mr. Richard Kogler
Page

PARAMETERS		#1 downstream	#2 up stream	#3 down canal	#4 up canal
Sodium	mg/l	33.17	31.70	39.80	44.78
pH	units	8.0	8.0	8.0	7.9
Specific conductance (micromhos/cm)		730	700	6700	6800
Chlorides	mg/l	66.15	55.23	73.74	72.53
R.O.E.	"	535	494	425	454
C.O.D.	"	98	103	69	78
Sulfates	"	195	180	180	195
Alkalinity to pH 4.3	"	156	210	178	150
Hardness (calc.)	"	503.1	505.3	454.8	529.7
Ammonia	"	0.06	*0.01	*0.01	*0.01

Samples #1 downstream and #2 upstream were also analyzed for organics commonly used as paint thinners by high performance liquid chromatography. These results are as follows:

PARAMETERS	#1 DOWNSTREAM	#2UPSTREAM
Generic paint thinner	*100 ppm	*100 ppm
Mineral spirits - petroleum dist.	*100 "	*100 "
R-66-MS mineral spirits	*1000 "	*1000 "
Toluene	*10 "	*10 "
Xylenes	*10 "	*10 "
Butyl acetate	*50 "	*50 "
Methyl ethyl ketone	*100 "	*100 "
Methyl isobutyl ketone	*100 "	*100 "

A peak of some unknown polar compound was detected in both samples but not identified. It could be organic or inorganic.

If you have any questions, please call me.

*less than

Sincerely,

Alan R. Maurer

ARM:eb

SS-6

Time Collected: 1250

Date Collected: 3/14/83

Lab # [illegible]

SPECIAL ANALYSIS FORM

Date Received

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	East Louis/EPA-Mike	1104501

SOURCE OF SAMPLE: (Exact Location) SS-6 collected from [illegible] 103

SS-6a is top sediment

SS-6b is sediment from ≈ 6" depth

PHYSICAL OBSERVATIONS, REMARKS: two 8 oz. jars with the

sample 6a appeared to have many discolorations

TESTS REQUESTED: Qualitative analysis organics ~~for~~ scan PCBs, phenols and metals

COLLECTED BY: G.C. Mann TRANSPORTED BY: G.C. Mann

LABORATORY

RECEIVED BY: JC/SB DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83

J. Henley

PCBs = 0.10 ug/g

Other organic compounds not detected in the extract of this sample.

RECEIVED
JUL 05 1983
ILL. E.P.A. - D.L.P.C.
STATE OF ILLINOIS

RECEIVED
JUN 23 1983
E.P.A. - D.L.P.C.
STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

DISPOSED

SS-5b

Time Collected: [illegible]

Date Collected: 3/14/83

Lab # [illegible]

SPECIAL ANALYSIS FORM

Date Received [illegible]

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E St. Louis/SCA-Mylan	163 0450

SOURCE OF SAMPLE: (Exact Location) SS-5 collected from same location as L 102

SS-5a is top sediment

SS-5b is sediment from ≈ 6" depth

PHYSICAL OBSERVATIONS, REMARKS: two 8 oz. bottles

sample 5a - yellow yellow organic discoloration

TESTS REQUESTED: Quantitative analyses - organics scan PCBs, phenols, and metals.

COLLECTED BY: R. M. McCarthy TRANSPORTED BY: P. C. Mann

LABORATORY

RECEIVED BY: QC/SB DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83

PCBs = 0.72 ug/g

Other organic compounds not detected in the extract of this sample.

RECEIVED JUL 01 1983 ILL. EPA - D.L.P.C. STATE OF ILLINOIS

RECEIVED JUN 23 1983 E.P.A. - D.L.P.C. STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

DUPLICATE

SS-4/4

Time Collected: 1:15p

Date Collected: 3/14/83

Lab # D028010

SPECIAL ANALYSIS FORM

Date Received 4/15/83

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E. St. Louis 150A-Mylan	1630450

SOURCE OF SAMPLE: (Exact Location) SS-4 collected from same location L-101

4 is top sediment - ~~apparent discoloration yellow orange~~

4b is sediment from 6' depth

PHYSICAL OBSERVATIONS, REMARKS: Two 8 oz soil bottles

sampl. 4a apparent yellow orange discoloration

TESTS REQUESTED: Quantitative analysis Organics scan PCBs, phenols and metals

COLLECTED BY: R.C. Mann & ~~[illegible]~~ TRANSPORTED BY: R.C. Mann

LABORATORY

RECEIVED BY: JC/SB DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83 J. Hurley

PCBs = 0.99 ug/g

Other organic compounds not detected in the extract of this sample.

RECEIVED JUL 01 1983 ILL. E.P.A. - D.L.P.C. STATE OF ILLINOIS

RECEIVED JUN 23 1983 E.P.A. - D.L.P.C. STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING) D028010

S.D.-2

Time Collected: 12:40p

Date Collected: 3/14/83

Lab # D028009

SPECIAL ANALYSIS FORM

Date Received MAR 15 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E. St. Louis/SCA-Milan	1630450 1

SOURCE OF SAMPLE: (Exact Location) SS-3 collected from same location S203

PHYSICAL OBSERVATIONS, REMARKS: 8 oz. wide bottle

TESTS REQUESTED: Quantitative analysis - organics scan PCBs, phenols and metals

COLLECTED BY: G.C. Mann TRANSPORTED BY: G.C. Mann

LABORATORY

RECEIVED BY: GC/SB DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83

PCBs = 0.05 mg/g

Other organic compounds not detected in the extract of this sample.

RECEIVED
JUL 01 1983
ILL. E.P.A. - D.L.P.C.
STATE OF ILLINOIS

RECEIVED
JUN 23 1983
E.P.A. - D.L.P.C.
STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

D028009

SS-2

Time Collected: 11:35a

Date Collected: 3/14/83

Lab # [illegible]8

SPECIAL ANALYSIS FORM

Date Received MAR 15 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E. St. Louis / SCA-Pyle Imp	1130450

SOURCE OF SAMPLE: (Exact Location) SS-2 collected from same location as S102

PHYSICAL OBSERVATIONS, REMARKS: 8 oz. soil bottle

TESTS REQUESTED: Quantitative analyses - organic scan - PCB, pesticides and metals.

COLLECTED BY: P.C. Mann + D.M. McCarthy TRANSPORTED BY: P.C. Mann

LABORATORY

RECEIVED BY: QC/SB DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83

J. Hurley

PCBs = 0.11 ug/g

other organic compounds not detected in the extract of this sample.

RECEIVED
JUL 02 1983
ILL. E.P.A. – D.L.P.C.
STATE OF ILLINOIS

RECEIVED
JUN 23 1983
E.P.A. – D.L.P.C.
STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

[illegible]8

SS 1

Time Collected: 11 0Clock

Date Collected: 3/14/83

Lab # DC28007

SPECIAL ANALYSIS FORM

Date Received MAR 15 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E. St. Louis LSCA-Milam	1630450 1

SOURCE OF SAMPLE: (Exact Location) SS-1 collect from same location S101

PHYSICAL OBSERVATIONS, REMARKS: 8 oz wide bottle

TESTS REQUESTED: Quantitative analysis organics scan PCBs, phenols, and metals

COLLECTED BY: [illegible] TRANSPORTED BY: [illegible]

LABORATORY

RECEIVED BY: JC/SB DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83

Q Hurley

PCBs = 0.02 ug/g

er Organic compounds not detected in the extract of this sample by gas chromatography/mass spectrometry

RECEIVED
JUL 01 1983
I.L. E.P.A. - D.L.P.C.
STATE OF ILLINOIS

RECEIVED
JUN 23 1983
E.P.A. - D.L.P.C.
STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

DC28007

-105

Time Collected: 1300 hp

Date Collected: 3/10/83

Lab # D028006

SPECIAL ANALYSIS FORM

Date Received MAR 15 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E. St. Louis/ECA-Nelson	1630450 1

SOURCE OF SAMPLE: (Exact Location) L103 @ 15 yds nw of L102

PHYSICAL OBSERVATIONS, REMARKS: one gal amber glass one 1/2 gal collected

TESTS REQUESTED: Quantitative analysis — organics scan (including but not limited to PCBs, benzenes, TCE, phenols, volatile organics)

COLLECTED BY: J.C. Munn & O.M. McCloth TRANSPORTED BY: J.C. Munn

LABORATORY

RECEIVED BY: JC/SB DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83 D. Hurley

PCBs = 15. ug/l
Dichloroethylene = 20. ug/l
Benzene = 2300 ug/l
Toluene = 2300. ug/l
Ethylbenzene = 600. ug/l
Xylenes = 4100. ug/l
Dimethylphenols = 350. ug/l

RECEIVED JUL 0 - 1983 ILL. E.P.A. - D.L.P.C. STATE OF ILLINOIS

RECEIVED JUN 23 1983 E.P.A. — D.L.P.C. STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

D028006

L102

Time Collected: 12:30 pm

Date Collected: 3/14/83

SPECIAL ANALYSIS FORM

Lab # D028005

Date Received MAR 15 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St Clair	E. St. Louis/SCA - Nelson	1630450

SOURCE OF SAMPLE: (Exact Location) L102 [illegible] from L101

PHYSICAL OBSERVATIONS, REMARKS: one gal amber and one 1/2 gal tallbated

TESTS REQUESTED: Quantitative analysis - organics scan (including but not limited to PCBs, benzene, TCE, phenols, volatile organics)

COLLECTED BY: G.C. Nelson & P.M. [illegible] TRANSPORTED BY: G.C. Nelson

LABORATORY

RECEIVED BY: JC/SB DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83

J. Hurley

PCBs < 0.9 ug/l
Benzene = 1400. ug/l
Toluene = 850. ug/l
Chlorobenzene = 60. ug/l
Ethylbenzene = 450. ug/l
Xylenes = 2200. ug/l
Dimethylphenols = 650. ug/l

RECEIVED JUL 22 1983 I.L.E.P.A. - D.L.P.C. STATE OF ILLINOIS

RECEIVED JUN 23 1983 I.E.P.A. - D.L.P.C. STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

D028005

L101

Time Collected: 12:00p

Date Collected: 3/14/83

Lab # D028904

SPECIAL ANALYSIS FORM

Date Received MAR 15 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	East St. Louis/SCA - Mr. Lum	1630450 1

SOURCE OF SAMPLE: (Exact Location) L101 upgradient within lifeguard drainage with observable leachate seeps, east of 5204 Trenton

PHYSICAL OBSERVATIONS, REMARKS: one gal. amber and one 40 ml collected. Elimination of air space in 40 ml bottle difficult because of high turbidity.

TESTS REQUESTED: Quantitative analysis organics scan (including but not limited to PCBs, benzene, TCE, ethylbenzene, volatile organics)

COLLECTED BY: P.C. Mann & D.M. McCarthy TRANSPORTED BY: P.C. Mann

LABORATORY

RECEIVED BY: JC/SB DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83

D. Hurley

PCBs = 14. ug/l

Dichloroethane = 830. ug/l

Benzene = 500. ug/l

Toluene = 2500. ug/l

Chlorobenzene = 50 ug/l

Ethylbenzene = 120 ug/l

Xylenes = 600. ug/l

Dimethylphenols = 1800. ug/l

RECEIVED
JUN 23 1983
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

D028904

S-301

Time Collected: 2.00 pm

Date Collected: 3/14/83

Lab # D128293

SPECIAL ANALYSIS FORM

Date Received MAR 15 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	East Louis / Cahokia	1630400

SOURCE OF SAMPLE: (Exact Location) S301 downstream of Cahokia Creek

PHYSICAL OBSERVATIONS, REMARKS: four quarts and one 40ml collected

TESTS REQUESTED: Quantitative analysis - organics scan (including but not limited to PCBs, benzene, TCE, phenols, volatile organics)

COLLECTED BY: R.C. Mann & D.M. Mulcahy TRANSPORTED BY: R.C. Mann

LABORATORY

RECEIVED BY: JC/SB DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83

PCBs < 0.4 µg/l

Volatile organics and phenolic compounds not detected

RECEIVED
JUN 23 1983
I.E.P.A. - D.L.P.C.
STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

D128293

S204

Time Collected: 1100

Date Collected: 3/14/83

Lab # D028902

SPECIAL ANALYSIS FORM

Date Received MAR 15 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E. St. Louis ISCA-Milan	IL 3045501

SOURCE OF SAMPLE: (Exact Location) S204 midstream of Cahokia Creek, downstream of S203, at the south end of a channel bar

PHYSICAL OBSERVATIONS, REMARKS: four quarts and one VOA vial collected

TESTS REQUESTED: Quantitative analyses - organics scan (including but not limited to PCBs, benzene, TCE, phenols, volatile organics)

COLLECTED BY: R.C. Mann & P.D. McCarth TRANSPORTED BY: R.C. Mann

LABORATORY

RECEIVED BY: QC/SB DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83 J. Hurley

PCBs < 0.1 ug/l

Dichloroethane = 40. ug/l

RECEIVED JUL 01 1983 ILL. E.P.A. — D.L.P.C. STATE OF ILLINOIS

RECEIVED JUN 23 1983 E.P.A. — D.L.P.C. STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

D028902

Time Collected: 12:05 p

Date Collected: 3/14/83

Lab # D048001

SPECIAL ANALYSIS FORM

Date Received MAR 15 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E. St. Louis IEPA - Milam	1630450 1

SOURCE OF SAMPLE: (Exact Location) S203 midstream of Cahokia Creek, downstream of S202

PHYSICAL OBSERVATIONS, REMARKS: one gal sample and one 40 ml collected

TESTS REQUESTED: Quantitative analyses - organics scan (including but not limited to PCBs, benzene, TCE, phenols, volatile organics)

COLLECTED BY: P.C. Mann + C.M. McMath TRANSPORTED BY: P.C. Mann

LABORATORY

RECEIVED BY: JC/SB DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83 J Hurley

PCBs < 0.1 ug/l

Volatile organics and phenolic compounds not detected

RECEIVED
JUL 01 1983
ILL. E.P.A. - D.L.P.C.
STATE OF ILLINOIS

RECEIVED
JUN 23 1983
L.P.A. - D.L.P.C.
STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

D048001

S.201

Time Collected: 1156

Date Collected: 3/14/83

Lab # D027903

SPECIAL ANALYSIS FORM

Date Received APR 15 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E. St. Louis/SCA-Milam	1630450 1

SOURCE OF SAMPLE: (Exact Location) S20 downstream of Cahokia Creek

PHYSICAL OBSERVATIONS, REMARKS: one gal. amber and one 40 ml collected

TESTS REQUESTED: Quantitative analysis - organics scan (including but not limited to PCBs, benzene, TCE, phenols, volatile organics)

COLLECTED BY: R.H. Mudd II & R.C. Mann TRANSPORTED BY: R.C. Mann

LABORATORY

RECEIVED BY: PC/SB DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83

J. Hurley

PCBs < 0.1 ug/l

Volatile organics and phenolic compounds not detected.

RECEIVED
JUL 01 1983
ILL. E.P.A. - D.L.P.C.
STATE OF ILLINOIS

RECEIVED
JUN 23 1983
E.P.A. - D.L.P.C.
STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

D027903

S102

Time Collected: 11:30a

Date Collected: 3/14/83

Lab # D027908

SPECIAL ANALYSIS FORM

Date Received [illegible]

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St Clair	E. St. Louis/SCA-Milam	1630450

SOURCE OF SAMPLE: (Exact Location) S102 upstream of Cahokia Creek west of G118

PHYSICAL OBSERVATIONS, REMARKS: one gal sample and one 1/2 gal collected

TESTS REQUESTED: Quantitative analysis organics (including but limited to PCBs, benzene, PCE, phenols, volatile organics)

COLLECTED BY: G.C. Mann + G.D. McCall TRANSPORTED BY: G.C. Mann

LABORATORY

RECEIVED BY: JC/SB DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83 J Hurley

PCBs < 0.2 ug/l

Volatile organics and phenolic compounds not detected

RECEIVED JUL 05 1983 ILL. E.P.A. – D.L.P.C. STATE OF ILLINOIS

RECEIVED JUN 23 1983 E.P.A. – L.P.C. STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

D027908

S202

Time Collected: 11:50a

Date Collected: 3/14/83

SPECIAL ANALYSIS FORM

Lab # DC28019

Date Received MAR 15 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	East St. Louis IEPA - Mitchell	1630470 01

SOURCE OF SAMPLE: (Exact Location) S202 midstream of Cahokia Creek, downstream from S201

PHYSICAL OBSERVATIONS, REMARKS: one gal. sample and one 1/0 ml collected area where sample was collected indicates observable discoloration of water (yellowish-buff colored)

TESTS REQUESTED: Quantitative analysis - organics scan (including but not limited to PCBs, benzene, TCE, phenols, volatile organics)

COLLECTED BY: G. C. Mann / G. M. McCarth TRANSPORTED BY: G.C. Mann

LABORATORY

RECEIVED BY: JC/SB DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83

J. Hurley

PCBs < 0.1 ug/l

Dichloroethane Trace detected < 5 ug/l

Other organic compound - too low for identification

RECEIVED
JUN 23 1983
D.L.P.C.
STATE OF ILLINOIS

RECEIVED
JUL 01 1983
ILL. E.P.A. - D.L.P.C.
STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

DC28019

DATE: March 15, 1983

TO: Division File

FROM: Dale Helmers DH

SUBJECT: 1630450l -- St. Clair County
East St. Louis/SCA Milam
OVA Sampling

On March 3, 1983, Perry Mann, Pat McCarthy and I sampled leachate entering Cahokia Creek from the SCA-Milam Landfill. Leachate was eminating from a series of large seeps in the east bank of the creek along section known as the "old drum area". Further investigation showed that leachate was also entering the creek from several other small seeps south of the "old drum area". Additionally, two drums were found partially exposed in the bank. Both drums were partially crushed and appeared to be empty.

The vapors eminating from the leachate were sampled using a Century Organic Vapor Analyzer (Model OVA-128). Samples were taken from a point approximately 80 yards south of the entrance road near a bend in Cahokia Creek. There was noticeable sweet solvent odor present. Two samples were obtained from holes made in the leachate contaminated mud. Both were run through the gas chromatograph attachment to the OVA. The first sample was discarded because of an improper scale setting on the stripchart recorder and a 10°F. column temperature increase. The second sample analysis showed 12 chemicals whose retention times corresponded to the times of known chemicals. The corresponding chemicals and their magnitudes are as follows:

Allyl Chloride	8 ppm
Chloroform	15 ppm
Benzene	6 ppm
Trichloroethylene	3 ppm
Ethyl Propionate	5 ppm
Ethyl Methacrylate	6 ppm
N-butal acetate or Octane	9 ppm
1,1,1,2 Tetrachloroethane	4 ppm
Xylene	5 ppm
Cyclohexanose	10 ppm
1,1,2,2 Tetrachloroethane	11 ppm

Several unidentifiable chemicals were also found. In order to identify these chemicals and verify the results obtained with the OVA, it is recommended that samples of the leachate be obtained and sent to a lab for analyses.

DAH/tk/a

cc: Southern Region
Sherry Otto

RECEIVED
JUL 01 1983
ILL. E.P.A. – D.L.P.C.
STATE OF ILLINOIS

RECEIVED
JUN 23 1983
EPA – D.L.P.C.
STATE OF ILLINOIS

D127907

Time Collected: [illegible] Am

Lab #

SPECIAL ANALYSIS FORM

Date Collected: 3/14/83

Date Received MAR 15 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St Clair	E. St Louis [illegible]	1630450

SOURCE OF SAMPLE: (Exact Location) [illegible] Columbia Creek system

PHYSICAL OBSERVATIONS, REMARKS: one gal. amber and one 40 ml collected

TESTS REQUESTED: Quantitative analyses organics scan (including but not limited to PCBs, benzene, 1,2 Ethyl, volatile organics)

COLLECTED BY: [illegible] TRANSPORTED BY: [illegible]

LABORATORY

RECEIVED BY: [illegible] DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83

PCBs < 0.1 ug/l

Volatile Organic compounds & phenolic compounds not detected

RECEIVED JUL 01 1983 ILL. E.P.A. – D.L.P.C. STATE OF ILLINOIS

RECEIVED JUN 23 1983 ILL. E.P.A. – D.L.P.C. STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

D127907

6501

Time Collected: _____ Lab # _____

SPECIAL ANALYSIS FORM

Date Collected: 4/19/83 Date Received _____

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	East St. Louis/SCA-Mobil	1630 9501

SOURCE OF SAMPLE: (Exact Location) 6501 sample collected from Shell Truckstop near SCA-Mobil from well located in Truckstop, well is 27 ft deep, sample collected from line from to filtration

PHYSICAL OBSERVATIONS, REMARKS:

Legal sample
1/10 mile (volatile)

TESTS REQUESTED: Organics Scan and volatiles

COLLECTED BY: C. L. Mann & C. M. Mondt TRANSPORTED BY: Robert F. Schlenger

LABORATORY

RECEIVED BY: Pmc DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83 J. Hurley

Dichloroethane = 120 ug/l
Dichloroethylene = 240 ug/l
Trichloroethylene = 10 ug/l
other organic compounds not detected

old well
restaurant before filtering

RECEIVED
JUL 01 1983
ILL. E.P.A. – D.L.P.C.
STATE OF ILLINOIS

RECEIVED
JUN 23 1983
E.P.A. – D.L.P.C.
STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

GSC 2

Time Collected: Lab #

Date Collected: 4/19/83 SPECIAL ANALYSIS FORM Date Received

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E. St. Louis/SCA Milw	1130450

SOURCE OF SAMPLE: (Exact Location) GSC 2 - Sample collected from at the site water sample near (Shell Trucking) near SCA Milwaukee sample collected at point Collection filter and effluent

PHYSICAL OBSERVATIONS, REMARKS: new

light amber offal
filmed (volatile)

TESTS REQUESTED: organics scan + volatile

COLLECTED BY: [illegible] TRANSPORTED BY: Robert L. [illegible]

LABORATORY

RECEIVED BY: RMC DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83

Dichloroethane = 120. ug/l
Dichloroethylene = 5 ug/l
Trichloroethylene = 3. ug/l
other organic compounds not detected.

RECEIVED JUL 01 1983 ILL. E.P.A. - D.L.P.C. STATE OF ILLINOIS

RECEIVED JUN 23 1983 - D.L.P.C. STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

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		

RECEIVED JUN 13 1983 E.P.A. – D.L.P.C. STATE OF ILLINOIS

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

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 1 3 0 4 5 0 1 (16)

MONITOR POINT NUMBER (17) 6 5 0 1 (20) DATE COLLECTED (21) 0 4 1 9 8 3 (26)

St. Clair Co. - LPC REGION 5 (27)

E. St. Louis (Location) / SCA - Milam (Responsible Party)

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

Time Collected 8:30 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) Dip sample (41) 3

Sample Appearance: colorless & odorless

Collector comments: sample collected point prior to filtration system - old

E.C. Moore & C.M. Smith LPC
Collected by Div. or Company

Transported by Div. or Company

LAB USE ONLY

Lab No. B 34444

Date Rec'd APR 20 1983

Rec'd by [illegible] Time 10 a.m. p.m.

Sample temp. acceptable YES NO

Sample properly preserved YES NO

Date completed

Date forwarded JUN 13 1983

CHAMPAIGN

Supervisor Signature

Name
Address
of Lab

LPCSM020
Lab Comments:

(27) PHENOLICS – (36)

(37) 0.000 (46)

(47) (56)

(57) (66)

(67) (76)

RECEIVED JUL 01 1983 ILL. E.P.A. – D.L.P.C. STATE OF ILLINOIS

Private Lab (X)

IEPA Lab (X) (78)

LPCSM030

		PARAMETERS*	PPM*
27	✓	Alkalinity*	436
31	✓	Ammonia as N	1.4
37	✓	Arsenic As	0.005
44	✓	Barium Ba	0.1
49		BOD 5	
53	✓	Boron B	0.9
58	✓	Cadmium Cd	0.0
64	✓	Calcium Ca	170.0
69	✓	COD	39
73	✓	Chloride Cl	190

LPCSM040

27	✓	Chromium Cr (tot)	1.0
33	✓	Chromium Cr^{+6}	0.0
39	✓	Copper Cu	0.03
45	✓	Cyanide CN	0.00
52		Fecal Coli (#/100 ml)	
56	✓	Fluoride F	0.3
61	✓	Hardness $CaCO_3$	639
65	✓	Iron Fe	4.6
70	✓	Lead Pb	0.0

LPCSM050

27	✓	Magnesium Mg	5
32	✓	Manganese Mn	1.5
38	✓	Mercury Hg	0.0001
46	✓	Nickel Ni	0.0
51	✓	Nitrate-nitrite N	0.0
56		Oil and Grease	
60	✓	pH (Units)	7.5
63	✓	Phenolics 0.000 <0.005	0.4
70	✓	Phosphorus P	0.47
75	✓	Potassium K	0.1

LPCSM060

27	✓	S.D.S. (180°C)	1073
31		Selenium Se	
38	✓	Silver Ag	0.0
44	✓	Sodium Na	78.1
49	✓	SC (umhos/cm)	1450
53	✓	Sulfate SO_4	136
58	✓	Zinc Zn	0.0
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.

*Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

G.P.

LPC-8 REV. 7/77

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		

RECEIVED JUN 15 1983 E.P.A. - D.L.P.C. STATE OF ILLINOIS

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

(1) L P C S M 0 1 0 (8)

SITE INVENTORY NUMBER (9) L C 3 0 4 7 0 1 (16)

MONITOR POINT NUMBER (17) G 5 0 2 (20)

DATE COLLECTED (21) 0 4 1 9 8 3 (26)

St. Clair Co. - LPC REGION 2 (27)

E. St. Louis (Location) / SCA-Milam (Responsible Party)

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

Time Collected 0850 (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) Faucet (41) 3

Sample Appearance: colorless, odorless

Collector comments: sample collected from faucet upstream after filtration & softening

Collected by: [illegible] Div. or Company: LPC

Transported by: ___ Div. or Company: ___

LAB USE ONLY 3 34445

Lab No. ___

Date Rec'd JUN 10 1983

Rec'd by [illegible] Time 10 a.m. p.m.

Sample temp. acceptable YES NO

Sample properly preserved YES NO

Date completed ___

Date forwarded JUN 13 1983

CHAMPAIGN

Supervisor Signature

Name ___

Address of Lab ___

LPCSM020 Lab Comments:

(27) ___ (36)

(37) ___ (46)

(47) ___ (56)

(57) ___ (66)

(67) ___ (76)

RECEIVED JUL 01 1983 E.P.A. - D.L.P.C. STATE OF ILLINOIS

Private Lab (X) (77)

IEPA Lab (X) (78)

LPCSM030

		PARAMETERS*	PPM*
27	✓	Alkalinity[1]	190
31	✓	Ammonia as N	0.66
37	✓	Arsenic As	0.025
44	✓	Barium Ba	0.0
45		BOD-5	
52	✓	Boron B	1.6
53	✓	Cadmium Cd	0.0
54	✓	Calcium Ca	4.0
60	✓	COD	36
73	✓	Chloride Cl	141

LPCSM040

27	✓	Chromium Cr (tot)	0.0
33	✓	Chromium Cr^{+6}	0.0
34	✓	Copper Cu	0.0
45	✓	Cyanide CN	0.00
52		Fecal Coli (#/100 ml)	
56	✓	Fluoride F	0.3
61	✓	Hardness $CaCO_3$	<10
65	✓	Iron Fe	0.3
70	✓	Lead Pb	0.0

LPCSM050

27	✓	Magnesium Mg	~~100.0~~ 0.76
32	✓	Manganese Mn	0.05
38	✓	Mercury Hg	0.0001
46	✓	Nickel Ni	0.0
51	✓	Nitrate-nitrite N	0.0
56		Oil and Grease	
60	✓	pH (Units)	7.4
63	✓	Phenolics	0.000
70	✓	Phosphorus P	0.18
75	✓	Potassium K	0.6

LPCSM060

27	✓	T.D.S. (180°C)	1427
31		Selenium Se	
38	✓	Silver Ag	0.0
44	✓	Sodium Na	538.0
49	✓	SC (umhos/cm)	2150
53	✓	Sulfate SO_4	242
58	✓	Zinc Zn	0.0
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.

LPC-1 REV. 7/77

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY MEMORANDUM

DATE: March 15, 1983

TO: Division File

FROM: Dale Helmers DH

SUBJECT: 6304501 -- St. Clair County
East St. Louis/SCA Milam
OVA Sampling

On March 3, 1983, Perry Mann, Pat McCarthy and I sampled leachate entering Cahokia Creek from the SCA-Milam Landfill. Leachate was eminating from a series of large seeps in the east bank of the creek along section known as the "old drum area". Further investigation showed that leachate was also entering the creek from several other small seeps south of the "old drum area". Additionally, two drums were found partially exposed in the bank. Both drums were partially crushed and appeared to be empty.

The vapors eminating from the leachate were sampled using a Century Organic Vapor Analyzer (Model OVA-128). Samples were taken from a point approximately 80 yards south of the entrance road near a bend in Cahokia Creek. There was noticeable sweet solvent odor present. Two samples were obtained from holes made in the leachate contaminated mud. Both were run through the gas chromatograph attachment to the OVA. The first sample was discarded because of an improper scale setting on the stripchart recorder and a 10°F. column temperature increase. The second sample analysis showed 12 chemicals whose retention times corresponded to the times of known chemicals. The corresponding chemicals and their magnitudes are as follows:

Allyl Chloride	8 ppm
Chloroform	15 ppm
Benzene	6 ppm
Trichloroethylene	3 ppm
Ethyl Propionate	5 ppm
Ethyl Methacrylate	6 ppm
N-butal acetate or Octane	9 ppm
1,1,1,2 Tetrachloroethane	4 ppm
Xylene	5 ppm
Cyclohexanose	10 ppm
1,1,2,2 Tetrachloroethane	11 ppm

Several unidentifiable chemicals were also found. In order to identify these chemicals and verify the results obtained with the OVA, it is recommended that samples of the leachate be obtained and sent to the lab for analyses.

DAH/tk/a

cc: Southern Region
Sherry Otto

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MAR 21 1983
ILL. E.P.A. - D.L.P.C.
STATE OF ILLINOIS

KM
PCM 3/
PMM

SECOND PHASE: This phase consists of testing 2 of the wells individually utilizing the test rig shown in Figure 2. The gas withdrawn is flared. Only a slight vacuum is required to withdraw the gas.

During this time testing personnel will be on site 24 hours a day. Approximately 2 workers for the day shift and 1 each for the night shifts. Gas quality, quantity, probe pressure and test rig operation will be monitored on a 24 hour basis.

THIRD PHASE: This phase consists of connecting several wells together by tying them into a main header pipe. Then the test rig extracts gas from all wells simultaneously. The gas is flared as in Phase Two.

This program as outlined above should take a minimum of three and a maximum of four months.

The testing program as outlined will be used to determine the volume of gas that can be recovered from the landfill. This gas is presently going into the atmosphere and will continue to be generated whether or not it is collected. A project to collect the gas and use it as energy would, therefore, help improve the surrounding environment by removing the gas from the atmosphere.

If you require any further information do not hesitate to call me at our California office. Thank you for your cooperation on this matter and your assistance is greatly appreciated.

Sincerely,

Steve Maddox

Steve Maddox
Superintendent Exploration & Testing

SM/ser
Enclosures

1) Typical Well Deisgn
2) Test Rig Visual

IL-40-13

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

DATE: September 21, 1983

ESC / SCA - Midam
1630 4501

TO: Division File

FROM: P. M. McCarthy

SUBJECT: L16300000 - St. Clair County - East St. Louis/Gateway Midstate Truck Plaza

On April 19, 1983, Perry Mann and this writer sampled the subject facility. In the week prior to this date, I called the owner of the facility, Mr. Ray Pratt, and arranged the sampling. I explained to Mr. Pratt that we felt a need to sample the wells closest to the landfill. Considering that his wells were utilized as potable water by the general public, it was of particular interest to us to sample his wells. He explained that the East Side Health District routinely sampled his wells and found no problems. I told him that we would be testing for organics, something the health department does not. He agreed to let us sample both of his wells.

One well is located near the truck maintenance garage, behind the restaurant. We also collected samples at the office building, south of the restaurant. The results of the sampling showed levels of solvents in the ground water. (see attachments) Because the samples showed some contaminants, I contacted Messrs. Frank Seyferth and Fred Crawford of the Illinois Department of Public Health (IDPH). They are responsible for enforcing regulations concerning non-community water supplies. Mr. Seyferth indicated that he felt the IDPH would send a "letter of condemnation" to the facility. I told him that we, as a matter of practice, would not normally take such a drastic step, based on one sampling. I suggested that another sample be collected and then they could make a decision. Mr. Crawford said he is a former employee of this Agency and a friend of John Hurley of the Springfield lab, and would request that our lab do the analyses.

On July 28, 1983, Mr. Mann and I resampled the wells. The analyses (lab sheets attached) showed somewhat of a reversal in the levels between the two wells. This, according to Ken Bardo of the Rockford Region, who has had experience with these solvents in ground water, is not unusual. However, Mr. Crawford stated that they now were not comfortable in issuing any kind of a condemnation order. They would like to resample. I told him that we felt they should take a more active role in any future proceedings.

On August 23, 1983, Perry Mann met with Frank Seyferth, Ray Pratt and his associate, Mr. Mancini. Mr. Pratt wanted to know what he should do, if anything. At first, Mr. Seyferth indicated, dependent upon the results of the sampling that would occur this date, they may close down the wells. Later he stated that they may just direct Mr. Pratt to "look for alternative sources". Mr. Pratt was aware that there is no "published standard" for THM (trihalomethane).

Mr. Pratt wanted to know if we had sampled other wells in the area, and if not, why. Mr. Mann explained that our main concern at this point was the health and welfare of the public consuming his water. Mr. Seyferth agreed to do sampling of other wells in the area. However, Mr. Mann told everyone present that Agency upper management would have to authorize regional sampling.

On September 1, 1983, I met with Messrs. Richard Volonino and Richard Kogler of SCA Services, Inc. They own part of and operate the adjacent landfill. Mr. Volonino was aware that we had sampled, because he had been told by Mr. Pratt. Mr. Volonino agreed to contact his attorney to inform him of his intention to split samples with us. We plan to sample three wells on the western and southwestern perimeter of the landfill west of Old Cahokia Creek.

On September 21, 1983, Richard Kogler of SCA and this writer sampled G134, G107, and G12S of the SCA-Milam landfill, LPC1630450l. Mr. Kogler furnished the sampling apparatus, and we followed their standard sampling procedures. We also split samples at the two wells at Gateway Truck Plaza.

While sampling G107, Mr. Kogler and I were approached by a Mr. Todd (AC 314/621-4471), who leases adjacent property. Mr. Todd raises hogs and uses water from a private 27' deep well. He stated that he doesn't drink the water, because he is afraid it may be contaminated. He agreed to let the Agency sample the well at anytime. However, no further sampling is anticipated until we receive results from this dates sampling.

PMM:jlr

cc: Phil Van Ness ✓
Southern Region
East St. Louis/SCA-Milam File LPC 1630450l

Time Collected: _____ Lab # _____

Date Collected: 4/19/83 SPECIAL ANALYSIS FORM Date Received _____

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	East Illinois/[illegible]	[illegible]

SOURCE OF SAMPLE: (Exact Location) G501 sample collected from (Shell Truckstop) near SCA-[illegible] from [illegible] and [illegible] Truckstop, and US 24 [illegible], sample collected from line [illegible] to [illegible]

PHYSICAL OBSERVATIONS, REMARKS:

Light amber
[illegible]

TESTS REQUESTED: Organics Scan and metals

COLLECTED BY: [illegible] TRANSPORTED BY: Robert F. Schlenger

LABORATORY

RECEIVED BY: [illegible] DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83

Dichloroethane = 120 ug/l
Dichloroethylene = 240 ug/l
Trichloroethylene = 10 ug/l
other organic compounds not detected

old well
restaurant before filtering

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STATE OF ILLINOIS

RECEIVED
JUN 23 1983
E.P.A. – D.L.P.C.
STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

Time Collected: _____ Lab #

Date Collected: 4/19/83 SPECIAL ANALYSIS FORM Date Received _____

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E. St. Louis/Cahokia	H 30450

SOURCE OF SAMPLE: (Exact Location) GSC 2 - Sample collected from the site water supply main (Kelly Trucking) from Gal. Mining Supply Co. Field & found Cahokia Creek and Flume

PHYSICAL OBSERVATIONS, REMARKS: new

1 gal amber glass bottle (volatile) office

TESTS REQUESTED: Organics scan & volatile

COLLECTED BY: [illegible] TRANSPORTED BY: Robert L. [illegible]

LABORATORY

RECEIVED BY: RMC DATE COMPLETED: 6/21/83 DATE FORWARDED: 6/21/83

Dichloroethane = 120. ug/l

Dichloroethylene = 5 ug/l

Trichloroethylene = 3. ug/l

other organic compounds not detected.

RECEIVED JUL 01 1983 ILL. E.P.A. - D.L.P.C. STATE OF ILLINOIS

RECEIVED JUN 23 1983 - D.L.P.C. STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

C 04 L-114

Time Collected: 10:50A

Lab # D023994

SPECIAL ANALYSIS FORM

Date Collected: 7/28/83

Date Received JUL 28 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E. St. Louis Water Treatment	General

SOURCE OF SAMPLE: (Exact Location) Sample Clarifier Effluent immediately after entering into the office located on the east of the maintenance facility

PHYSICAL OBSERVATIONS, REMARKS:

(1) quart bottle
(2) 10 ml bottle
quart was used to make a composite for THM's etc.

TESTS REQUESTED: Chlorinated volatile organics

COLLECTED BY: R. C. Tilman + Pat Clarity TRANSPORTED BY: Ken Bosie DLPC & Doug Tolan DLPC

LABORATORY

RECEIVED BY: GD DATE COMPLETED: 8/1/83 8:23 DATE FORWARDED: 8/1/83 D. Hurley

Dichloroethylene	= 280. ug/l	310	ug/l
Trichloroethylene	= 9 ug/l	10	ug/l
Chloroethylene	= 12 ug/l		
Chloroethane	= 4 ug/l		
1,1-Dichloroethane	= 11 ug/l	12	ug/l

RECEIVED
AUG 05 1983
ILL. E.P.A. – D.L.P.C.
STATE OF ILLINOIS

REPORTED
AUG - 9 1983

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

D023994

B 04 LAN

Time Collected: 10:35a

Date Collected: 7/28/83

Lab # D029993

SPECIAL ANALYSIS FORM

Date Received JUL 28 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E. St. Louis [illegible]	General

SOURCE OF SAMPLE: (Exact Location) Sample B was collected from tap which is fed by the well sampled in sample A, after it leaves the [illegible]

PHYSICAL OBSERVATIONS, REMARKS:

(1) Quart bottle
(2) 40 ml bottle
[illegible] was collected at same time as L 771/M bottle

TESTS REQUESTED: Chlorinated volatile organics

COLLECTED BY: [illegible] TRANSPORTED BY: KEN BOSIE DLPC & DOUG TOLAN DLPC

LABORATORY

RECEIVED BY: [illegible] DATE COMPLETED: 8/1/83 8/23 DATE FORWARDED: 8/1/83 [illegible]

Dichloroethylene = 7 ug/l 8 ppb
1,1- Dichloroethane = 12 ug/l 13 ppb
Trichloroethylene = 3 ug/l 3 ppb

RECEIVED AUG 05 1983 ILL. E.P.A. – D.L.P.C. STATE OF ILLINOIS

RECEIVED AUG 05 1983 ILL. E.P.A. – D.L.P.C. STATE OF ILLINOIS

RECEIVED AUG - 9 1983

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

D029993

704 L-001

Time Collected: 9:55 +

Date Collected: 7/28/83

Lab # 1[illegible]92

SPECIAL ANALYSIS FORM

Date Received JUL 28 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	East Alton Trad	General

SOURCE OF SAMPLE: (Exact Location) Sample A is a collected from well #294 located on the E corner of Trad maintenance shop. Sample collected prior to settling. Sample previously designated as G-701

PHYSICAL OBSERVATIONS, REMARKS:

(1) Quart bottle
(2) 40 ml bottle
caution need to pour off sample into 40 ml bottle

TESTS REQUESTED: Chlorinated ethylenes

COLLECTED BY: [illegible] & P. McCarty TRANSPORTED BY: KEN BOSIE DLPC & DOUG TOLAN DLPC

LABORATORY

RECEIVED BY: [illegible] DATE COMPLETED: 8/1/83 DATE FORWARDED: 8/1/83

Dichloroethylene = 5 ug/l	6.23 ppb	
1,1-Dichloroethane = 8 ug/l	12 ppb	
Trichloroethylene = 2 ug/l	3 ppb	

RECEIVED AUG 05 1983 ILL. E.P.A. - D.L.P.C. STATE OF ILLINOIS

RECEIVED AUG - 9 1983 E.P.A. -- [illegible] STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING) 1[illegible]92

A-04 L-P4 D0 0265

Time Collected: _____ Lab # _____

Date Collected: 8/23/83 SPECIAL ANALYSIS FORM Date Received SEP 2 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E. St Louis / Gateway Truck	General

SOURCE OF SAMPLE: (Exact Location) Sample A: Gas collected from well located on NE corner of truck maintenance shop. Sample collected at point prior to settling ~~[illegible]~~

PHYSICAL OBSERVATIONS, REMARKS: 2 (40 ml) bottles

TESTS REQUESTED: Chlorinated volatile organics

COLLECTED BY: R.C. Mann TRANSPORTED BY: [illegible]

LABORATORY

RECEIVED BY: JC DATE COMPLETED: 9/2/83 DATE FORWARDED: 9/2/83 J. Stuney

1,1-dichloroethane = 12 ug/l (ppb)
dichloroethylene = 6 ug/l
Trichloroethylene = 3 ug/l

Trace volatile compounds (< 2 ug/l) also detected in the samples, but concentrations were too low for identification.

RECEIVED
SEP - 6 1983
E.P.A. — D.L.P.C.
STATE OF ILLINOIS
D0 0265

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

B 04 L 1

Time Collected: _____ Lab # D030265

SPECIAL ANALYSIS FORM

Date Collected: 8/23/83 Date Received AUG 28 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E. St. Louis / Gateway Trail	General

SOURCE OF SAMPLE: (Exact Location) Sample B was collected from tap which is fed by the well sampled in Sample A, after softening

PHYSICAL OBSERVATIONS, REMARKS: 2 (40 ml) bottles

TESTS REQUESTED: Chlorinated volatile organics

COLLECTED BY: G. C. Mann TRANSPORTED BY: Priority Express

LABORATORY

RECEIVED BY: [illegible] DATE COMPLETED: 9/2/83 DATE FORWARDED: 9/2/83 [illegible]

1,1-dichloroethane = 13. ug/l (PPb)
dichloroethylene = 8. ug/l
trichloroethylene = 3 ug/l

I.E.P.A. - D.L.P.C.
STATE OF ILLINOIS
SEP 6 1983
RECEIVED

RECEIVED
SEP - 6 1983
E.P.A. — D.L.P.C.
STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

D030265

04 LP41

Time Collected: _____ Lab # 030287

SPECIAL ANALYSIS FORM

Date Collected: 8/22/83 Date Received AUG 24 1983

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E. St. Louis Water Trust	General

SOURCE OF SAMPLE: (Exact Location) Sample C was collected from well source after softening in the office located SE of the maintenance

PHYSICAL OBSERVATIONS, REMARKS: 2 (40 ml) bottles

TESTS REQUESTED: Chlorinated volatile organics

COLLECTED BY: R. C. Mann TRANSPORTED BY: [illegible]

LABORATORY

RECEIVED BY: [illegible] DATE COMPLETED: 9/2/83 DATE FORWARDED: 9/2/83 J. Hurley

1,1-dichloroethane = 12. ug/l (PPb)
dichloroethylene = 310. ug/l
Trichloroethylene = 10. ug/l

ILL. E.P.A. - D.L.P.C.
STATE OF ILLINOIS
SEP 15 1983
RECEIVED

RECEIVED
SEP - 6 1983
E.P.A. D.L.P.C.
STATE OF ILLINOIS

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

030287

LP41

Time Collected: 10:00 am

Date Collected: 9/20/83

Lab #

SPECIAL ANALYSIS FORM

Date Received

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E St. Louis / SCA-Milam	16304501

SOURCE OF SAMPLE: (Exact Location)

from monitor well G134

PHYSICAL OBSERVATIONS, REMARKS:

removed one volume (60 bailers) - septic smell - recording H_2O level at ground elevation

TESTS REQUESTED: volatile chlorinated organics - phenols organic scan

COLLECTED BY: Philip Carling

TRANSPORTED BY:

LABORATORY

RECEIVED BY:	DATE COMPLETED:	DATE FORWARDED:

LPC-8A 4/77

(NOT FOR DATA PROCESSING)

r41

Time Collected: 10:40 am

Date Collected: 9/20/83

Lab #

SPECIAL ANALYSIS FORM

Date Received

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E. St. Louis / SCA - Milam	16304501

SOURCE OF SAMPLE: (Exact Location)

from monitor well G107

PHYSICAL OBSERVATIONS, REMARKS:

H_2O level at 13' - removed 51 bailers - one volume - collected 40ml at 10:40 am - allowed recharge and obtained 1 gallon and guard at 11:40 am - slight septic odor

TESTS REQUESTED: Volatile organics - phenols organic scan

COLLECTED BY: [illegible] TRANSPORTED BY:

LABORATORY

RECEIVED BY: DATE COMPLETED: DATE FORWARDED:

	G107	G134
methyl chloride	2 ppb	1 ppb
dichloromethane	1 ppb	3 "
dichloroethane	26 ppb	4 "
trichloroethane	3 ppb	
chlorobenzene	7 ppb	
dichlorobenzene	12 ppb	

volital organic data show

LPC-8A 4/77 (NOT FOR DATA PROCESSING)

Time Collected: 11:20 am

Lab #

SPECIAL ANALYSIS FORM

Date Collected: 9/20/83

Date Received

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St. Clair	E. St. Louis / SCA-Milan	16304501

SOURCE OF SAMPLE: (Exact Location)

From monitor well G12S -

PHYSICAL OBSERVATIONS, REMARKS:

H_2O level at 8' - removed one volume (72 hours)

TESTS REQUESTED: chlorinated volatile organics - phenol

organic scan

COLLECTED BY: Pennsylvania

TRANSPORTED BY:

LABORATORY

RECEIVED BY:	DATE COMPLETED:	DATE FORWARDED:
Methylene	2 pk	

LPC-8A 4/77

(NOT FOR DATA PROCESSING)

L141

Time Collected: 12:15 pm

Date Collected: 9/20/93

Lab #

SPECIAL ANALYSIS FORM

Date Received

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL

COUNTY:	FILE HEADING:	FILE NUMBER:
St Clair	E. St Louis Storm Tank	General

SOURCE OF SAMPLE: (Exact Location) Sample B collected from tap after softener in the office located SE of cement bldg.

PHYSICAL OBSERVATIONS, REMARKS: 2 (cloudy) bottles

1 blank carried w/ sample

TESTS REQUESTED: Alkalinity, chloride, organic

COLLECTED BY: [illegible]

TRANSPORTED BY:

LABORATORY

RECEIVED BY:	DATE COMPLETED:	DATE FORWARDED:

LPC-8A 4/77

(NOT FOR DATA PROCESSING)

ILLINOIS ENVIRONMENT PROTECTION AGENCY MEMORANDUM

ATE: March 29, 1983

O: Division File - St. Clair Co: LPC 163 045 01 - East St. Louis/SCA-Milam

ROM: Perry Mann - Southern PCM

UBJECT: Sampling in Response to Leachate Out-Breaks in Phase I Adjacent to Cahokia Creek

On March 14, 1983, Pat McCarthy and myself visited the subject site in order to collect water and leachate samples for organic analysis from Cahokia Creek and the area adjacent to a portion of the site which has been designated in the past as the "old barrel area". This latter area during the years prior to 1974-1975 (since at least 1963 as per aerial photos) had been utilized for the disposal of thousands of waste drums whose markings indicated the materials contained were of a toxic and hazardous nature. In August, 1973, documents in the file indicate a chemical fire in this area occurred which resulted in explosions, dense smoke, and burning drums to be propelled like missles into the air.

The subject leachate problem was initially observed by Pat McCarthy and myself on March 1, 1983. On this date, discolored liquid exhibiting a sweet organic chemical odor was observed to be ponded in an inactive slough of Cahokia Creek approximately 100-125 yards upstream from the flap gate, which is below the canal road.

On March 3, 1983, Pat McCarthy, myself, and Dale Helmers returned to the problem area for a preliminary identification of the leachate utilizing the Century Organic Vapor Analyzer. (See Dale Helmers to Division File memorandum dated March 15, 1983). During inspections of other areas along the east bank of Cahokia Creek, additional leachate seeps were observed throughout the western side of Phase I upstream from those seeps observed on March 1. These other seeps, observed in areas not adjacent to the "old barrel area", did not exhibit any odor similar to that observed in the leachate exhibiting a sweet organic chemical odor.

The time between the March 3 visit and the March 14 sampling was utilized for the development of a sampling strategy for the subject problem area and coordinating split sampling with Rich Kogler of SCA. Inclement weather postponed earlier sampling dates proposed for March 10 and March 11. The following indicates the appropriate designated sample point number, time sample was taken, whom it was collected by and types of sample collected:

S101	11:00 a.m.	Organics	P. Mann & P. McCarthy
		Sediment (SS-1)	P. Mann
S102	11:30 a.m.	Organics	P. Mann & P. McCarthy
		Sediment (SS-2)	P. Mann
S201	11:45 a.m.	Organics	P. Mann & P. McCarthy
S202	11:50 a.m.	Organics	P. Mann & P. McCarthy

KM

S203	12:05 p.m.	Organics	P. Mann & P. McCarthy
		Sediment (SS-3)	P. Mann
L101	12:55 p.m.	Organics	P. McCarthy
	1:15 p.m.	Sediment (SS-4a, 4b)	P. Mann
L102	12:35 p.m.	Organics	P. Mann
	1:15 p.m.	Sediment (SS-5a, 5b)	P. McCarthy
L103	12:45 p.m.	Organics	P. McCarthy
	1:25 p.m.	Sediment (SS-6a, 6b)	P. Mann
S204	1:45 p.m.	Organics	P. Mann & P. McCarthy
S301	2:00 p.m.	Organics	P. Mann

Photos were taken by P. McCarthy at sample points S101, S201, S203, L101, L102, L103 and S 301. The small script (a) designation on sediment sample indicates surface sediments were collected; small script (b) designation indicates where samples of subsurface sediments, approximately 10-12 inch depth, were collected.

Sample S102 was taken in close proximity of well G118. Sample S202 was taken near well G111 from the creek where discoloration by leachate was observed. S203 was collected near where the creek bifurcates and an inactive slough exists. L102 was collected from the same location where readings with the Century OVA were taken on March 3 by Dale Helmers, et. at.

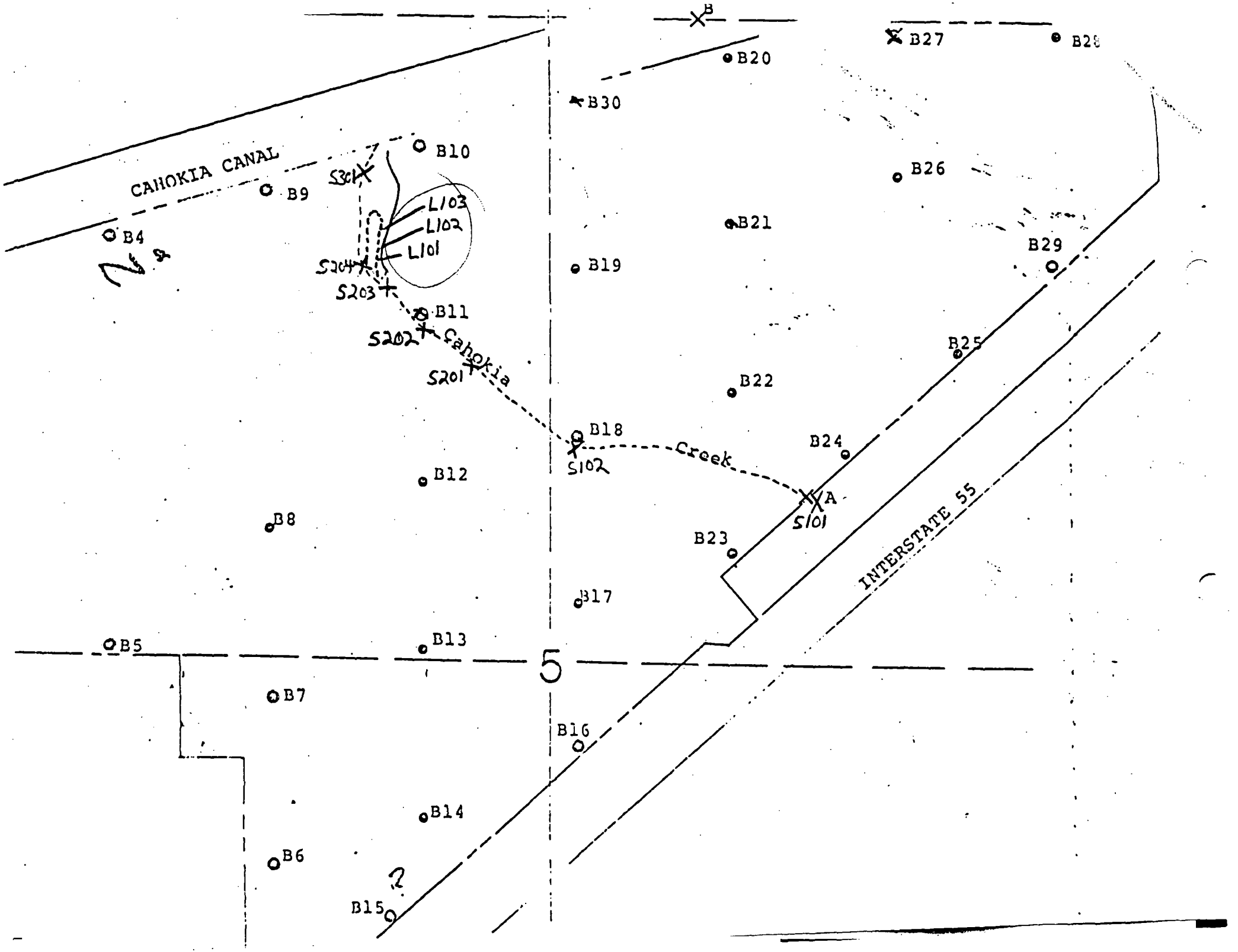
Attached to this memo is a map which more clearly identifies the locations of the sampling points utilized on March 14.

These samples collected were all transported to the Springfield lab on March 15, 1983, by P. McCarthy and myself. It was indicated that a portion of the sediment samples was to be dispensated to the proper state la[illegible] f[illegible] the metals analyses. Organic analyses were to include organic scans for PCB's, benzene, trichlorethane, as well as volatile organics.

Rich Kogler of SCA collected water samples at three of the ten I.E.P.A. designated sampling points for analyses at a private lab during the time the described sampling was conducted. Level C protection was utilized by P. McCarthy and myself during the collection of L101, L102, L103, and S204.

PCM:pbo

cc: Southern Region
cc: Joe Podlewski
cc: Vince Moreth - A.G.
cc: FOS Mgr. - Land


B
B27
B28
B20
B30
B10
CAHOKIA CANAL
B9
S301
L103
L102
L101
B4
B26
B21
B29
S204
S203
B19
B11
S202
Cahokia
S201
B25
B22
B18
Creek
S102
B24
B12
A
S101
B8
B23
INTERSTATE 55
B17
B5
B13
5
B7
B16
B14
B6
?
B15

5/14/83

3/14/83 Sampling - H_2O - reported by John Hinley

	PCB		
L 101	14 ppb	L102 - none	L103 15 PCB
dichloroethane	830 ppb	—	2075 ppb
benzene	500 "	- 1400 ppb	2300 "
toluene	3500 ppb	- 850 "	2300 "
chlorobenzene	50 ppb	- 60 "	
xylenes	120 "	- 450 "	600 "
styrene	600 ppb	- 2200 "	4100 "

~~what requirement do they follow~~

~~Reported to Superfund 103(c) - ?~~

	S2017	S301
	<DNE	2.4 PCB
dichloroethane	40 ppb	no dichloroethane

- did not do purge on the soil -

800-424-9346

SCA SERVICES, INC.
1838 N. BROADWAY
ST. LOUIS, MO. 63102
314-241-3710

SCA SERVICES

October 18, 1983

Mr. Mark Haney
Illinois Environmental Protection Agency
Division of Land Pollution Control
2200 Churchill Road
Springfield, Illinois 62706

RE: SCA/Milam Landfill,
SCA/Chouteau Island and
Barton #1 and #2 Landfills

Dear Mr. Haney:

Please find enclosed the results of the quarterly sampling for the above referenced sites. Also, included are the previous quarters results for Barton #2, which were delayed due to a misunderstanding with your office concerning the status up-date for the site monitering program.

Outlined below are the manhole and well-point depths for the Chouteau Island Landfill Leachate Collection System:

MANHOLE	DEPTH OF LEACHATE
1	2.1'
2	1.8'
3	1.8'
4	2.5'
5	2.0'

WELL POINTS	DEPTH OF LEACHATE
1	3.2'
2	3.5'
3	4.9'

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

RECEIVED
OCT 26 1983
ILL. E.P.A. - D.L.P.C.
STATE OF ILLINOIS

PMK

RECYCLED PAPER

October 18, 1983

Mr. Mark Haney
Illinois Environmental Protection Agency
Division of Land Pollution Control

Re: SCA/Milam Landfill,
SCA/Chouteau Island and
Barton #1 and #2 Landfills

Should you have any questions, please contact me at (314) 241-3721.

Very truly yours,

Richard T. Kogler

Richard T. Kogler
Environmental Manager

RTK/lm
encl.

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 6 3 0 4 5 0 1 (16)

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

St. Clair Co. - LPC REGION (27) S

E.St.Louis (Location) / SCA Milam (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) °C Background (X). . . . (40)

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

Sample Appearance: _____

Collector comments: stream dry

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

S. A. Meierotto — Collected by — LACLEDE GAS LAB — Div. or Company

S. A. Meierotto — Transported by — LACLEDE GAS LAB — 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 Laclede Gas Lab

Address of Lab 4118 Shrewsbury St. Louis, Mo. 63119

LPCSM020
Lab Comments:

(27) D R Y S T R E A M (36)

(37) (46)

(47) (56)

(57) (66)

(67) (76)

Private Lab (X) (77) X

IEPA Lab (X) (78)

RECEIVED

	PARAMETERS+	PPM*
	LPCSM030	
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
LPC 8 3/77

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOTE 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 6 3 0 4 5 0 1 (16)

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

St. Clair Co. - LPC REGION (27) S

E.St.Louis (Location) / SCA Milam (Responsible Party)

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

Time Collected 1:00 ~~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) 8 0 (39) o F Background (X). . . (40)

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

Sample Appearance: _____

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

Collector comments: turbid - sulfur odor

S. A. Meierotto — Collected by — LACLEDE GAS LAB — Div. or Company

S. A. Meierotto — Transported by — LACLEDE GAS LAB — Div. or Company

LAB USE ONLY

Lab No. _____

Date Rec'd 8/15/83

Rec'd by ARM Time 2:00 ~~a.m.~~ p.m.

Sample temp. acceptable YES ~~NO~~

Sample properly preserved YES ~~NO~~

Date completed 9/8/83

Date forwarded 9/30/83

Supervisor Signature

Name LACLEDE GAS LAB

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

LPCSM020 Lab Comments:

(27) B less than (36)

(37) Fe less tha (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	2.04
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	0.1
58	Cadmium Cd	
64	Calcium Ca	
69	COD	103
73	Chloride Cl	30

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	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)	8.4
63	Phenolics	
70	Phosphorus P	
76	Potassium K	

LPCSM060

27	B.O.E. (180°C)	500
31	Selenium Se	
38	Silver Ag	
44	Sodium Na	
49	SC (umhos/cm)	
53	Sulfate SO_4	50.0
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/WATER 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 6 3 0 4 5 0 1 (16)

West edge

MONITOR POINT NUMBER (17) G 1 2 S (20) — DATE COLLECTED (21) 0 9 1 5 8 3 (26)

St. Clair Co. - LPC REGION S (27)

F.St.Louis (Location) / SCA Milam (Responsible Party)

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

Time Collected 19:15 ~~a.m.~~ p.m. Unable to collect sample (X) (30)

Stick-up 2.0 ft. (31) (33) Depth to water 7.8 ft. (from T.O.C.) (34) (36)

Sample temp. 73 °F (37) (39) Background (X). . . . (40)

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

Sample Appearance: black - septic odor

Collector comments: well depth 32.8'
fast recharge

S. A. Meierotto — Collected by — LACLEDE GAS LAB — Div. or Company

S. A. Meierotto — Transported by — LACLEDE GAS LAB — Div. or Company

LAB USE ONLY

Lab No. _____

Date Rec'd 9/15/83

Rec'd by ARM Time 1:00 ~~a.m.~~ p.m.

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

Date completed 9/27/83
Date forwarded ~~9/30/83~~

Supervisor Signature

Name Laclede Gas Lab
Address 4119 Shrewsbury
of Lab 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)

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

LPCSM030

	PARAMETERS*	PPM*
27	Alkalinity[1]	
31	Ammonia as N	0.90
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	0.5
58	Cadmium Cd	
64	Calcium Ca	
69	COD	33
73	Chloride Cl	40

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	0.3
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)	288
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/NOTE 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 6 3 0 4 5 0 1 (9)–(16)

MONITOR POINT NUMBER 6 1 3 4 (17)–(20) DATE COLLECTED 0 8 1 5 8 3 (21)–(26)

St. Clair Co. - LPC REGION S (27)

E.St.Louis (Location) / SCA Milam (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 1.5 ft. (31) (33) Depth to water 5 8 ft. (from T.O.C.) (34) (36)

Sample temp. 7 5 ° F (37) (39) Background (X). . . . (40)

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

Sample Appearance: clear - no odor

Collector comments: well depth 25.0'
fast recharge

S. A. Meierotto — Collected by — LACLEDE GAS LAB — Div. or Company
S. A. Meierotto — Transported by — LACLEDE GAS LAB — Div. or Company

LAB USE ONLY

Lab No. _____

Date Rec'd 8/15/83

Rec'd by ARM Time 2:00 ~~a.m.~~ p.m.

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

Date completed 9/8/83
Date forwarded 9/30/83

a R Hauser
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)

RECEIVED
OCT 21 1983
E.P.A.
STATE OF ILLINOIS

LPCSM030

	PARAMETERS*	PPM*
27	Alkalinity[1]	
31	Ammonia as N	1.62
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	2.1
58	Cadmium Cd	
64	Calcium Ca	
69	COD	59
73	Chloride Cl	170

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	18
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)	1703
31	Selenium Se	
38	Silver Ag	
44	Sodium Na	
49	SC (umhos/cm)	
53	Sulfate SO_4	
58	Zinc Zn	
	Lab. P.O.	

*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

	(G) Ground Water	(L) Leachate	(X) Special
rface Water	(1) Monitor Well	(1) Flow or seep	(1) Soil
stream			
d-site	(2) Private well	(2) Pond	(2) Waste
wnstream	(3) Spring	(3) Collection System	(3) Other
n-off	(4) Lysimeter		
pounded	(5) Public W S		

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

C S M 0 1 0 (8) SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (9) (16)

R POINT G 1 3 3 (17) (20) DATE COLLECTED 0 8 1 5 8 3 (21) (26)

St. Clair Co. - LPC REGION S (27)

E.St.Louis / SCA Milam
(Location) (Responsible Party)

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

ollected 09:15 a.m. p.m. Unable to collect sample (X) (30)

up 1.5 ft. (31) (33) Depth to water 2.4 ft. (from T.O.C.) (34) (36)

temp. 74 (37) °F (39) Background (X). . . . (40)

water sampled by (Indicate one): (1) Bailing; mping; (3) Other (Specify) 1 (41)

Appearance: turbid - H2S odor

tor comments: well depth 30.0'
fast recharge

A. Meierotto — Laclede Gas Lab
Collected by — Div. or Company
A. Meierotto — Laclede Gas Lab
Transported by — Div. or Company

SE ONLY

o.

Rec'd 8/15/83

by ARM Time 2:00 a.m. p.m.

e temp. acceptable YES NO
e properly preserved YES NO
completed 9/8/83
forwarded 9/30/83

ARMauer
Supervisor Signature

LACLEDE GAS LAB
ss 4118 Shrewsbury
b St. Louis, Mo.
63119

LPCSM020
Lab Comments:

b less than (27) (36)

(37) (46)

(47) (56)

(57) (66)

(67) (76)

Private Lab (X) (77)

IEPA Lab (X) (78)

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LPCSM030

	PARAMETERS*	PPM*
27	Alkalinity[1]	
31	Ammonia as N	1.58
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	0.1
58	Cadmium Cd	
64	Calcium Ca	
69	COD	22
73	Chloride Cl	2

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	1.4
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)	431
31	Selenium Se	
38	Silver Ag	
44	Sodium Na	
50	SC (umhos/cm)	
53	Sulfate SO_4	
56	Zinc Zn	
63		

ces are to be performed on unfiltered samples. *Values ing no. of places shown are reported in the lab comments section. 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.

CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(5) Surface Water	(2) Ground Water	(1) 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) Aquifer		
(5) Impounded	(5) Public W S		

Special Waste Area

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

SITE INVENTORY NUMBER (9) 1 6 3 0 4 5 0 1 (16)

MONITOR POINT NUMBER (17) G 1 3 3 (20)

DATE COLLECTED (21) 0 8 1 5 8 3 (26)

St. Clair Co. - LPC

East. St. Louis / SCA-Milam

(Location) (Responsible Party)

LPCSM070

	PARAMETER	Units
27	Aldrin	
35	Chlordane	
43	DDT	
50	Dieldrin	
58	Endrin	
66	Gross Alpha	
70	Gross Beta	

LPCSM080

27	Heptachlor	
35	Heptac Epox	
43	Lindane	
51	Methoxychlor	
57	Parathion	
63	PCB's	
71	Radium	

LPCSM090

27	Tot Org C	
35	Tot Org Hal	
43	Toxaphene	
51	Turbidity	
55	2, 4-D	
61	Silvex	
68		

LPCSM100

27		
40		
53		
66		

Supplemental Chemical Analysis Form

PARAMETERS	METHOD	RESULTS
Acrylonitrile	ASTN/EEI#14	*0.3 ppm
Di-butyl phthalate	606	*0.1 "
Di-benzyl phthalate	"	*0.1 "
Di-octyl phthalate	"	*0.1 "
Myristic acid	methylene chloride	*0.1 "
Palmitic acid	ext.	*0.1 "
Stearic acid	"	*0.1 "
Oleic acid	"	*0.1 "
Sorbitol	direct injection	*10 "

*less than

All units in ppm except:

Radium - pCi/l
Gross Alpha - pCi/l
Gross Beta - millirem/yr
Turbidity - JTU

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

Four replicate measurements

	pH No. 1		TOC No. 1	
	No. 2		No. 2	
	No. 3		No. 3	
	No. 4		No. 4	
	SC No. 1		TOX No. 1	
	No. 2		No. 2	
	No. 3		No. 3	
	No. 4		No. 4	

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 6 3 0 4 5 0 1 (16)

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

St. Clair Co. - LPC REGION S (27)

E.St.Louis (Location) / SCA Milam (Responsible Party)

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

Time Collected 9:45 a.m. ~~p.m.~~ Unable to collect sample (X) (30)

Stick-up 1.5 ft. (31) (33) Depth to water (from T.O.C.) 3.5 ft. (34) (36)

Sample temp. 75 °F (37) (39) Background (X). . . . (40)

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

Sample Appearance: muddy - no odor

Collector comments: Well depth 23.5'
fast recharge

S. A. Meierotto — Collected by — LACLEDE GAS LAB — Div. or Company

S. A. Meierotto — Transported by — LACLEDE GAS LAB — Div. or Company

LAB USE ONLY

Lab No. _____

Date Rec'd 8/15/83

Rec'd by ARM Time 2:00 ~~a.m.~~ p.m.

Sample temp. acceptable YES ~~NO~~
Sample properly preserved YES ~~NO~~
Date completed 9/8/83
Date forwarded 9/30/83

Supervisor Signature

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

LPCSM020
Lab Comments:

(27) b less than (36)
(37) (46)
(47) (56)
(57) (66)
(67) (76)

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

RECEIVED

LPCSM030

	PARAMETERS+	PPM*
27	Alkalinity[1]	
31	Ammonia as N	2.16
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	0.1
58	Cadmium Cd	
64	Calcium Ca	
69	COD	32
73	Chloride Cl	2

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	2.0
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	R.O.E. (180°C)	514
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.

OCT 21 1983

E.P.A. — D.L.P.C.

IL 532-0313

CHEMICAL ANALYSIS FORM

Key for Determining Inventory 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		

Special Waste Area

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

SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (9) (16)

MONITOR POINT NUMBER G 1 3 2 (17) (20)

DATE COLLECTED 0 8 1 5 8 3 (21) (26)

St. Clair Co. - LPC

East St. Louis / SCA-Milam

(Location) (Responsible Party)

LPCSM070

		Parameter	Time
27		Aldrin	
35		Chlordane	
43		DDT	
50		Dieldrin	
58		Endrin	
66		Gross Alpha	
70		Gross Beta	

LPCSM080

27		Heptachlor	
35		Heptac Epox	
43		Lindane	
51		Methoxychlor	
57		Parathion	
63		PCB's	
71		Radium	

LPCSM090

27		Tot Org C	
35		Tot Org Hal	
43		Toxaphene	
51		Turbidity	
55		2, 4-D	
61		Silvex	
68			

LPCSM100

27			
40			
53			
66			

Supplemental Chemical Analysis Form

PARAMETERS	METHOD	RESULTS	
Acrylonitrile	ASTN/EEI#14	*0.3	ppm
Di-butyl phthalate	606	*0.1	"
Di-benzyl phthalate	"	*0.1	"
Di-octyl phthalate	"	*0.1	"
Myristic acid	methylene chloride	*0.1	"
Palmitic acid	ext.	*0.1	"
Stearic acid	"	*0.1	"
Oleic acid	"	*0.1	"
Sorbitol	direct injection	*10	"

*less than

All units in ppm except:

Radium - pCi/l
Gross Alpha - pCi/l
Gross Beta - millirem/yr
Turbidity - JTU

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E.P.A. — D.L.P.C.
STATE OF ILLINOIS

Four replicate measurements

	pH No. 1			TOC No. 1	
	No. 2			No. 2	
	No. 3			No. 3	
	No. 4			No. 4	
	SC No. 1			TOX No. 1	
	No. 2			No. 2	
	No. 3			No. 3	
	No. 4			No. 4	

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

Key for Determining Type of Monitoring Point

...ce Water	(G) Ground Water	(L) Leachate	(X) Special
...ream	(1) Monitor Well	(1) Flow or seep	(1) Soil
...site	(2) Private well	(2) Pond	(2) Waste
...ostream	(3) Spring	(3) Collection System	(3) Other
...off	(4) Lysimeter		
...ounded	(5) Public W S		

...rivate Well, Stream, Spring, Impounded Water only)

S M 0 1 0 (8) SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (9) (16)

...POINT G 1 3 1 (17) (20) DATE COLLECTED 0 8 1 5 8 3 (21) (26)

St. Clair Co. - LPC REGION S (27)

E.St.Louis / SCA Milam
...location) (Responsible Party)

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

...lected 9:40 a.m. ~~p.m.~~ Unable to collect sample (X) (30)

...(31) 1.5 ft. (33) Depth to water (from T.O.C.) (34) 3.8 ft. (36)

...emp. 72 o F (37) (39) Background (X). . . . (40)

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

...appearance: green - no odor

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EPA - U.L.P.C.
STATE OF ILLINOIS

...collector comments: well depth 29.5'
fast recharge

S. L. Meierotto — LACLEDE GAS LAB
...ollected by — Div. or Company
S. L. Meierotto — LACLEDE GAS LAB
...ransported by — Div. or Company

LAB USE ONLY

Lab #. _____

...ate Rec'd 8/15/83

...ec'd by ARM Time 2:00 ~~a.m.~~ p.m.

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

...ate completed 9/8/83
...ate forwarded ~~9/30/83~~

...Supervisor Signature

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

LPCSM020
Lab Comments:

B L E S S T H A N
(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	0.84
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	0.1
58	Cadmium Cd	
64	Calcium Ca	
69	COD	36
73	Chloride Cl	2

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	2.7
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)	535
31	Selenium Se	
38	Silver Ag	
44	Sodium Na	
49	SC (umhos/cm)	
53	Sulfate SO_4	
58	Zinc Zn	
63		

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

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

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 Special Waste Area (Private Well, Stream, Spring, Impounded Water only)

SITE INVENTORY NUMBER 1 6 3 0 4 5 0 1 (9) (16)

MONITOR POINT NUMBER G 1 3 1 (17) (20)

DATE COLLECTED 0 8 1 5 8 3 (21) (26)

St. Clair Co. - LPC

East St. Louis / SCA/Milam
(Location) (Responsible Party)

Supplemental Chemical Analysis Form

PARAMETERS	METHOD	RESULTS
Acrylonitrile	ASTN/EEI#14	*0.3 ppm
Di-butyl phthalate	606	*0.1 "
Di-benzyl phthalate	"	*0.1 "
Di-octyl phthalate	"	*0.1 "
Myristic acid	methylene chl.	*0.1 "
Palmitic acid	ext.	*0.1 "
Stearic acid	"	*0.1 "
Oleic acid	"	*0.1 "
Sorbitol	direct injection	*10 "

*less than

All units in ppm except:

Radium - pCi/l
Gross Alpha - pCi/l
Gross Beta - millirem/yr
Turbidity - JTU

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STATE OF ILLINOIS

Four replicate measurements

	pH No. 1	0 0 . 8 8 8		TOC No. 1
	No. 2	0 0 . 0 8 8		No. 2
	No. 3	0 0 . 0 0 8		No. 3
	No. 4	0 0 . 8 8 8		No. 4
	SC No. 1	. 8 8 8 8		TOX No. 1
	No. 2	. 0 8 8 8		No. 2
	No. 3	. 0 0 8 8		No. 3
	No. 4	. 0 8 0 8		No. 4

LPCSM070

		Parameters	Time
27		Aldrin	
35		Chlordane	
43		DDT	
50		Dieldrin	
58		Endrin	
66		Gross Alpha	0 0 0
70		Gross Beta	0 0 0

LPCSM080

27		Heptachlor	
35		Heptac Epox	
43		Lindane	
51		Methoxychlor	
57		Parathion	
63		PCB's	
71		Radium	0 0

LPCSM090

27		Tot Org C	
35		Tot Org Hal	
43		Toxaphene	
51		Turbidity	0 0 0
55		2, 4-D	0
61		Silvex	
68			

LPCSM100

27	X	A C M O N	
40	X	P H I H A	
53	X	P L H Y D	
66	X	I O R A 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)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 1 6 3 0 4 5 0 1 (16)

MONITOR POINT NUMBER (17) G 1 2 9 (20) DATE COLLECTED (21) 0 8 1 5 8 3 (26)

St. Clair Co. - LPC REGION (27) S

E.St.Louis (Location) / SCA Milam (Responsible Party)

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

Time Collected 8:50 a.m. ~~p.m.~~ Unable to collect sample (X) (30)

Stick-up (31) 1.5 (33) ft. Depth to water (from T.O.C.) (34) 5.8 (36) ft.

Sample temp. (37) 74 (39) °F Background (X). . . . (40)

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

Sample Appearance: turbid brown - no odor

Collector comments: well depth 24.0'
fast recharge

S. A. Meierotto — Collected by
LACLEDE GAS LAB — Div. or Company
S. A. Meierotto — Transported by
LACLEDE GAS LAB — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 8/15/83

Rec'd by ARM Time 2:00 ~~a.m.~~ p.m.

Sample temp. acceptable YES ~~NO~~
Sample properly preserved YES ~~NO~~
Date completed 9/8/83
Date forwarded ~~9/30/83~~

ARHauer
Supervisor Signature

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

LPCSM020
Lab Comments:

(27) b less tha (36)
(37) (46)
(47) (56)
(57) (66)
(67) (76)

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

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E.P.A. — D.L.S.
STATE OF ILLINOIS

LPCSM030

	PARAMETERS*	PPM*
27	Alkalinity[1]	
31	Ammonia as N	2.40
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	0.1
58	Cadmium Cd	
64	Calcium Ca	
69	COD	44
73	Chloride Cl	1

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	7.3
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)	579
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 6 3 0 4 5 0 1 (16)

MONITOR POINT NUMBER (17) G 1 2 7 (20) DATE COLLECTED (21) 0 8 1 5 8 3 (26)

St. Clair Co. - LPC REGION S (27)

E.St.Louis (Location) / SCA Milam (Responsible Party)

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

Time Collected 10:15 a.m. ~~p.m.~~ Unable to collect sample (X) (30)

Stick-up (31) 1.0 (33) ft. Depth to water (from T.O.C.) (34) 5.0 (36) ft.

Sample temp. (37) 72 (39) °F Background (X). . . . (40)

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

Sample Appearance: muddy - no odor

Collector comments: well depth 23.8'
fast recharge

S. A. Meierotto — Collected by — LACLEDE GAS LAB — Div. or Company

S. A. Meierotto — Transported by — LACLEDE GAS LAB — Div. or Company

LAB USE ONLY

Lab No.

Date Rec'd 8/15/83

Rec'd by ARM Time 2:00 ~~a.m.~~ p.m.

Sample temp. acceptable YES ~~NO~~

Sample properly preserved YES ~~NO~~

Date completed 9/8/83

Date forwarded ~~9/30/83~~

Supervisor Signature

Name Laclede Gas Lab

Address of Lab 4118 Shrewsbury St. Louis, MO. 63119

LPCSM020 Lab Comments:

(27) b less than (36)

(37) fe less than (46)

(47) (56)

(57) (66)

(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	1.01
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	0.1
58	Cadmium Cd	
64	Calcium Ca	
69	COD	55
73	Chloride Cl	6

	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	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	R.O.E. (180°C)	582
31	Selenium Se	
38	Silver Ag	
44	Sodium Na	
50	SC (umhos/cm)	
53	Sulfate SO_4	
56	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
LPC 8 3/77

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 6 3 0 4 5 0 1 (16)

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

St. Clair Co. - LPC REGION (27) S

E.St.Louis (Location) / SCA Milam (Responsible Party)

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

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

Stick-up (31) 1.0 (33) ft. Depth to water (from T.O.C.) (34) 1 5 . 8 (36) ft.

Sample temp. (37) 7 0 (39) o F Background (X). . . . (40)

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

Sample Appearance: clear - no odor

Collector comments: Well depth 15.8'
Fast recharge

S. A. Meierotto — Collected by — LACLEDE GAS LAB — Div. or Company
S. A. Meierotto — Transported by — LACLEDE GAS LAB — Div. or Company

LAB USE ONLY

Lab No. _____

Date Rec'd 8/15/83

Rec'd by ARM Time 2:00 ~~a.m.~~ p.m.

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

Date completed 9/8/83
Date forwarded ~~9/30/83~~

Supervisor Signature

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

LPCSM020
Lab Comments:

(27) b less than (36)
(37) fe less tha (46)
(47) _____ (56)
(57) _____ (66)
(67) _____ (76)

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

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

LPCSM030

	PARAMETERS*	PPM*
27	Alkalinity[1]	
31	Ammonia as N	0.60
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	0.1
58	Cadmium Cd	
64	Calcium Ca	
69	COD	48
73	Chloride Cl	24

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	01
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)	750
31	Selenium Se	
38	Silver Ag	
44	Sodium Na	
50	SC (umhos/cm)	
53	Sulfate SO_4	
56	Zinc Zn	
63		

*Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section. [1]Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5. tests requested but not run should also be explained in the lab comments section.

IL 532-0317

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 6 3 0 4 5 0 1 (16)

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

St. Clair Co. - LPC REGION (27) S

F.St.Louis (Location) / SCA Milam (Responsible Party)

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

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

Stick-up (31) 2.0 (33) ft. Depth to water (from T.O.C.) (34) 1 1 . 5 (36) ft.

Sample temp. (37) 7 0 (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 27.5'
Fast recharge

S. A. Meierotto — Collected by — LACLEDE GAS LAB — Div. or Company
S. A. Meierotto — Transported by — LACLEDE GAS LAB — Div. or Company

LAB USE ONLY

Lab No. _____

Date Rec'd 8/15/83

Rec'd by ARM Time 2:00 ~~a.m.~~ p.m.

Sample temp. acceptable YES ~~NO~~
Sample properly preserved YES ~~NO~~
Date completed 9/8/83
Date forwarded 9/30/83

Supervisor Signature

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

LPCSM020
Lab Comments:

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

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

RECEIVED DEC 02 1983 ILL. E.P.A. — D.L.P.C. STATE OF ILLINOIS

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

LPCSM030

	PARAMETERS*	PPM*
27	Alkalinity[1]	
31	Ammonia as N	4.68
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	0.1
58	Cadmium Cd	
64	Calcium Ca	
69	COD	51
73	Chloride Cl	139

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	23.3
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)	970
31	Selenium Se	
38	Silver Ag	
44	Sodium Na	
49	SC (umhos/cm)	
53	Sulfate SO_4	
58	Zinc Zn	

*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 6 3 0 4 5 0 1 (16)

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

St. Clair Co. - LPC REGION (27) S

E.St.Louis (Location) / SCA Milam (Responsible Party)

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

Time Collected 11:15 a.m. ~~p.m.~~ Unable to collect sample (X) (30)

Stick-up (31) 1 . (33) 7 ft. Depth to water (from T.O.C.) (34) 1 2 . (36) 7 ft.

Sample temp. (37) 7 0 ° (39) F Background (X). . . . (40)

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

Sample Appearance: Very cloudy-sulfur odor

Collector comments: well depth 22.8'
fast recharge

S. A. Meierotto — Collected by — LACLEDE GAS LAB — Div. or Company

S. A. Meierotto — Transported by — LACLEDE GAS LAB — Div. or Company

LAB USE ONLY

Lab No. _____

Date Rec'd 8/15/83

Rec'd by ARM Time 2:00 a.m. p.m.

Sample temp. acceptable YES ~~NO~~
Sample properly preserved YES ~~NO~~
Date completed 9/8/83
Date forwarded 9/30/83

Supervisor Signature

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

LPCSM020
Lab Comments:

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

Private Lab (X) (76)
IEPA Lab (X) (76)

RECEIVED AUG 8 1983 ILL. EPA - D.L.P.C. STATE OF ILLINOIS

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

LPCSM030

	PARAMETERS*	PPM*
27	Alkalinity[1]	
31	Ammonia as N	5 7 . 6 0
37	Arsenic As	
44	Barium Ba	
49	BOD -5	
53	Boron B	2 . 5
58	Cadmium Cd	
64	Calcium Ca	
69	COD	7 5
73	Chloride Cl	2 2 4

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	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	R.O.E. (180°C)	9 3 1
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

IL-40-10

ecology and environment, inc.
223 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60606, TEL. 312-663-9415
International Specialists in the Environmental Sciences

DATE: May 16, 1984
TO: File
FROM: Eileen Marie Black
SUBJECT: Sampling at SCA Milam Landfill
East St. Louis, ILL
TDD# R05-8303-01, WSTS# 05-IL-0040

Sampling was conducted at the SCA Milam Landfill on May 1 and 2, 1984. Sampling personnel included: Paul Hess, Eileen Black, Randy Livingston, Nick Longo, and Mark Lunsford. Sample locations with corresponding Traffic Report numbers and Chain of Custody numbers are listed below. Photocopies of Chain of Custody sheets, receipt for samples and data sheets are attached.

Collection Date	Sample Location	Organic Traffic Report#	Inorganic Traffic Report#	Chain of Custody Numbers
5/01/84	B27	E4337	ME1373	5-3861/5-3860
5/01/84	B31	E4338	ME1374	5-3861/5-3860
5/01/84	Blank	E4344	ME1380	5-3861/5-3860
5/02/84	B4	E4340	ME1376	5-3864/5-3865
5/02/84	B2A	E4319	ME0867	5-3864/5-3865
5/02/84	B11	E4322	ME0870	5-3864/5-3865
5/02/84	B10	E4345	ME1381	5-3863/5-3865
5/02/84	B10	E4321	ME0869	5-3863/5-3865
5/02/84	Blank 2	E4320	ME0868	5-3863/5-3865
5/02/84	Cahokia Creek Downstream	E4343	ME1379	5-3864/5-3860
5/02/84	Cahokia Creek Upstream	E4341	ME1377	5-3864/5-3860
5/02/84	Cahokia Creek Midstream	E4342	ME1378	5-3864/5-3860

recycled paper

The following transcription errors on Chain of Custody 5-3865 should be noted. Station Location B10 lists Traffic Report numbers ME4345 and E1381. These numbers have been transposed and should be ME1381 and E4345. Station Location B11 list the correct Traffic Report numbers, disregard the arrows. These samples were shipped on Federal Express Airbill #627314295 with Custody seals numbers 17770 and 17771.

EMB:4M

Site Name / TDD#: SCA / Milam, East St. Louis IL

Case Number : 2681 R05-8303-01 - #0040

Sampling Date: ~~1410~~ 1415

Sampling Time:

		VOA	metals
Sample/Station Location: B2A	PP 15846	16211	~~16[illegible]~~
	15839	16218	36073

Organic Traffic Number E 4319

Inorganic Traffic Number ME 0867

High Hazard Traffic Number E

Physical Description

At time of collection:

Physical Changes (if any)

From time of collection until shipment:

Instrument Readings (i.e. - pH, conductivity...): ORG NORG

Versar Inc.
P.O Box 1549
6850 Versar Center
Springfield VA 22151
attn: Scott Powers

Chemtech Consulting Group
360 West 11th St
New York NY 10014
attn: Alan Schoffman

Sampling Date:

Sampling Time:

		VOA	metals
Sample/Station Location: BLANK	PP 132900037 16232	36075	33839
	36074	36076	

lot# 123152

Organic Traffic Number E 4320

Inorganic Traffic Number ME 0868

High Hazard Traffic Number E

Physical Description

At time of collection:

Physical Changes (if any)

From time of collection until shipment:

Instrument Readings (i.e. - ph, conductivity...):

Site Name / TDD#:

Case Number : 2681

Sampling Date:

Sampling Time: 5-1-84

Sample/Station Location: B27 1410

error the actual time was 1610 however all paperwork has incorect time

Organic Traffic Number E 4337

Inorganic Traffic Number ME 1373

High Hazard Traffic Number E

Physical Description

At time of collection: VOA 33842 33843 (1065052) PP 33840 33841 metals 33844

Physical Changes (if any)

From time of collection until shipment: (121631)

Instrument Readings (i.e. - pH, conductivity...):

Sampling Date: 1600

Sampling Time: 5-1/84

Sample/Station Location: B31

Organic Traffic Number E 4338

Inorganic Traffic Number ME 1374

High Hazard Traffic Number E

Physical Description PP VOA

At time of collection: (1406052) B3845 33846 33847 33924 33925

(121631)

Physical Changes (if any)

From time of collection until shipment:

Instrument Readings (i.e. - ph, conductivity...):

Site Name / TDD#:

Case Number : 2681

Sampling Date: 5/2/84

Sampling Time: 1100

Sample/Station Location: #3 Cahokia Creek Downstream

Organic Traffic Number E 4343

Inorganic Traffic Number ME 1379

High Hazard Traffic Number E

Physical Description

At time of collection: PP 36085 Metals 36084

Physical Changes (if any)

From time of collection until shipment:

Instrument Readings (i.e. - pH, conductivity...):

Sampling Date: 5/1/84

Sampling Time: 1340

Sample/Station Location: Blank

Organic Traffic Number E 4344

Inorganic Traffic Number ME 1380

High Hazard Traffic Number E

Physical Description

At time of collection: PP 36087-14062952 36086-12163 VOA 36089 36088 Metals 36090

Physical Changes (if any)

From time of collection until shipment:

Instrument Readings (i.e. - ph, conductivity...):

Site Name / TDD#:

Case Number : 2681

Sampling Date: 5/2/84

Sampling Time: 905

Sample/Station Location: B10

Organic Traffic Number E 4321

Inorganic Traffic Number ME 0869

High Hazard Traffic Number E

Physical Description

	PP	VOA	metals
At time of collection:	33935	34209	34203
	33936	34202	

Physical Changes (if any)

From time of collection until shipment:

Instrument Readings (i.e. - pH, conductivity...):

Sampling Date: 5/2/84

Sampling Time: 945

Sample/Station Location: B11

Organic Traffic Number E 4322

Inorganic Traffic Number ME 0870

High Hazard Traffic Number E

Physical Description

	PP	VOA	metals
At time of collection:	33926	33928	0870
	33927	33929	

Physical Changes (if any)

From time of collection until shipment:

Instrument Readings (i.e. - ph, conductivity...):

Site Name / TDD#:

Case Number : 2681

Sampling Date: 5/2/84

Sampling Time: 1015

Sample/Station Location: Cahokia Creek Upstream

Organic Traffic Number E 4341

Inorganic Traffic Number ME 1377

High Hazard Traffic Number E

Physical Description

At time of collection: PP VOA metals

36077 36079 36081

Physical Changes (if any) ~~36078~~ ~~36080~~

From time of collection until shipment:

Instrument Readings (i.e. - pH, conductivity...):

802 jars 633/8022 lot#

Sampling Date: 5/2/84

Sampling Time: 1040

Sample/Station Location: Cahokia Creek Midstream

Organic Traffic Number E 4342

Inorganic Traffic Number ME 1378

High Hazard Traffic Number E

Physical Description

At time of collection: PP metals

36083 36082

Physical Changes (if any)

From time of collection until shipment:

Instrument Readings (i.e. - ph, conductivity...):

Site Name / TDD#:

Case Number : 2681

Sampling Date: 5/1/84

Sampling Time:

Sample/Station Location: B32

Organic Traffic Number E 1375

Inorganic Traffic Number ME 4339

High Hazard Traffic Number E

Physical Description

At time of collection: PP 36092, 36091 VOA 36094, 36093 metals 36095

Physical Changes (if any)

From time of collection until shipment:

Instrument Readings (i.e. - pH, conductivity...):

Sampling Date: ~~5/1/84~~ 5/2/84

Sampling Time: 1355

Sample/Station Location: ~~B31~~ B4

Organic Traffic Number E 4340

Inorganic Traffic Number ME 1376

High Hazard Traffic Number E

Physical Description

At time of collection: PP 36096, 36097 VOA 36098, 36099 metals 36100

Physical Changes (if any)

From time of collection until shipment:

Instrument Readings (i.e. - ph, conductivity...):

Site Name / TDD#:

Case Number :

Sampling Date: 5/2/84

Sampling Time: 908

Sample/Station Location: Duplicate B10

Organic Traffic Number E 4345

Inorganic Traffic Number ME 1381

High Hazard Traffic Number E

Physical Description PP VOA metals

At time of collection: 34204 34206 34208

lot# 3223031 34205 34207

Physical Changes (if any)

From time of collection until shipment:

Instrument Readings (i.e. - pH, conductivity...):

liter bottles 33224081

VOA's 24020021

Crystal Water purchased at Drug Store on Main St in Belleville IL St Louis Crystal Water Co

Pure Distilled water for Complete analysis Write: 704 S. Boyle Ave

#printed on jug # 121988 St Louis MO 63110

2 gallon lot #5

Sampling Date:

Sampling Time:

Sample/Station Location: 1-13279032 2-13307032 3-3223031 DUP 4-121631-31

13307032 3223031 DUP 121631-10

1-14065047 3223031 121631-27

Organic Traffic Number E 121631-Black

Inorganic Traffic Number ME 3-123152-11

High Hazard Traffic Number E 123152-11 4-14065052-10

Physical Description 123152 Blank2 4-14065052-31

At time of collection: 14065052-27

5 13290032 Blank2 14065052-Black

Physical Changes (if any) 13290032 2A

From time of collection until shipment: 13290032 2A

13290032 6134B

13290032 6134B

Instrument Readings (i.e. - ph, conductivity...):

Saw Concentration

RECEIPT FOR SAMPLES

PROJECT NO. R05 8303 01#0040	PROJECT NAME SCA / Milam
SAMPLERS: (Signature) Paul Allen Randy Livingston Eileen Marie Black Marlie Sudsford	Name of Facility SCA / Milam East St. Louis IL
Samples Offered (X) Accepted ( ) Declined	Facility Location I70 & Route 203 East St Louis IL

TA. NO.	DATE	TIME	COMP.	GRAB	SPLIT SAMPLES	TRAFFIC REPORT #S	STATION DESCRIPTION/LOCATION	NO. OF CONTAINERS	~~SOIL~~ SEDIMENT/Water REMARKS
B2A	5/2/84	1215		X	no	E4319/ME0867	B2A	5	water
B10	5/2/84	908		X	no	E4345/ME1381	B10 (collected as duplicate)	5	water
CCU	5/2/84	1015		X	yes	E4341/ME1377	Cahokia Creek Upstream	2	sediment
CCM	5/2/84	1040		X	yes	E4342/ME1378	Cahokia Creek Midstream	2	sediment
CCD	5/2/84	1100		X	yes	E4343/ME1379	Cahokia Creek Downstream	2	sediment
B4	5/2/84	1355		X	yes	E4340/ME1376	B4	5	water
B27	5/1/84	1418*		X	yes	E4337/ME1373	B27	5	Water
B31	5/1/84	1600		X	yes	E4338/ME1374	B31	5	water
B10	5/1/84	905		X	yes	E4321/ME0869	B10	5	water
B11	5/1/84	945		X	yes	E4322/ME0870	B11	5	water
* All paperwork has time marked as 1410 correct time is 1610 *									

Transferred by: (Signature) Eileen Marie Black Paul Allen 5/2/84		Received by: (Signature) Richard T. K	Telephone 314-241-37
Date	Time 2:25 PM	Title * Regional Envi Mgr	Date 5/2/84 Time 2:25

Distribution: Original to Coordinator Field Files; Copy to Facility

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

Dow Concentrated Chemicals Corp.

CHAIN OF CUSTODY RECORD

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

PROJ. NO.: EDS 0305 01 #0040
PROJECT NAME: SCH/Hyram Grove St. Louis, IL #2681
SAMPLERS: (Signature) Ellen Marie Park

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	8oz jar - one	one - 1l Iterbottle	HNO3 added	REMARKS ITR#	OTR#	tag#
CCD	5/2/84	1100		X	Cahokia Creek Downstream	1	X			ME1379	E4343	36084
CCU	5/2/84	1015		X	Cahokia Creek Upstream	1	X			ME1377	E4341	36081
CM	5/2/84	1040		X	Cahokia Creek Midstream	1	X			ME1378	E4342	36082
B27	5/1/84	1410*		X	B27	1		X	X	ME1373	E4337	33844
B31	5/1/84	1600		X	B31	1		X	X	ME1374	E4338	33925
B	5/1/84	1340**		X	Blank	1		X	X	ME1380	E4344	36090

*Time listed is 1410, correct time is 1610 ok

Sod. nar lot# 63318022
Filter, by the lot#

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Ellen Marie Park	5/2/84 1435				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
				Federal Express #627514306 Photo Kentech Consulting Custody Seal #17699 + 17700	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-3860

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

Soil Concentration Environmental Sy

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO. 2681 | PROJECT NAME SCA Milan / East St. Louis IL

SAMPLERS: (Signature) Eileen Marie Black

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	2½ gal jugs	2-40 ml vials	16 oz jars	REMARKS OTR#	ITR#	PP tag #s	VOA tag #s
B	5/1/84	1340		X	BLANK	4	X	X		E4344	ME1380	36087	36089
											lot# 14065052		36088
												36086	
											lot# 121163		
B31	5/1/84	1600		X	B31	4	X	X		E4338	ME1374	33845	33847
											lot# 14065052		33844
												33846	
											lot# 121631		
B27	5/1/84	1413*		X	B27	4	X	X		E4337	ME1373	33840	33842
											lot# 14065052		
												33841	33843
											lot# 121631		

time for B27 should be 1610, the incorrect time is listed on the sample tags

½ gal jugs lot# see above under remarks column
VOA lot #s 24020021 ; 8oz jars lot# none in this order

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Eileen Marie Black	5/2/84 1030				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Federal Express #627314310 Ship to Versar Lab Sample for analysis Custody Seals 17762 + 17763	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-3861

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

Southeastern Environmental Laboratories

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO. PDS 8303 0040

PROJECT NAME SCA / Melam Cont. St. Louis IL #2681

SAMPLERS: (Signature) Ellen Marie Black

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	2½ gal jug	0 0 0	2-40 ml vials				REMARKS OTP#	ITP#	PP tests	VOA tests
B10	2/2/84	908		X	B10	4	X		X				E4345	ME1381	34204	34206
					for B10 2½ gallon jugs	lot # 3	2c	3	03						34205	34207
B10	2/2/84	905		X	B10	4	X		X				E4321	ME08869	33935	34204
													lot # 121631			34202
															33936	
															lot # 14065052	
B2	2/2/84	910		X	BLANK	4	X		X				E4320	ME08608	16232	36075
													lot # 13290032			36076
															36074	
													lot # 123152			
VOA Vials = lot # 24020021																

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Ellen Marie Black	5/2/84				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Federal Express # 627 314 310. Custody Seal = #17766 & #17767 Blue Dry Ice in coolers SHIPPED [illegible]	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-3863

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

New Concentration Environmental Supplies

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO. 8303-01 0040 2681

PROJECT NAME: SCA Milan Pist St Louis IL

SAMPLERS: (Signature) Allen Marie Black

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1.2 cat jug	2.40 vials	1.8 oz jar	REMARKS: OTR #	ITR #	PP tags	VOA Inv #s
B11	5/2/84	945		X	B11	4	X	X		E4322	ME0870	33926 · 33928 · 33927 · 33924	
B2A	5/2/84	1415		X	B2A	4	X	X		E4319	ME0867	15840 · 16211 · 15839 · 16218	
B4	5/2/84	1355		X	B4	4	X	X		E4340	ME1376	36096 · 36098 · 36097 · 36099	
CCU	5/2/84	1015		X	Cahokia Creek Upstream	1			X	E4341	ME1377	36077	
CCM	5/2/84	1040		X	Cahokia Creek Midstream	1			X	E4342	ME1378	36083	
CCD	5/2/84	1100		X	Cahokia Creek Downstream	1			X	E4343	ME1379	36085	

VOA vials lot #2402002 / 8 oz jars 33180 / 222

Lot # 1 gal jars 3290032 lot # B2A + #B4 · 57 123152 for # B11 ·

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Allen Marie Black	5/2/84 1530				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
		K Stitch	5/3/84 1000	Federal Express # 627314310 ship to Versar Custody Seals # 17763 + 17769 Sample Preservation Grades	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

E 3864

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

CHAIN OF CUSTODY RECORD

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

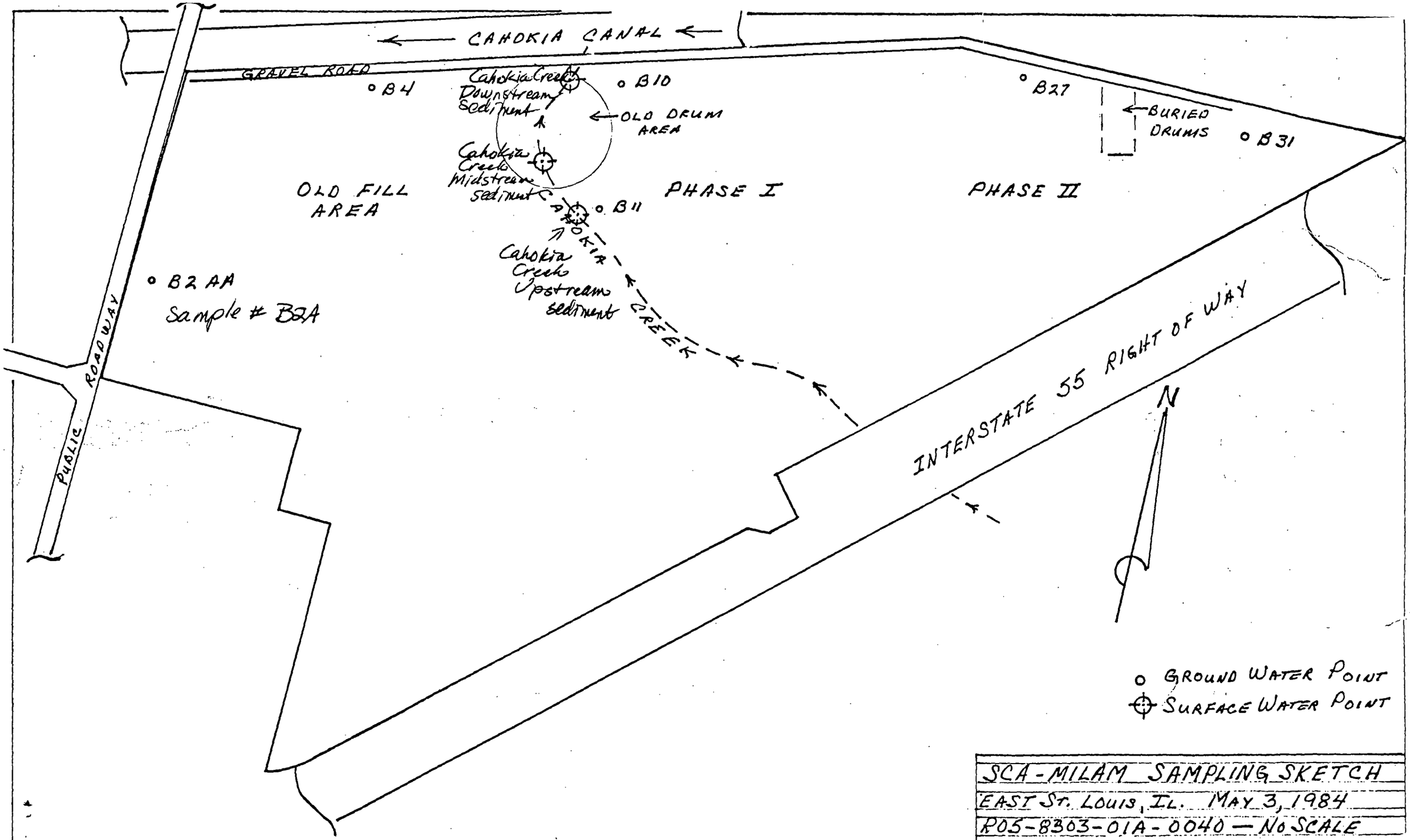
PROJ. NO.: [illegible] 2681
PROJECT NAME: [illegible] Cent & Blue IL
SAMPLERS: (Signature) [illegible]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	REMARKS
B10	5/2/84	905		X	B10	1	X		X				ME0868 · E4321 · [illegible]
[illegible]	[illegible]	910		X	BLANK2	1	X		X				ME0866 · E4320 · [illegible]
B10	5/2/84	908		X	B10	1	X		X				ME4345 · E4321 · [illegible]
B11	5/2/84	945		X	B11	1	X		X				ME0870 · E4322 · [illegible]
B4	5/2/84	1355		X	B4	1	X		X				ME1374 · E4340 · [illegible]
B2A	5/2/84	1415		X	B2A	1	X		X				ME0867 · E4[illegible]
blue	bottles				Lot # 3322408								

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[illegible]	5/3/84 1720				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
				[illegible]	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-3865


CAHOKIA CANAL
GRAVEL ROAD
B4
Cahokia Creek Downstream Sediment
B10
OLD DRUM AREA
B27
BURIED DRUMS
B31
Cahokia Creek Midstream sediment
OLD FILL AREA
PHASE I
PHASE II
B11
CAHOKIA CREEK
Cahokia Creek Upstream sediment
B2AA
Sample # B2A
PUBLIC ROADWAY
INTERSTATE 55 RIGHT OF WAY
N
o GROUND WATER POINT
SURFACE WATER POINT
SCA-MILAM SAMPLING SKETCH
EAST ST. LOUIS, IL. MAY 3, 1984
R05-8303-01A-0040 — NO SCALE

IL-0040-07

ecology and environment, inc.

223 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60606, TEL. 312-663-9415

International Specialists in the Environmental Sciences

Date Received for Review: 7/9/84 Date Review Completed: 7/13/84

To: PAUL HESS

From: Cynthia Bachunas

Subject: SCA / MILAN (ILLINOIS)
R05- 8303-01

Sample Description: CASE # 2681 - LOW WATER AND LOW SEDIMENT METALS

Project Data Status: STILL AWAITING ALL ORGANICS

FIT Data Review Findings:

- FIELD BLANK (ME 1380) CONTAINS 238 ppb COPPER AND 28 ppb ZINC. FIELD BLANK (ME 0868) CONTAINS 242 ppb COPPER AND 57 ppb ZINC. USE ALL DATA FOR THESE ELEMENTS WITH CAUTION.
- SEE ATTACHED CRL REVIEW FOR ADDITIONAL COMMENTS

Additional Comments:

DATA RECEIVED FROM CRL 5 WEEKS OVERDUE.

recycled paper

RECEIVED JUL 0 9 1984

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 6/29/84

SUBJECT: Review of Region V CLP Data
Received for Review on 6/27/84

FROM: Curtis Ross, Director Chuck Eltz
Central Regional Laboratory

TO: Data User: Fit

We have reviewed the data for the following case(s).

SITE NAME SCA/Milan SMO Case No. 2681

EPA Data Set No. SF 437 No. of Samples 12 D.U./Activity Numbers 905 1C48500

CRL No. 84MH05555 - 84MH05D56

SMO Traffic No. ME 0867 - ME 1381

Contract Laboratory: Chemtech Hours Required for Review: 16

Following are our findings. Overdue

Contractual:
Data were analyzed and received after due date. No raw data were included to verify ICP second continuing calibration, as well as final interference check std.

Technical:
Non-uniformity in reporting (1) continuing calibration on AA; (2) adopting use of new report forms; (3) Miscalculation of RPD for Ba (soil); (4) high RPD on soils for Cd, Pb, Sn + Be (Be values near detection limit); (5) duplicate sample used in calculating Pb spike, with no notification on data sheet the duplicate was spiked. Fe reported erroneous value for soil spike recovery; (6) Ag for ME 0867 (H_2O) reported in mg/kg. not ppb.
Pertaining to non-uniformity on (1), sometimes the calibration at end of long case preceeding this one was the first reported continuing calibration, with the second at the end of this case. Then other times the late calibration of this case was reported first, using one from a third following case to be reported. Most important would be using the newer forms, easier to read.

6-29-84 DM

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

cc: Dr. Alfred Haeberer/Joan Fisk/Gary Ward, EPA Support Services
Ross K. Robeson, EMSL-Las Vegas
Robert Pritchard, CLP/SMO

EPA FORM 1320-6 (REV 3-76)

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

RECEIVED
JUN 27 1984
US EPA CENTRAL REGIONAL LAB.
CHICAGO, ILLINOIS

Sample No.
ME 1373

84MH05558

INORGANICS ANALYSIS DATA SHEET

LAB NAME CHEMTECH
CASE NO. 2681 RECEIVED JUL 0 9 1984
LAB SAMPLE ID. NO. G2-229-01
QC REPORT NO. 229

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Aluminum	109	10.	Zinc	<10
2.	Chromium	<10	11.	Boron	~~119~~ 6K
3.	Barium	105	12.	Vanadium	<200
4.	Beryllium	<5	13.	Silver	<10
5.	Cobalt	<50			
6.	Copper	<50			
7.	Iron	7762			
8.	Nickel	<40			
9.	Manganese	986			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Arsenic	<10	5.	Mercury	<0.2
2.	Antimony	<20	6.	Tin	33.
3.	Selenium	<2	7.	Cadmium	<1
4.	Thallium	<10	8.	Lead	<5

TASK 3 (Elements to be Identified and Measured)

1. CN

COMMENTS:

Atchffme 6/27/84

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

RECEIVED JUL 09 1984

Sample No.
ME 1374

84MH05559

INORGANICS ANALYSIS DATA SHEET

LAB NAME CHEMTECH CASE NO. 2651

LAB SAMPLE ID. NO. G2-229-02 QC REPORT NO. 229

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Aluminum	<100	10.	Zinc	17
2.	Chromium	<10	11.	Boron	~~<100~~ GK
3.	Barium	<100 ~~99~~ GK	12.	Vanadium	<200
4.	Beryllium	<5	13.	Silver	<10
5.	Cobalt	<50			
6.	Copper	<50			
7.	Iron	3733			
8.	Nickel	<40			
9.	Manganese	191			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Arsenic	<10	5.	Mercury	<0.2
2.	Antimony	<20	6.	Tin	35.
3.	Selenium	<2	7.	Cadmium	<1
4.	Thallium	<10	8.	Lead	<5

TASK 3 (Elements to be Identified and Measured)

1. CN

COMMENTS:

A Schaffman 6/28/84

Form I

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

RECEIVED JUL 0 9 1984

Sample No.
ME 1376

84MH05560

INORGANICS ANALYSIS DATA SHEET

LAB NAME CHEMTECH CASE NO. 2681

LAB SAMPLE ID. NO. G2-229-11 QC REPORT NO. 229

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Aluminum	1329	10.	Zinc	23
2.	Chromium	<10	11.	Boron	
3.	Barium	364	12.	Vanadium	<200
4.	Beryllium	<5	13.	Silver	<10
5.	Cobalt	<50			
6.	Copper	<50			
7.	Iron	20760			
8.	Nickel	<40			
9.	Manganese	590			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Arsenic	<10	5.	Mercury	<0.2
2.	Antimony	<20	6.	Tin	25.
3.	Selenium	<2	7.	Cadmium	<1
4.	Thallium	<10	8.	Lead	<5

TASK 3 (Elements to be Identified and Measured)

COMMENTS:

A Schaffman 6/11/84

Form I

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 – Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

RECEIVED JUL 0 9 1984

Sample No.
ME 1380

84MH05R08

INORGANICS ANALYSIS DATA SHEET

LAB NAME CHEMTECH CASE NO. 2651

LAB SAMPLE ID. NO. G2-229-03 QC REPORT NO. 229

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Aluminum	<100	10.	Zinc	28
2.	Chromium	<10	11.	Boron	
3.	Barium	<100	12.	Vanadium	<200
4.	Beryllium	<5	13.	Silver	<10
5.	Cobalt	<50			
6.	Copper	238			
7.	Iron	<50			
8.	Nickel	<40			
9.	Manganese	<10			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Arsenic	<10	5.	Mercury	<0.2
2.	Antimony	<20	6.	Tin	<20.
3.	Selenium	<2	7.	Cadmium	<1
4.	Thallium	<10	8.	Lead	<5

TASK 3 (Elements to be Identified and Measured)

1. CN

COMMENTS:

A Schaffner 6/20/84

Form I

US ENVIRONMENTAL PROTECTION AGENCY
NEIC Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

RECEIVED JUL 0 9 1984

Sample No.
ME 1381

84MH05D56

INORGANICS ANALYSIS DATA SHEET

LAB NAME CHEMTECH CASE NO. 3681
LAB SAMPLE ID. NO. G2-229-12 QC REPORT NO. 229

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Aluminum	167	10.	Zinc	22
2.	Chromium	<10	11.	Boron	
3.	Barium	419	12.	Vanadium	<200
4.	Beryllium	<5	13.	Silver	<10
5.	Cobalt	<50			
6.	Copper	<50			
7.	Iron	7699			
8.	Nickel	<40			
9.	Manganese	909			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Arsenic	<10	5.	Mercury	<0.2
2.	Antimony	<20	6.	Tin	25.
3.	Selenium	<2	7.	Cadmium	<1
4.	Thallium	<10	8.	Lead	<5

TASK 3 (Elements to be Identified and Measured)

COMMENTS:

AHoffman 6/20/84

SEDIMENT

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

RECEIVED JUL 0 9 1984

Sample No.
ME 1377

84MH05556

INORGANICS ANALYSIS DATA SHEET

LAB NAME CHEMTECH CASE NO. 2681

LAB SAMPLE ID. NO. G2-229-04 QC REPORT NO. 229

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Aluminum	7340	10.	Zinc	289
2.	Chromium	11.6	11.	Boron	~~+~~ GK
3.	Barium	177	12.	Vanadium	15.1
4.	Beryllium	0.62	13.	Silver	<0.5
5.	Cobalt	3.7			
6.	Copper	20.7			
7.	Iron	14275			
8.	Nickel	9.8			
9.	Manganese	811			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Arsenic	5.5	5.	Mercury	<0.1
2.	Antimony	<1.0	6.	Tin	<0.5
3.	Selenium	<0.1	7.	Cadmium	6.6
4.	Thallium	<0.5	8.	Lead	86.

TASK 3 (Elements to be Identified and Measured)

1. CN

COMMENTS:

AHoffman 6/11/84

SEDIMENT

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 – Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

RECEIVED JUL 09 1984

Sample No.
ME 1378

84MH05562

INORGANICS ANALYSIS DATA SHEET

LAB NAME CHEMTECH CASE NO. 2681

LAB SAMPLE ID. NO. G2-229-05 QC REPORT NO. 229

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Aluminum	5450	10.	Zinc	128
2.	Chromium	8.0	11.	Boron	
3.	Barium	231	12.	Vanadium	14.1
4.	Beryllium	0.43	13.	Silver	<0.5
5.	Cobalt	3.8			
6.	Copper	14.1			
7.	Iron	9550			
8.	Nickel	8.9			
9.	Manganese	73.5			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Arsenic	5.0	5.	Mercury	<0.1
2.	Antimony	<1.0	6.	Tin	1.9
3.	Selenium	<0.1	7.	Cadmium	2.8
4.	Thallium	<0.5	8.	Lead	12.1

TASK 3 (Elements to be Identified and Measured)

1. CN

COMMENTS:

AHoffman 6/07/84

Form I

SEDIMENT

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 – Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

RECEIVED JUL 0 9 1984

Sample No.
ME 1379

84MH05563

INORGANICS ANALYSIS DATA SHEET

LAB NAME CHEMTECH CASE NO. 2681

LAB SAMPLE ID. NO. G2-229-06 QC REPORT NO. 229

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Aluminum	3640	10.	Zinc	92
2.	Chromium	6.9	11.	Boron	
3.	Barium	164	12.	Vanadium	10.5
4.	Beryllium	<0.25	13.	Silver	<0.5
5.	Cobalt	3.5			
6.	Copper	10.1			
7.	Iron	7420			
8.	Nickel	6.8			
9.	Manganese	291			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Arsenic	2.5	5.	Mercury	<0.1
2.	Antimony	<1.0	6.	Tin	2.5
3.	Selenium	<0.1	7.	Cadmium	0.87
4.	Thallium	<0.5	8.	Lead	12.2

TASK 3 (Elements to be Identified and Measured)

1. CN

COMMENTS:

AHoffman 6/22/84

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

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Sample No.
ME 0867

84MH0555

INORGANICS ANALYSIS DATA SHEET

LAB NAME CHEMTECH CASE NO. 2681

LAB SAMPLE ID. NO. G2-229-07 QC REPORT NO. 229

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Aluminum	2813	10.	Zinc	35
2.	Chromium	<10	11.	Boron	
3.	Barium	433	12.	Vanadium	<200
4.	Beryllium	<5	13.	Silver	<0.5
5.	Cobalt	<50			
6.	Copper	<50			
7.	Iron	21090			
8.	Nickel	<40			
9.	Manganese	1399			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Arsenic	<10	5.	Mercury	<0.2
2.	Antimony	<20	6.	Tin	45.
3.	Selenium	<V	7.	Cadmium	~~0.5~~ H 11.
4.	Thallium	~~<0.5~~ H <10	8.	Lead	<5

TASK 3 (Elements to be Identified and Measured)

COMMENTS:

Aschiffa 6/22/84

Form I

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Sample No.
ME 0868

24MH05R0

INORGANICS ANALYSIS DATA SHEET

LAB NAME CHEMTECH CASE NO. 2681

LAB SAMPLE ID. NO. G2-229-08 QC REPORT NO. 229

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Aluminum	<100	10.	Zinc	57
2.	Chromium	<10	11.	Boron	
3.	Barium	<100	12.	Vanadium	<200
4.	Beryllium	<5	13.	Silver	<10
5.	Cobalt	<50			
6.	Copper	242			
7.	Iron	<50			
8.	Nickel	<40			
9.	Manganese	<10			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Arsenic	<10	5.	Mercury	<0.2
2.	Antimony	<20	6.	Tin	<20
3.	Selenium	<2	7.	Cadmium	<1
4.	Thallium	<10	8.	Lead	<5

TASK 3 (Elements to be Identified and Measured)

COMMENTS:

A Schaffner 6/22/84

Form I

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Sample No.
ME 0869

84M40552

INORGANICS ANALYSIS DATA SHEET

LAB NAME CHEMTECH CASE NO. 2681

LAB SAMPLE ID. NO. G2-229-09 QC REPORT NO. 229

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Aluminum	232	10.	Zinc	16
2.	Chromium	<10	11.	Boron	
3.	Barium	420	12.	Vanadium	<200
4.	Beryllium	<5	13.	Silver	<10
5.	Cobalt	<50			
6.	Copper	<50			
7.	Iron	8641			
8.	Nickel	<40			
9.	Manganese	920			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Arsenic	<10	5.	Mercury	<0.2
2.	Antimony	<20	6.	Tin	41.
3.	Selenium	<2	7.	Cadmium	<1
4.	Thallium	<10	8.	Lead	<5

TASK 3 (Elements to be Identified and Measured)

COMMENTS:

Alchoffme 6/22/84

US ENVIRONMENTAL PROTECTION AGENCY
HWI Sample Management Office
P.O. Box 818 — Alexandria, Virginia 22313
703/557-2490 FTS 8-557-2490

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Sample No.
ME 0870

84MH05357

INORGANICS ANALYSIS DATA SHEET

LAB NAME CHEMTECH CASE NO. 2681

LAB SAMPLE ID. NO. G2-229-10 QC REPORT NO. 229

TASK 1 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Aluminum	201	10.	Zinc	222
2.	Chromium	<10	11.	Boron	
3.	Barium	<100	12.	Vanadium	<200
4.	Beryllium	<5	13.	Silver	<10
5.	Cobalt	<50			
6.	Copper	<50			
7.	Iron	4116			
8.	Nickel	<40			
9.	Manganese	1604			

TASK 2 (Elements to be Identified and Measured)

		ug/l or mg/kg (circle one)			ug/l or mg/kg (circle one)
1.	Arsenic	<10	5.	Mercury	<0.2
2.	Antimony	<20	6.	Tin	35.
3.	Selenium	<V	7.	Cadmium	3.1
4.	Thallium	<10	8.	Lead	<5

TASK 3 (Elements to be Identified and Measured)

COMMENTS:

A Schiffman 6/21/84

IL-0040-08

ecology and environment, inc.

223 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60606, TEL. 312-663-9415

International Specialists in the Environmental Sciences

Date Received for Review: 7/19/84 Date Review Completed: 7/20/84

To: PAUL HESS

From: Cynthia Bachunas

Subject: SCA/MILAN
ROS-8303-01 #0040 (ILLINOIS)

Sample Description: CASE #2681 - LOW WATER AND LOW SEDIMENT ORGANICS

Project Data Status: COMPLETE

FIT Data Review Findings:

NO ADDITIONAL COMMENTS - SEE ATTACHED CRL REVIEW

Additional Comments:

recycled paper

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 7/12/84

SUBJECT: Review of Region V CLP Data
Received for Review on 7/6/84

FROM: Curtis Ross, Director
Central Regional Laboratory

TO: Data User: FIT

We have reviewed the data for the following case(s).

SITE NAME SCA/Milan SMO Case No. 2681

EPA Data Set No. SF437 No. of Samples 12 D.U./Activity Numbers 1905 1C48500

CRL No. 84MH05555 to 84MH05563

SMO Traffic No. E4319 to E4343

Contract Laboratory: Versar Hours Required for Review: 14

Following are our findings.

(1) WATER SURROGATE PERCENT RECOVERY - SEE ATTACHMENT 1
PESTICIDE. 66.7% outside QC LIMITS

(2) SOIL SURROGATE PERCENT RECOVERY - SEE ATTACHMENT 2
SEMI-VOLITALES. 22.2% outside QC LIMITS

(3) Water Matrix spike Duplicate / RECOVERY. SEE ATTACHMENT 3
RECOVERY: Acid. 40% outside QC LIMITS
SEE ATTACHMENT 3

CONT. ON NEXT PAGE

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications noted above. R.H. 7-12-84
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

cc: Dr. Alfred Haeberer/Joan Fisk/Gary Ward, EPA Support Services
Ross K. Robeson, EMSL-Las Vegas
Robert Pritchard, CLP/SMO

EPA FORM 1220-6 (REV. 3-76)

RECEIVED JUL 19 1984

Versar INC.

SF437

Ms. Braun
Viar and Company
Sample Management Office
300 North Lee Street
P.O. Box 818
Alexandria, VA 22313

July 5, 1984

Reference: EPA Case 2681 Versar Project 824.004
EPA Contract Number 68-01-6756

Dear Ms. Braun:

Enclosed is the final data package for case 2681 out of Region V. The case consisted of nine water and three soil samples. All samples were screened and analyzed as low level samples.

Should you have any questions or require additional information, please call.

RECEIVED
JUL 06 1984
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

Sincerely,

Scott E. Powers
GC/MS Section Chief
Applied Chemistry Division

Use or disclosure of proprietary data is subject to the restrictions on the title page of this document.

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Versar INC.

I. NARRATIVE
EPA Case 2681
EPA Contract No. 68-01-6756

SUMMARY

Case 2681 out of Region V consisted of nine water and three soil samples. The samples were received on 05/03/84. All samples were screened for BNA's and found to be low level.

WATER SAMPLES

There were no unusual problems with the water samples. All Volatiles QC was within control limits. For the Semivolatiles, two samples (E4322 & E4337), had surrogate recovery outliers. We suspect matrix difficulties with both samples, since the samples appeared quite complex during extraction, and sample E4337 had a visible interfering hydrocarbon envelope in the chromatograph.

SOIL SAMPLES

The soil sample analyses for Volatiles, Pesticide and TCDD went without any major problems, and all surrogate recoveries were within the QC limits. For two samples, E4337 and E4338 a minor contamination problem was experienced with the florisil cleaned extracts. For Pesticide analysis the problem occured in the 6% fraction of E4337 and the 50% fraction of E4338. The uncleaned fractions were analyzed in place of the florisil cleaned extracts. No pesticide or PCB's were detected in the extracts.

The Base Neutral/Acid fraction of the Semivolatile extraction contained matrix interference and required dilution prior to GC/MS analysis. As a result of the complexity of the samples and the subsequent dilution, surrogate recovery's were low, and out of the QC limits. These matrix effects were substantiated in the QC sample. In addition, all QC was within QC limits for the reagant blank for this set of samples.

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CASE 2681 CONT.

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(4) SOIL MATRIX SPIKE DUPLICATE/RECOVERY. SEE ATTACHMENT 4

RPD:
- B/N 42.9% OUTSIDE QC LIMITS
- ACID 60% " " "
- PEST 16.7% " " "

RECOVERY
- B/N 28.6% " " "
- ACID 20% " " "
- PEST 16.7% " " "

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FORM III
WATER SURROGATE PERCENT RECOVERY SUMMARY

68-01-6756 (824)

Case NO. 2681
LOW LEVEL ✓
WATER ✓
QC REPORT NO. 2681

CONTRACTOR VERSAR INC.
MED. LEVEL

CONTRACT NO. ~~68-01-6757 (824)~~
HIGH LEVEL
OTHER (Specify)

ATTACHMENT 1

[-------Volatile -------][----------Semi-Volatile----------][Pesticide]--[Dioxin]

SMO Traffic Report No.	D_8 Toluene (86-119)	BFB (85-121)	D_4-1,2-Dichloroethane (77-120)	D_5-Nitrobenzene (41-120)	2-Fluorobiphenyl (44-119)	D_{14}-p-Terphenyl (33-128)	D_5-Phenol (15-96)	2-Fluorophenol (23-107)	2,4,6-Tribromophenol (20-105)	Dibutyl-Chlorendate (67-114)**	1,2,3,4-TCDD (23-148)
E4321	88	96	105	60	68	47	48	48	45	161**	
E4322	93	102	105	66	50	22*	84	80	58	20**	
E4337	92	100	104	69	79	69	28	16*	11*	101	
E4338	88	96	103	74	83	76	64	67	61	81	
E4340	92	102	104	64	66	49	62	57	86	28**	
E4344	90	97	104	77	78	75	61	61	54	63**	
E4345	87	96	104	76	77	54	41	27	32	63**	
Rec BLK	100	110	102	80	78	77	59	62	32	72	
E4338 MS	107	115	92	81	86	92	77	67	74		
E4338 DMS	99	107	93	78	90	75	64	58	79		
E4319	100	108	92	69	78	52	72	81	81	24**	
E4320	88	96	105	75	81	73	71	71	52	67	
E4321 MS	—	—	—	—	—	—	—	—	—	66**	
E4321 DMS	—	—	—	—	—	—	—	—	—	60**	

* Asterisked values are outside of QC limits.
** Advisory Limit

Comments:
DNA's water matrix with hydrocarbon background.

Volatiles: 0 out of 36; outside of QC limits
Semi-Volatiles: 3 out of 72; outside of QC limits
Pesticides: 8 out of 12; outside of QC limits
Dioxin: — out of —; outside of QC limits

Limits Revised 12/83

03/21/84

FORM III
SOIL SURROGATE PERCENT RECOVERY SUMMARY

68-01-6756 (824)

Case NO. 2681
LOW LEVEL ✓
QC REPORT NO. 2681

CONTRACTOR VERSAR INC.
MED. LEVEL

CONTRACT NO. ~~68-01-6757 (825)~~
HIGH LEVEL
OTHER (Specify)

ATTACHMENT 2

RECEIVED JUL 19 1984

000006

[-------Volatile -------][----------Semi-Volatile----------][Pesticide]--[Dioxin

SMO Traffic Report No.	D_8 Toluene (69-127)	BFB (61-122)	D_4-1,2-Dichloroethane (64-129)	D_5-Nitrobenzene (24-115)	2-Fluorobiphenyl (37-120)	D_{14}-p-Terphenyl (28-133)	D_5-Phenol (20-106)	2-Fluorophenol (24-111)	2,4,6-Tribromophenol (11-102)	Dibutyl Chlorendate (0-205)**	1,2,3,4-TCDD (18-128)**
E4341	112	102	90	∅ *	107	129	67	87	28	45	121
E4342	102	104	89	∅ *	100	156 *	25	29	∅ *	26	108
E4343	118	109	91	19 *	102	124	70	82	50	40	108
Rec BLK	102	121	92	83	64	126	71	104	32	27	99
E4341 MS	108	100	88	1 *	105	97	57	55	26	44	—
E4341 DMS	104	92	90	∅ *	97	117	43	30	0 *	43	—

* Asterisked values are outside of QC limit.
** Advisory Limits

Comments:
BNA's soil matrix complex (hydrocarbon) and may have required Dilutions.

Volatiles: 0 out of 18; outside of QC limits
Semi-Volitales: 8 out of 36; outside of QC limits
Pesti es: 0 out of 6; outside of QC limits
Dioxin 0 out of 4; outside of QC limits

Limits Revi 12/83

V 3/21/84

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000009

FORM V

MATRIX SPIKE DUPLICATE/RECOVERY

68-01-6756 (824)
~~68-01-6757 (825)~~

CASE NO. 2681
LOW LEVEL ✓
WATER ✓
QC REPORT NO. 2681

CONTRACTOR VERSAR
MED. LEVEL
SOIL/SED.

CONTRACT NO.
HIGH LEVEL
OTHER (Specify)
UNITS (Circle) ug/kg ug/L

ATTACHMENT 3

FRACTION	COMPOUND	CONC. SPIKE ADDED	CONC. MS	% REC.	CONC. MSD	% REC	RPD	QC %RECOVERY LIMITS* RPD	WATER	SOIL	COMMENTS
VOA SMO # E4338	1,1-Dichloroethylene	30	30	100	31	103	3.2	<15%	61-145	59-177	
	Trichloroethylene	27	27	100	29	107	7.1	<15%	71-120	62-137	
	Chlorobenzene	29	31	107	31	107	0	<15%	75-130	60-133	
	Toluene	32	36	112	34	106	5.7	<15%	76-125	59-139	
	Benzene	27	28	104	29	107	3.5	<15%	76-127	66-142	
B/N SMO # E4338	1,2,4-Trichlorobenzene	100	73	73	73	73	0	<50%	39- 98	38-107	
	Acenaphthene	100	89	89	86	86	3	<50%	46-118	31-137	
	2,4-Dinitrotoluene	100	104	104*	103	103*	1	<50%	24- 96	28- 89	
	Di-N-Butylphthalate	100	69	69	81	81	16	<50%	11-117	29-135	
	Pyrene	100	97	97	127	127	27	<50%	26-127	35-142	
	N-Nitrosodi-N-Propylamine	100	66	66	63	63	5	<50%	41-116	41-126	
	1,4-Dichlorobenzene	100	82	82	78	78	5	<50%	36- 97	28-104	
ACID SMO # E4338	Pentachlorophenol	200	136	68	208	104*	42*	<40%	9-103	17-109	
	Phenol	100	80	80	72	72	11	<40%	12- 89	26- 90	
	2-Chlorophenol	100	73	73	68	68	7	<40%	27-123	25-102	
	P-Chlor-M-Cresol	100	73	73	70	70	4	<40%	23- 97	26-103	
	4-Nitrophenol	200	97	49	177	89*	58*	<40%	10- 80	11-114	
PEST SMO # E4321	Lindane (G-BHC)	25	27.7	111	26.4	106	5	<40%	56-123	46-127	
	Heptachlor	25	17.9	72	15.9	64	12	<40%	40-131	35-130	
	Aldrin	25	17.4	70	15.4	62	12	<40%	40-120	34-132	
	Dieldrin	25	20.3	81	20.7	83	2	<40%	52-126	31-134	
	Endrin	25	18.6	74	19.6	78	5	<40%	56-121	42-139	
	P,P-DDT	25	15.1	60	13.5	54	11	<40%	38-127	23-134	

*Asterisked values are outside QC limits.

RPD:
VOAs 0 out of 5 ; outside QC limits
B/N 2 out of 14 ; outside QC limits
ACID 1 out of 10 ; outside QC limits
PEST 0 out of 6 ; outside QC limits

RECOVERY:
VOAs 0 out of 10 ; outside of QC limits
B/N 0 out of 7 ; outside of QC limits
ACID 2 out of 5 ; outside of QC limits
PEST 0 out of 12 ; outside of QC limits

*Advisory Limits
Revised 12/83

V3/21/84

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000010

FORM V

MATRIX SPIKE DUPLICATE/RECOVERY

68-01-6756 (824)
~~68-01-6757 (825)~~

CASE NO. 2681
LOW LEVEL ✓
WATER
QC REPORT NO. 2681

CONTRACTOR VERSAR
MED. LEVEL
SOIL/SED. ✓

CONTRACT NO.
HIGH LEVEL
OTHER (Specify)
UNITS (Circle) ug/kg ug/L

ATTACHMENT 4

FRACTION	COMPOUND	CONC. SPIKE ADDED	CONC. MS	% REC.	CONC. MSD	% REC	RPD	QC %RECOVERY LIMITS* RPD	WATER	SOIL	COMMENTS
VOA SMO # E4341	1,1-Dichloroethylene	30	36	120	35	117	2.5	<15%	61-145	59-177	
	Trichloroethylene	27	35	130	34	126	4.7	<15%	71-120	62-137	
	Chlorobenzene	29	37	128	34	117	9.0	<15%	75-130	60-133	
	Toluene	32	45	141*	43	130	5	<15%	76-125	59-139	
	Benzene	27	35	130	35	130	0	<15%	76-127	66-142	
B/N SMO # E4341	1,2,4-Trichlorobenzene	100	88	88	85	85	3	<50%	39- 98	38-107	
	Acenaphthene	100	100	100	91	91	9	<50%	46-118	31-137	
	2,4-Dinitrotoluene	100	0	0*	0*	0	0	<50%	24- 96	28- 89	
	Di-N-Butylphthalate	100	141	141*	74	74	62*	<50%	11-117	29-135	
	Pyrene	100	163	163*	93	93	55*	<50%	26-127	35-142	
	N-Nitrosodi-N-Propylamine	100	84	84	73	73	14	<50%	41-116	41-126	
	1,4-Dichlorobenzene	100	90	90	85	85	6	<50%	36- 97	28-104	
ACID SMO # E4341	Pentachlorophenol	200	0	0*	0*	0	0	<40%	9-103	17-109	Sample 1 (Root) Removed Dilution 2
	Phenol	100	59	59	39	39	41*	<40%	12- 89	26- 90	
	2-Chlorophenol	100	52	52	38	38	31	<40%	27-123	25-102	
	P-Chlor-M-Cresol	100	0	0*	0*	0	0	<40%	23- 97	26-103	
	4-Nitrophenol	200	0	0*	0*	0	0	<40%	10- 80	11-114	
PEST SMO # E4341	Lindane (G-BHC)	890	142	16*	89	10*	46*	<40%	56-123	46-127	
	Heptachlor	890	596	67	570	64	5	<40%	40-131	35-130	
	Aldrin	890	543	61	445	50	20	<40%	40-120	34-132	
	Dieldrin	890	668	75	641	72	4	<40%	52-126	31-134	
	Endrin	890	534	60	525	59	2	<40%	56-121	42-139	
	P,P-DDT	890	401	45	312	35	25	<40%	38-127	23-134	

*Asterisked values are outside QC limits.

RPD:
VOAs 0 out of 5 ; outside QC limits
B/N 4 out of 14 ; outside QC limits
ACID 6 out of 10 ; outside QC limits
PEST 1 out of 6 ; outside QC limits

RECOVERY:
VOAs 1 out of 10 ; outside of QC limits
B/N 2 out of 7 ; outside of QC limits
ACID 1 out of 5 ; outside of QC limits
PEST 2 out of 12 ; outside of QC limits

*Advisory Limits
Revised 12/83

V3/21/84

RECEIVED JUL 19 1984

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
E 4319

84MH05555

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 151
Sample Matrix: LOW LEVEL AQUEOUS
Data Release Authorized By: [signature]

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-4-84
DATE ANALYZED: 6-20-84
PERCENT MOISTURE: n/a
CONC./DILUTION FACTOR none

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10 u
(22A)	59-50-7	p-chloro-m-cresol	10 u
(24A)	95-57-8	2- chlorophenol	10 u
(31A)	120-83-2	2,4-dichlorophenol	10 u
(34A)	105-67-9	2,4-dimethylphenol	10 u
(57A)	88-75-5	2- nitrophenol	20 u
(58A)	100-02-7	4-nitrophenol	50 u
(59A)	51-28-5	2,4-dinitrophenol	50 u
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20 u
(64A)	87-86-5	pentachlorophenol	10 u
(65A)	108-95-2	phenol	10 u
	65-85-0	benzoic acid	100 u
	95-48-7	2-methylphenol	5 u
	108-39-4	4-methylphenol	5 u
	95-95-4	2,4,5-trichlorophenol	100 u
(1B)	83-32-9	acenaphthene	10 u
(5B)	92-87-5	benzidine	40 u
(8B)	120-82-1	1,2,4-trichlorobenzene	10 u
(9B)	118-74-1	hexachlorobenzene	10 u
(12B)	67-72-1	hexachloroethane	10 u
(18B)	111-44-4	bis(2-chloroethyl)ether	10 u
(20B)	91-58-7	2-chloronaphthalene	10 u
(25B)	95-50-1	1,2-dichlorobenzene	10 u
(26B)	541-73-1	1,3-dichlorobenzene	10 u
(27B)	106-46-7	1,4-dichlorobenzene	10 u
(28B)	91-94-1	3,3'-dichlorobenzidine	20 u
(35B)	121-14-2	2,4-dinitrotoluene	20 u
(36B)	606-20-2	2,6-dinitrotoluene	20 u
(37B)	122-66-7	1,2-diphenylhydrazine	20 u
(39B)	206-44-0	fluoranthene	10 u
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10 u
(41B)	101-55-3	4-bromophenyl phenyl ether	10 u
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20 u
(43B)	111-91-1	bis (2-chloroethoxy) methane	20 u

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10 u
(53B)	77-47-4	hexachlorocyclopentadiene	10 u
(54B)	78-59-1	isophorone	10 u
(55B)	91-20-3	naphthalene	10 u
(56B)	98-95-3	nitrobenzene	10 u
(62B)	86-30-6	N-nitrosodiphenylamine	10 u
(63B)	621-64-7	N-nitrosodipropylamine	10 u
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10 u
(67B)	85-68-7	benzyl butyl phthalate	10 u
(68B)	84-74-2	di-n-butyl phthalate	10 u
(69B)	117-84-0	di-n-octyl phthalate	10 u
(70B)	84-66-2	diethyl phthalate	10 u
(71B)	131-11-3	dimethyl phthalate	10 u
(72B)	56-55-3	benzo(a)anthracene	10 u
(73B)	50-32-8	benzo(a)pyrene	20 u
(74B)	205-99-2	benzo(b)fluoranthene	20 u
(75B)	207-08-9	benzo(k)fluoranthene	20 u
(76B)	218-01-9	chrysene	20 u
(77B)	208-96-8	acenaphthylene	10 u
(78B)	120-12-7	anthracene	10 u
(79B)	191-24-2	benzo(ghi)perylene	20 u
(80B)	86-73-7	fluorene	10 u
(81B)	85-01-8	phenanthrene	10 u
(82B)	53-70-3	dibenzo(a,h)anthracene	20 u
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20 u
(84B)	129-00-0	pyrene	10 u
	62-53-3	aniline	5 u
	100-51-6	benzyl alcohol	20 u
	106-47-8	4-chloroaniline	50 u
	132-64-9	dibenzofuran	10 u
	91-57-6	2-methylnaphthalene	20 u
	88-74-4	2-nitroaniline	100 u
	99-09-2	3-nitroaniline	100 u
	100-01-6	4-nitroaniline	100 u

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Sample Number
E 4319

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 151
Sample Matrix: LOW LEVEL AQUEOUS
Data Release Authorized By:

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-11-84
DATE ANALYZED: 5-11-84
PERCENT MOISTURE: 100
CONC./DILUTION FACTOR 1

PP #	CAS #		(ug/l or ug/kg) (circle one)
(2V)	107-02-8	acrolein	100 u
(3V)	107-13-1	acrylonitrile	100 u
(4V)	71-43-2	benzene	5 u
(6V)	56-23-5	carbon tetrachloride	5 u
(7V)	108-90-7	chlorobenzene	5 u
(10V)	107-06-2	1,2-dichloroethane	1 u
(11V)	71-55-6	1,1,1-trichloroethane	5 u
(13V)	75-34-3	1,1-dichloroethane	5 u
(14V)	79-00-5	1,1,2-trichloroethane	5 u
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10 u
(16V)	75-00-3	chloroethane	10 u
(19V)	110-75-8	2-chloroethylvinyl ether	10 u
(23V)	67-66-3	chloroform	5 u
(29V)	75-35-4	1,1-dichloroethene	5 u
(30V)	156-60-5	trans-1,2-dichloroethene	5 u
(32V)	78-87-5	1,2-dichloropropane	10 u
(33V)	10061-02-6	trans-1,3-dichloropropene	5 u
	10061-01-05	cis-1,3-dichloropropene	5 u
(38V)	100-41-4	ethylbenzene	5 u
(44V)	75-09-2	methylene chloride	5 u
(45V)	74-87-3	chloromethane	10 u
(46V)	74-83-9	bromomethane	10 u
(47V)	75-25-2	bromoform	10 u
(48V)	75-27-4	bromodichloromethane	5 u
(49V)	75-69-4	fluorotrichloromethane	5 u
(50V)	75-71-8	dichlorodifluoromethane	5 u
(51V)	124-48-1	chlorodibromomethane	5 u
(85V)	127-18-4	tetrachloroethene	5 u
(86V)	108-88-3	toluene	5 u
(87V)	79-01-6	trichloroethene	5 u
(88V)	75-01-4	vinyl chloride	10 u
	67-64-1	acetone	5 u
	78-93-3	2-butanone	5 u
	75-15-0	carbondisulfide	1 u
	519-78-6	2-hexanone	5 u
	108-10-1	4-methyl-2-pentanone	5 u
	100-42-5	styrene	5 u
	108-05-4	vinyl acetate	5 u
	1330-20-7	total xylenes	5 u

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-8-84
DATE ANALYZED: 6-10-84
PERCENT MOISTURE: NA
CONC./DILUTION FACTOR 1.0 l → 10 ml

PP #	CAS #		(ug/l or ug/kg) (circle one)
(89P)	309-00-2	aldrin	0.005 u
(90P)	60-57-1	dieldrin	0.005 u
(91P)	57-74-9	chlordane	0.050 u
(92P)	50-29-3	4,4'-DDT	0.010 u
(93P)	72-55-9	4,4'-DDE	0.005 u
(94P)	72-54-8	4,4'-DDD	0.010 u
(95P)	115-29-7	α-endosulfan	0.005 u
(96P)	115-29-7	β-endosulfan	0.005 u
(97P)	1031-07-8	endosulfan sulfate	0.010 u
(98P)	72-20-8	endrin	0.005 u
(99P)	7421-93-4	endrin aldehyde	0.010 u
(100P)	76-44-8	heptachlor	0.005 u
(101P)	1024-57-3	heptachlor epoxide	0.005 u
(102P)	319-84-6	α-BHC	0.005 u
(103P)	319-85-7	β-BHC	0.005 u
(104P)	319-86-8	δ-BHC	0.005 u
(105P)	58-89-9	γ-BHC (lindane)	0.005 u
(106P)	53469-21-9	PCB-1242	0.050 u
(107P)	11097-69-1	PCB-1254	0.100 u
(108P)	11104-28-2	PCB-1221	0.100 u
(109P)	11141-16-5	PCB-1232	0.100 u
(110P)	12672-29-6	PCB-1248	0.100 u
(111P)	11096-82-5	PCB-1260	0.200 u
(112P)	12674-11-2	PCB-1016	0.050 u
(113P)	8001-35-2	toxaphene	0.050 u

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR

PP #	CAS #		(ug/l or ug/kg) (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	0.005

12/83
V3/21/84

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample No.
E 4319

Laboratory Name: VERSAR INC. Case No: 2681 QC Report No: 2681

B. Tentatively Identified Compounds

CAS NO.	Compound Name	Fraction	Scan No.	%Score VOA-PBM BNA-FIT	Est. Conc. (ug/L; ug/kg)	
1.	No VOAs detected					J
2. 112-50-5	Ethanol, 2-[2-(2-Ethoxyethoxy) Ethoxy]-	BNA	734	844	50.	J
3. 105-60-2	2H-Azepin-2-one, hexahydro-	BNA	907	971	8	J
4. -	unknown	BNA	1629	-	21	J
5.						J
6.						J
7.						J
8.						J
9.						J
10.						J
11.						J
12.						J
13.						J
14.						J
15.						J
16.						J
17.						J
18.						J
19.						J
20.						J
21.						J
22.						J
23.						J
24.						J
25.						J
26.						J
27.						J
28.						J
29.						J
30.						J

000015

J= Estimated Concentration

3/84

V3/21/84

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Sample Number
E 4320

84M H05SR07

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 157
Sample Matrix: LOW LEVEL AQUEOUS
Data Release Authorized By: [signature]

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-4-84
DATE ANALYZED: 6-20-84
PERCENT MOISTURE: n/a
CONC./DILUTION FACTOR none

PP #	CAS #		(ug/l) or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10 u
(22A)	59-50-7	p-chloro-m-cresol	10 u
(24A)	95-57-8	2- chlorophenol	10 u
(31A)	120-83-2	2,4-dichlorophenol	10 u
(34A)	105-67-9	2,4-dimethylphenol	10 u
(57A)	88-75-5	2- nitrophenol	20 u
(58A)	100-02-7	4-nitrophenol	50 u
(59A)	51-28-5	2,4-dinitrophenol	50 u
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20 u
(64A)	87-86-5	pentachlorophenol	10 u
(65A)	108-95-2	phenol	10 u
	65-85-0	benzoic acid	100 u
	95-48-7	2-methylphenol	5 u
	108-39-4	4-methylphenol	5 u
	95-95-4	2,4,5-trichlorophenol	100 u
(1B)	83-32-9	acenaphthene	10 u
(5B)	92-87-5	benzidine	40 u
(8B)	120-82-1	1,2,4-trichlorobenzene	10 u
(9B)	118-74-1	hexachlorobenzene	10 u
(12B)	67-72-1	hexachloroethane	10 u
(18B)	111-44-4	bis(2-chloroethyl)ether	10 u
(20B)	91-58-7	2-chloronaphthalene	10 u
(25B)	95-50-1	1,2-dichlorobenzene	10 u
(26B)	541-73-1	1,3-dichlorobenzene	10 u
(27B)	106-46-7	1,4-dichlorobenzene	10 u
(28B)	91-94-1	3,3'-dichlorobenzidine	20 u
(35B)	121-14-2	2,4-dinitrotoluene	20 u
(36B)	606-20-2	2,6-dinitrotoluene	20 u
(37B)	122-66-7	1,2-diphenylhydrazine	20 u
(39B)	206-44-0	fluoranthene	10 u
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10 u
(41B)	101-55-3	4-bromophenyl phenyl ether	10 u
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20 u
(43B)	111-91-1	bis (2-chloroethoxy) methane	20 u

PP #	CAS #		(ug/l) or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10 u
(53B)	77-47-4	hexachlorocyclopentadiene	10 u
(54B)	78-59-1	isophorone	10 u
(55B)	91-20-3	naphthalene	10 u
(56B)	98-95-3	nitrobenzene	10 u
(62B)	86-30-6	N-nitrosodiphenylamine	10 u
(63B)	621-64-7	N-nitrosodipropylamine	10 u
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10 u
(67B)	85-68-7	benzyl butyl phthalate	10 u
(68B)	84-74-2	di-n-butyl phthalate	10 u
(69B)	117-84-0	di-n-octyl phthalate	10 u
(70B)	84-66-2	diethyl phthalate	10 u
(71B)	131-11-3	dimethyl phthalate	10 u
(72B)	56-55-3	benzo(a)anthracene	10 u
(73B)	50-32-8	benzo(a)pyrene	20 u
(74B)	205-99-2	benzo(b)fluoranthene	20 u
(75B)	207-08-9	benzo(k)fluoranthene	20 u
(76B)	218-01-9	chrysene	20 u
(77B)	208-96-8	acenaphthylene	10 u
(78B)	120-12-7	anthracene	10 u
(79B)	191-24-2	benzo(ghi)perylene	20 u
(80B)	86-73-7	fluorene	10 u
(81B)	85-01-8	phenanthrene	10 u
(82B)	53-70-3	dibenzo(a,h)anthracene	20 u
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20 u
(84B)	129-00-0	pyrene	10 u
	62-53-3	aniline	5 u
	100-51-6	benzyl alcohol	20 u
	106-47-8	4-chloroaniline	50 u
	132-64-9	dibenzofuran	10 u
	91-57-6	2-methylnaphthalene	20 u
	88-74-4	2-nitroaniline	100 u
	99-09-2	3-nitroaniline	100 u
	100-01-6	4-nitroaniline	100 u

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Sample Number
E 4320

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 157
Sample Matrix: LOW LEVEL AQUEOUS
Data Release Authorized By:

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-11-84
DATE ANALYZED: 5-11-84
PERCENT MOISTURE: 100
CONC./DILUTION FACTOR 1

PP #	CAS #		(ug/l) or ug/kg (circle one)
(2V)	107-02-8	acrolein	100 µ
(3V)	107-13-1	acrylonitrile	100 µ
(4V)	71-43-2	benzene	5 µ
(6V)	56-23-5	carbon tetrachloride	5 µ
(7V)	108-90-7	chlorobenzene	5 µ
(10V)	107-06-2	1,2-dichloroethane	1 µ
(11V)	71-55-6	1,1,1-trichloroethane	5 µ
(13V)	75-34-3	1,1-dichloroethane	5 µ
(14V)	79-00-5	1,1,2-trichloroethane	5 µ
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10 µ
(16V)	75-00-3	chloroethane	10 µ
(19V)	110-75-8	2-chloroethylvinyl ether	10 µ
(23V)	67-66-3	chloroform	5 µ
(29V)	75-35-4	1,1-dichloroethene	5 µ
(30V)	156-60-5	trans-1,2-dichloroethene	5 µ
(32V)	78-87-5	1,2-dichloropropane	10 µ
(33V)	10061-02-6	trans-1,3-dichloropropene	5 µ
	10061-01-05	cis-1,3-dichloropropene	5 µ
(38V)	100-41-4	ethylbenzene	5 µ
(44V)	75-09-2	methylene chloride	5 µ
(45V)	74-87-3	chloromethane	10 µ
(46V)	74-83-9	bromomethane	10 µ
(47V)	75-25-2	bromoform	10 µ
(48V)	75-27-4	bromodichloromethane	5 µ
(49V)	75-69-4	fluorotrichloromethane	5 µ
(50V)	75-71-8	dichlorodifluoromethane	5 µ
(51V)	124-48-1	chlorodibromomethane	5 µ
(85V)	127-18-4	tetrachloroethene	5 µ
(86V)	108-88-3	toluene	5 µ
(87V)	79-01-6	trichloroethene	5 µ
(88V)	75-01-4	vinyl chloride	10 µ
	67-64-1	acetone	5 µ
	78-93-3	2-butanone	5 µ
	75-15-0	carbondisulfide	1 µ
	519-78-6	2-hexanone	5 µ
	108-10-1	4-methyl-2-pentanone	5 µ
	100-42-5	styrene	5 µ
	108-05-4	vinyl acetate	5 µ
	1330-20-7	total xylenes	5 µ

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-8-84
DATE ANALYZED: 6-10-84
PERCENT MOISTURE: NA
CONC./DILUTION FACTOR 1l → 10ml

PP #	CAS #		(ug/l) or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.005µ
(90P)	60-57-1	dieldrin	0.005µ
(91P)	57-74-9	chlordane	0.050µ
(92P)	50-29-3	4,4'-DDT	0.010µ
(93P)	72-55-9	4,4'-DDE	0.005µ
(94P)	72-54-8	4,4'-DDD	0.010µ
(95P)	115-29-7	α-endosulfan	0.005µ
(96P)	115-29-7	β-endosulfan	0.005µ
(97P)	1031-07-8	endosulfan sulfate	0.010µ
(98P)	72-20-8	endrin	0.005µ
(99P)	7421-93-4	endrin aldehyde	0.010µ
(100P)	76-44-8	heptachlor	0.005µ
(101P)	1024-57-3	heptachlor epoxide	0.005µ
(102P)	319-84-6	α-BHC	0.005µ
(103P)	319-85-7	β-BHC	0.005µ
(104P)	319-86-8	δ-BHC	0.005µ
(105P)	58-89-9	γ-BHC (lindane)	0.005µ
(106P)	53469-21-9	PCB-1242	0.050µ
(107P)	11097-69-1	PCB-1254	0.100µ
(108P)	11104-28-2	PCB-1221	0.100µ
(109P)	11141-16-5	PCB-1232	0.100µ
(110P)	12672-29-6	PCB-1248	0.100µ
(111P)	11096-82-5	PCB-1260	0.200µ
(112P)	12674-11-2	PCB-1016	0.050µ
(113P)	8001-35-2	toxaphene	0.050µ

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR

PP #	CAS #		(ug/l) or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	0.005

12/83

V3/21/84

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample No.
E 4320

Laboratory Name: VERSAR INC. Case No: 2681 QC Report No: 2681

B. Tentatively Identified Compounds

CAS NO.	Compound Name	Fraction	Scan No.	%Score VOA-PBM BNA-FIT	Est. Conc. (ug/l;ug/kg)
1.	No Volatiles detected				J
2.	No BNA's detected				J
3.					J
4.					J
5.					J
6.					J
7.					J
8.					J
9.					J
10.					J
11.					J
12.					J
13.					J
14.					J
15.					J
16.					J
17.					J
18.					J
19.					J
20.					J
21.					J
22.					J
23.					J
24.					J
25.					J
26.					J
27.					J
28.					J
29.					J
30.					J

J= Estimated Concentration

3/84

V3/21/84

000043

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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
E 4321

84MH05556

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 159
Sample Matrix: LOW LEVEL AQUEOUS
Data Release Authorized By: [signature]

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-4-84
DATE ANALYZED: 6-20-84
PERCENT MOISTURE: n/a
CONC./DILUTION FACTOR none

PP #	CAS #		(ug/l) or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10 u
(22A)	59-50-7	p-chloro-m-cresol	10 u
(24A)	95-57-8	2- chlorophenol	10 u
(31A)	120-83-2	2,4-dichlorophenol	10 u
(34A)	105-67-9	2,4-dimethylphenol	10 u
(57A)	88-75-5	2- nitrophenol	20 u
(58A)	100-02-7	4-nitrophenol	50 u
(59A)	51-28-5	2,4-dinitrophenol	50 u
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20 u
(64A)	87-86-5	pentachlorophenol	10 u
(65A)	108-95-2	phenol	10 u
	65-85-0	benzoic acid	100 u
	95-48-7	2-methylphenol	5 u
	108-39-4	4-methylphenol	5 u
	95-95-4	2,4,5-trichlorophenol	100 u
(1B)	83-32-9	acenaphthene	10 u
(5B)	92-87-5	benzidine	40 u
(8B)	120-82-1	1,2,4-trichlorobenzene	10 u
(9B)	118-74-1	hexachlorobenzene	10 u
(12B)	67-72-1	hexachloroethane	10 u
(18B)	111-44-4	bis(2-chloroethyl)ether	10 u
(20B)	91-58-7	2-chloronaphthalene	10 u
(25B)	95-50-1	1,2-dichlorobenzene	10 u
(26B)	541-73-1	1,3-dichlorobenzene	10 u
(27B)	106-46-7	1,4-dichlorobenzene	10 u
(28B)	91-94-1	3,3'-dichlorobenzidine	20 u
(35B)	121-14-2	2,4-dinitrotoluene	20 u
(36B)	606-20-2	2,6-dinitrotoluene	20 u
(37B)	122-66-7	1,2-diphenylhydrazine	20 u
(39B)	206-44-0	fluoranthene	10 u
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10 u
(41B)	101-55-3	4-bromophenyl phenyl ether	10 u
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20 u
(43B)	111-91-1	bis (2-chloroethoxy) methane	20 u

PP #	CAS #		(ug/l) or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10 u
(53B)	77-47-4	hexachlorocyclopentadiene	10 u
(54B)	78-59-1	isophorone	10 u
(55B)	91-20-3	naphthalene	10 u
(56B)	98-95-3	nitrobenzene	10 u
(62B)	86-30-6	N-nitrosodiphenylamine	10 u
(63B)	621-64-7	N-nitrosodipropylamine	10 u
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10 u
(67B)	85-68-7	benzyl butyl phthalate	10 u
(68B)	84-74-2	di-n-butyl phthalate	10 u
(69B)	117-84-0	di-n-octyl phthalate	10 u
(70B)	84-66-2	diethyl phthalate	10 u
(71B)	131-11-3	dimethyl phthalate	10 u
(72B)	56-55-3	benzo(a)anthracene	10 u
(73B)	50-32-8	benzo(a)pyrene	20 u
(74B)	205-99-2	benzo(b)fluoranthene	20 u
(75B)	207-08-9	benzo(k)fluoranthene	20 u
(76B)	218-01-9	chrysene	20 u
(77B)	208-96-8	acenaphthylene	10 u
(78B)	120-12-7	anthracene	10 u
(79B)	191-24-2	benzo(ghi)perylene	20 u
(80B)	86-73-7	fluorene	10 u
(81B)	85-01-8	phenanthrene	10 u
(82B)	53-70-3	dibenzo(a,h)anthracene	20 u
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20 u
(84B)	129-00-0	pyrene	10 u
	62-53-3	aniline	5 u
	100-51-6	benzyl alcohol	20 u
	106-47-8	4-chloroaniline	50 u
	132-64-9	dibenzofuran	10 u
	91-57-6	2-methylnaphthalene	20 u
	88-74-4	2-nitroaniline	100 u
	99-09-2	3-nitroaniline	100 u
	100-01-6	4-nitroaniline	100 u

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Sample Number
E 4321

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 159
Sample Matrix: LOW LEVEL AQUEOUS
Data Release Authorized By:

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-11-84
DATE ANALYZED: 5-11-84
PERCENT MOISTURE: 100
CONC./DILUTION FACTOR 1

PP #	CAS #		(ug/l) or ug/kg (circle one)
(2V)	107-02-8	acrolein	100 u
(3V)	107-13-1	acrylonitrile	100 u
(4V)	71-43-2	benzene	5 u
(6V)	56-23-5	carbon tetrachloride	5 u
(7V)	108-90-7	chlorobenzene	5 u
(10V)	107-06-2	1,2-dichloroethane	1 u
(11V)	71-55-6	1,1,1-trichloroethane	5 u
(13V)	75-34-3	1,1-dichloroethane	5 u
(14V)	79-00-5	1,1,2-trichloroethane	5 u
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10 u
(16V)	75-00-3	chloroethane	10 u
(19V)	110-75-8	2-chloroethylvinyl ether	10 u
(23V)	67-66-3	chloroform	5 u
(29V)	75-35-4	1,1-dichloroethene	5 u
(30V)	156-60-5	trans-1,2-dichloroethene	5 u
(32V)	78-87-5	1,2-dichloropropane	10 u
(33V)	10061-02-6	trans-1,3-dichloropropene	5 u
	10061-01-05	cis-1,3-dichloropropene	5 u
(38V)	100-41-4	ethylbenzene	5 u
(44V)	75-09-2	methylene chloride	5 u
(45V)	74-87-3	chloromethane	10 u
(46V)	74-83-9	bromomethane	10 u
(47V)	75-25-2	bromoform	10 u
(48V)	75-27-4	bromodichloromethane	5 u
(49V)	75-69-4	fluorotrichloromethane	5 u
(50V)	75-71-8	dichlorodifluoromethane	5 u
(51V)	124-48-1	chlorodibromomethane	5 u
(85V)	127-18-4	tetrachloroethene	5 u
(86V)	108-88-3	toluene	5 u
(87V)	79-01-6	trichloroethene	5 u
(88V)	75-01-4	vinyl chloride	10 u
	67-64-1	acetone	5 u
	78-93-3	2-butanone	5 u
	75-15-0	carbondisulfide	1 u
	519-78-6	2-hexanone	5 u
	108-10-1	4-methyl-2-pentanone	5 u
	100-42-5	styrene	5 u
	108-05-4	vinyl acetate	5 u
	1330-20-7	total xylenes	5 u

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-8-84
DATE ANALYZED: 6-10-84
PERCENT MOISTURE: NA
CONC./DILUTION FACTOR 0.48 l → 10 ml

PP #	CAS #		(ug/l) or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.005 u
(90P)	60-57-1	dieldrin	0.005 u
(91P)	57-74-9	chlordane	0.050 u
(92P)	50-29-3	4,4'-DDT	0.010 u
(93P)	72-55-9	4,4'-DDE	0.005 u
(94P)	72-54-8	4,4'-DDD	0.010 u
(95P)	115-29-7	α-endosulfan	0.005 u
(96P)	115-29-7	β-endosulfan	0.005 u
(97P)	1031-07-8	endosulfan sulfate	0.010 u
(98P)	72-20-8	endrin	0.005 u
(99P)	7421-93-4	endrin aldehyde	0.010 u
(100P)	76-44-8	heptachlor	0.005 u
(101P)	1024-57-3	heptachlor epoxide	0.005 u
(102P)	319-84-6	α-BHC	0.005 u
(103P)	319-85-7	β-BHC	0.005 u
(104P)	319-86-8	δ-BHC	0.005 u
(105P)	58-89-9	γ-BHC (lindane)	0.005 u
(106P)	53469-21-9	PCB-1242	0.050 u
(107P)	11097-69-1	PCB-1254	0.100 u
(108P)	11104-28-2	PCB-1221	0.100 u
(109P)	11141-16-5	PCB-1232	0.100 u
(110P)	12672-29-6	PCB-1248	0.100 u
(111P)	11096-82-5	PCB-1260	0.200 u
(112P)	12674-11-2	PCB-1016	0.050 u
(113P)	8001-35-2	toxaphene	0.050 u

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR

PP #	CAS #		(ug/l) or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	0.005 u

12/83

000060

V3/21/84

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample No.
E 4321

Laboratory Name: VERSAR INC. Case No: 2681 QC Report No: 2681

B. Tentatively Identified Compounds

	CAS NO.	Compound Name	Fraction	Scan No.	%Score VOA-PBM BNA-FIT	Est. Conc. (ug/L;ug/kg)	
1.		No Volatiles detected					J
2.	544-76-3	Hexadecane	BNA	1182	979	17.	J
3.	629-78-7	Heptadecane	BNA	1255	985	39.	J
4.	629-78-7	Heptadecane	BNA	1323	960	43.	J
5.	629-92-5	Nonadecane	BNA	1388	981	40.	J
6.	62238-11-3	Decane, 2,3,5-Trimethyl-	BNA	1450	971	16.	J
7.	31295-56-4	Dodecane, 2,6,11-Trimethyl-	BNA	1511	949	5.	J
8.							J
9.							J
10.							J
11.							J
12.							J
13.							J
14.							J
15.							J
16.							J
17.							J
18.							J
19.							J
20.							J
21.							J
22.							J
23.							J
24.							J
25.							J
26.							J
27.							J
28.							J
29.							J
30.							J

J = Estimated Concentration

3/84

V3/21/84

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Sample Number
E 4322

84MH05557

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 152
Sample Matrix: LOW LEVEL AQUEOUS
Data Release Authorized By: [signature]

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-4-84
DATE ANALYZED: 6-20-84
PERCENT MOISTURE: n/a
CONC./DILUTION FACTOR none

PP #	CAS #		(ug/l) or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10 u
(22A)	59-50-7	p-chloro-m-cresol	10 u
(24A)	95-57-8	2- chlorophenol	10 u
(31A)	120-83-2	2,4-dichlorophenol	10 u
(34A)	105-67-9	2,4-dimethylphenol	10 u
(57A)	88-75-5	2- nitrophenol	20 u
(58A)	100-02-7	4-nitrophenol	50 u
(59A)	51-28-5	2,4-dinitrophenol	50 u
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20 u
(64A)	87-86-5	pentachlorophenol	10 u
(65A)	108-95-2	phenol	10 u
	65-85-0	benzoic acid	100 u
	95-48-7	2-methylphenol	5 u
	108-39-4	4-methylphenol	5 u
	95-95-4	2,4,5-trichlorophenol	100 u
(1B)	83-32-9	acenaphthene	10 u
(5B)	92-87-5	benzidine	40 u
(8B)	120-82-1	1,2,4-trichlorobenzene	10 u
(9B)	118-74-1	hexachlorobenzene	10 u
(12B)	67-72-1	hexachloroethane	10 u
(18B)	111-44-4	bis(2-chloroethyl)ether	10 u
(20B)	91-58-7	2-chloronaphthalene	10 u
(25B)	95-50-1	1,2-dichlorobenzene	10 u
(26B)	541-73-1	1,3-dichlorobenzene	10 u
(27B)	106-46-7	1,4-dichlorobenzene	10 u
(28B)	91-94-1	3,3'-dichlorobenzidine	20 u
(35B)	121-14-2	2,4-dinitrotoluene	20 u
(36B)	606-20-2	2,6-dinitrotoluene	20 u
(37B)	122-66-7	1,2-diphenylhydrazine	20 u
(39B)	206-44-0	fluoranthene	10 u
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10 u
(41B)	101-55-3	4-bromophenyl phenyl ether	10 u
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20 u
(43B)	111-91-1	bis (2-chloroethoxy) methane	20 u

PP #	CAS #		(ug/l) or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10 u
(53B)	77-47-4	hexachlorocyclopentadiene	10 u
(54B)	78-59-1	isophorone	10 u
(55B)	91-20-3	naphthalene	10 u
(56B)	98-95-3	nitrobenzene	10 u
(62B)	86-30-6	N-nitrosodiphenylamine	10 u
(63B)	621-64-7	N-nitrosodipropylamine	10 u
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10 u
(67B)	85-68-7	benzyl butyl phthalate	10 u
(68B)	84-74-2	di-n-butyl phthalate	10 u
(69B)	117-84-0	di-n-octyl phthalate	10 u
(70B)	84-66-2	diethyl phthalate	10 u
(71B)	131-11-3	dimethyl phthalate	10 u
(72B)	56-55-3	benzo(a)anthracene	10 u
(73B)	50-32-8	benzo(a)pyrene	20 u
(74B)	205-99-2	benzo(b)fluoranthene	20 u
(75B)	207-08-9	benzo(k)fluoranthene	20 u
(76B)	218-01-9	chrysene	20 u
(77B)	208-96-8	acenaphthylene	10 u
(78B)	120-12-7	anthracene	10 u
(79B)	191-24-2	benzo(ghi)perylene	20 u
(80B)	86-73-7	fluorene	10 u
(81B)	85-01-8	phenanthrene	10 u
(82B)	53-70-3	dibenzo(a,h)anthracene	20 u
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20 u
(84B)	129-00-0	pyrene	10 u
	62-53-3	aniline	5 u
	100-51-6	benzyl alcohol	20 u
	106-47-8	4-chloroaniline	50 u
	132-64-9	dibenzofuran	10 u
	91-57-6	2-methylnaphthalene	20 u
	88-74-4	2-nitroaniline	100 u
	99-09-2	3-nitroaniline	100 u
	100-01-6	4-nitroaniline	100 u

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Sample Number
E 4322

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 152
Sample Matrix: LOW LEVEL AQUEOUS
Data Release Authorized By:

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-11-84
DATE ANALYZED: 5-11-84
PERCENT MOISTURE: 100
CONC./DILUTION FACTOR 1

PP #	CAS #		(ug/l) or ug/kg (circle one)
(2V)	107-02-8	acrolein	100 u
(3V)	107-13-1	acrylonitrile	100 u
(4V)	71-43-2	benzene	5 u
(6V)	56-23-5	carbon tetrachloride	5 u
(7V)	108-90-7	chlorobenzene	5 u
(10V)	107-06-2	1,2-dichloroethane	1 u
(11V)	71-55-6	1,1,1-trichloroethane	5 u
(13V)	75-34-3	1,1-dichloroethane	56
(14V)	79-00-5	1,1,2-trichloroethane	5 u
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10 u
(16V)	75-00-3	chloroethane	10 u
(19V)	110-75-8	2-chloroethylvinyl ether	10 u
(23V)	67-66-3	chloroform	5 u
(29V)	75-35-4	1,1-dichloroethene	5 u
(30V)	156-60-5	trans-1,2-dichloroethene	5 u
(32V)	78-87-5	1,2-dichloropropane	10 u
(33V)	10061-02-6	trans-1,3-dichloropropene	5 u
	10061-01-05	cis-1,3-dichloropropene	5 u
(38V)	100-41-4	ethylbenzene	5 u
(44V)	75-09-2	methylene chloride	5 u
(45V)	74-87-3	chloromethane	10 u
(46V)	74-83-9	bromomethane	10 u
(47V)	75-25-2	bromoform	10 u
(48V)	75-27-4	bromodichloromethane	5 u
(49V)	75-69-4	fluorotrichloromethane	5 u
(50V)	75-71-8	dichlorodifluoromethane	5 u
(51V)	124-48-1	chlorodibromomethane	5 u
(85V)	127-18-4	tetrachloroethene	5 u
(86V)	108-88-3	toluene	5 u
(87V)	79-01-6	trichloroethene	5 u
(88V)	75-01-4	vinyl chloride	10 u
	67-64-1	acetone	5 u
	78-93-3	2-butanone	5 u
	75-15-0	carbondisulfide	1 u
	519-78-6	2-hexanone	5 u
	108-10-1	4-methyl-2-pentanone	5 u
	100-42-5	styrene	5 u
	108-05-4	vinyl acetate	5 u
	1330-20-7	total xylenes	5 u

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-8-84
DATE ANALYZED: 6-10-84
PERCENT MOISTURE: NA
CONC./DILUTION FACTOR 1.0l → 10ml

PP #	CAS #		(ug/l) or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.005u
(90P)	60-57-1	dieldrin	0.005u
(91P)	57-74-9	chlordane	0.050u
(92P)	50-29-3	4,4'-DDT	0.010u
(93P)	72-55-9	4,4'-DDE	0.005u
(94P)	72-54-8	4,4'-DDD	0.010u
(95P)	115-29-7	α-endosulfan	0.005u
(96P)	115-29-7	β-endosulfan	0.005u
(97P)	1031-07-8	endosulfan sulfate	0.010u
(98P)	72-20-8	endrin	0.005u
(99P)	7421-93-4	endrin aldehyde	0.010u
(100P)	76-44-8	heptachlor	0.005u
(101P)	1024-57-3	heptachlor epoxide	0.005u
(102P)	319-84-6	α-BHC	0.005u
(103P)	319-85-7	β-BHC	0.005u
(104P)	319-86-8	δ-BHC	0.005u
(105P)	58-89-9	γ-BHC (lindane)	0.005u
(106P)	53469-21-9	PCB-1242	0.050u
(107P)	11097-69-1	PCB-1254	0.100u
(108P)	11104-28-2	PCB-1221	0.100u
(109P)	11141-16-5	PCB-1232	0.100u
(110P)	12672-29-6	PCB-1248	0.100u
(111P)	11096-82-5	PCB-1260	0.200u
(112P)	12674-11-2	PCB-1016	0.050u
(113P)	8001-35-2	toxaphene	0.050u

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR

PP #	CAS #		(ug/l) or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	0.005

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V3/21/84

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample No.
E 4322

Laboratory Name: VERSAR INC. Case No: 2681 QC Report No: 2681

B. Tentatively Identified Compounds

	CAS NO.	Compound Name	Fraction	Scan No.	%Score VOA-PBM BNA-FIT	Est. Conc. (ug/L, ug/kg)	
1.	60297	Ethane, 1,1'-oxybis-	VOA	273	85	25	J
2.	—	unknown	BNA	558	—	22.	J
3.	112-50-5	Ethanol, 2-[2-(2-ethoxyethoxy)ethoxy]-	BNA	733	863	22.	J
4.	—	unknown	BNA	757	—	120	J
5.	124-07-02	Octanoic acid	BNA	820	986	22.	J
6.	10471-14-4	Ethane, 1-ethoxy-1-methoxy-	BNA	843	839	6.	J
7.	—	unknown	BNA	894	—	10.	J
8.	4127-45-1	Cyclopropane, 1,1,2-trimethyl-	BNA	907	965	12	J
9.	19089-47-5	1-Propanol, 2-ethoxy-	BNA	1075	947	12	J
10.	143-07-7	Dodecanoic acid	BNA	1150	967	26.	J
11.	544-76-3	Hexadecane	BNA	1182	981	43.	J
12.	55045-11-9	Tridecane, 5-propyl-	BNA	1218	944	14	J
13.	629-78-7	Heptadecane	BNA	1254	990	91	J
14.	—	unknown	BNA	1258	—	12.	J
15.	629-78-7	Heptadecane	BNA	1323	941	75.	J
16.	3891-98-3	Dodecane, 2,6,10-trimethyl-	BNA	1330	973	16	J
17.	629-92-5	Nonadecane	BNA	1388	985	64	J
18.	74764-11-7	Iron, tricarbonyl[N-(phenyl-2-pyridinylmethylene)benzenamine-N	BNA	1456	983	25.	J
19.	17312-75-3	Nonane, 5-methyl-5-propyl-	BNA	1510	951	61.	J
20.	—	unknown	BNA	1627	—	37.	J
21.	54105-66-7	Cyclohexane, undecyl-	BNA	1677	878	8.	J
22.							J
23.							J
24.							J
25.							J
26.							J
27.							J
28.							J
29.							J
30.							J

J= Estimated Concentration

3/84

V3/21/84

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000060

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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
E 4337

84MH05555

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 154
Sample Matrix: LOW LEVEL AQUEOUS
Data Release Authorized By: [signature]

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-4-84
DATE ANALYZED: 6-20-84
PERCENT MOISTURE: n/a
CONC./DILUTION FACTOR none

PP #	CAS #		(ug/l) or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10 u
(22A)	59-50-7	p-chloro-m-cresol	10 u
(24A)	95-57-8	2- chlorophenol	10 u
(31A)	120-83-2	2,4-dichlorophenol	10 u
(34A)	105-67-9	2,4-dimethylphenol	10 u
(57A)	88-75-5	2- nitrophenol	20 u
(58A)	100-02-7	4-nitrophenol	50 u
(59A)	51-28-5	2,4-dinitrophenol	50 u
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20 u
(64A)	87-86-5	pentachlorophenol	10 u
(65A)	108-95-2	phenol	10 u
	65-85-0	benzoic acid	100 u
	95-48-7	2-methylphenol	5 u
	108-39-4	4-methylphenol	5 u
	95-95-4	2,4,5-trichlorophenol	100 u
(1B)	83-32-9	acenaphthene	10 u
(5B)	92-87-5	benzidine	40 u
(8B)	120-82-1	1,2,4-trichlorobenzene	10 u
(9B)	118-74-1	hexachlorobenzene	10 u
(12B)	67-72-1	hexachloroethane	10 u
(18B)	111-44-4	bis(2-chloroethyl)ether	10 u
(20B)	91-58-7	2-chloronaphthalene	10 u
(25B)	95-50-1	1,2-dichlorobenzene	10 u
(26B)	541-73-1	1,3-dichlorobenzene	10 u
(27B)	106-46-7	1,4-dichlorobenzene	10 u
(28B)	91-94-1	3,3'-dichlorobenzidine	20 u
(35B)	121-14-2	2,4-dinitrotoluene	20 u
(36B)	606-20-2	2,6-dinitrotoluene	20 u
(37B)	122-66-7	1,2-diphenylhydrazine	20 u
(39B)	206-44-0	fluoranthene	10 u
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10 u
(41B)	101-55-3	4-bromophenyl phenyl ether	10 u
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20 u
(43B)	111-91-1	bis (2-chloroethoxy) methane	20 u

PP #	CAS #		(ug/l) or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10 u
(53B)	77-47-4	hexachlorocyclopentadiene	10 u
(54B)	78-59-1	isophorone	10 u
(55B)	91-20-3	naphthalene	10 u
(56B)	98-95-3	nitrobenzene	10 u
(62B)	86-30-6	N-nitrosodiphenylamine	10 u
(63B)	621-64-7	N-nitrosodipropylamine	10 u
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10 u
(67B)	85-68-7	benzyl butyl phthalate	10 u
(68B)	84-74-2	di-n-butyl phthalate	10 u
(69B)	117-84-0	di-n-octyl phthalate	10 u
(70B)	84-66-2	diethyl phthalate	10 u
(71B)	131-11-3	dimethyl phthalate	10 u
(72B)	56-55-3	benzo(a)anthracene	10 u
(73B)	50-32-8	benzo(a)pyrene	20 u
(74B)	205-99-2	benzo(b)fluoranthene	20 u
(75B)	207-08-9	benzo(k)fluoranthene	20 u
(76B)	218-01-9	chrysene	20 u
(77B)	208-96-8	acenaphthylene	10 u
(78B)	120-12-7	anthracene	10 u
(79B)	191-24-2	benzo(ghi)perylene	20 u
(80B)	86-73-7	fluorene	10 u
(81B)	85-01-8	phenanthrene	10 u
(82B)	53-70-3	dibenzo(a,h)anthracene	20 u
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20 u
(84B)	129-00-0	pyrene	10 u
	62-53-3	aniline	5 u
	100-51-6	benzyl alcohol	20 u
	106-47-8	4-chloroaniline	50 u
	132-64-9	dibenzofuran	10 u
	91-57-6	2-methylnaphthalene	20 u
	88-74-4	2-nitroaniline	100 u
	99-09-2	3-nitroaniline	100 u
	100-01-6	4-nitroaniline	100 u

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Sample Number
E4337

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 154
Sample Matrix: LOW LEVEL AQUEOUS
Data Release Authorized By:

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - 68-01-6757 (825)
Date Sample Received: 05-03-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one) PVM
DATE EXTRACTED/PREPARED: 5-11-84
DATE ANALYZED: 5-11-84
PERCENT MOISTURE: NA
CONC./DILUTION FACTOR 1

PP #	CAS #		(ug/l or ug/kg) (circle one)
(2V)	107-02-8	acrolein	100 µ
(3V)	107-13-1	acrylonitrile	100 µ
(4V)	71-43-2	benzene	5 µ
(6V)	56-23-5	carbon tetrachloride	5 µ
(7V)	108-90-7	chlorobenzene	5 µ
(10V)	107-06-2	1,2-dichloroethane	1 µ
(11V)	71-55-6	1,1,1-trichloroethane	5 µ
(13V)	75-34-3	1,1-dichloroethane	5 µ
(14V)	79-00-5	1,1,2-trichloroethane	5 µ
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10 µ
(16V)	75-00-3	chloroethane	10 µ
(19V)	110-75-8	2-chloroethylvinyl ether	10 µ
(23V)	67-66-3	chloroform	5 µ
(29V)	75-35-4	1,1-dichloroethene	5 µ
(30V)	156-60-5	trans-1,2-dichloroethene	5 µ
(32V)	78-87-5	1,2-dichloropropane	10 µ
(33V)	10061-02-6	trans-1,3-dichloropropene	5 µ
	10061-01-05	cis-1,3-dichloropropene	5 µ
(38V)	100-41-4	ethylbenzene	5 µ
(44V)	75-09-2	methylene chloride	5 µ
(45V)	74-87-3	chloromethane	10 µ
(46V)	74-83-9	bromomethane	10 µ
(47V)	75-25-2	bromoform	10 µ
(48V)	75-27-4	bromodichloromethane	5 µ
(49V)	75-69-4	fluorotrichloromethane	5 µ
(50V)	75-71-8	dichlorodifluoromethane	5 µ
(51V)	124-48-1	chlorodibromomethane	5 µ
(85V)	127-18-4	tetrachloroethene	5 µ
(86V)	108-88-3	toluene	5 µ
(87V)	79-01-6	trichloroethene	5 µ
(88V)	75-01-4	vinyl chloride	10 µ
	67-64-1	acetone	5 µ
	78-93-3	2-butanone	5 µ
	75-15-0	carbondisulfide	1 µ
	519-78-6	2-hexanone	5 µ
	108-10-1	4-methyl-2-pentanone	5 µ
	100-42-5	styrene	5 µ
	108-05-4	vinyl acetate	5 µ
	1330-20-7	total xylenes	5 µ

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-8-84
DATE ANALYZED: 6-10-84
PERCENT MOISTURE: NA
CONC./DILUTION FACTOR 1.0L → 10 ml

PP #	CAS #		(ug/l or ug/kg) (circle one)
(89P)	309-00-2	aldrin	0.005µ
(90P)	60-57-1	dieldrin	0.005µ
(91P)	57-74-9	chlordane	0.050µ
(92P)	50-29-3	4,4'-DDT	0.010µ
(93P)	72-55-9	4,4'-DDE	0.005µ
(94P)	72-54-8	4,4'-DDD	0.010µ
(95P)	115-29-7	α-endosulfan	0.005µ
(96P)	115-29-7	β-endosulfan	0.005µ
(97P)	1031-07-8	endosulfan sulfate	0.010µ
(98P)	72-20-8	endrin	0.005µ
(99P)	7421-93-4	endrin aldehyde	0.010µ
(100P)	76-44-8	heptachlor	0.005µ
(101P)	1024-57-3	heptachlor epoxide	0.005µ
(102P)	319-84-6	α-BHC	0.005µ
(103P)	319-85-7	β-BHC	0.005µ
(104P)	319-86-8	δ-BHC	0.005µ
(105P)	58-89-9	γ-BHC (lindane)	0.005µ
(106P)	53469-21-9	PCB-1242	0.050µ
(107P)	11097-69-1	PCB-1254	0.100µ
(108P)	11104-28-2	PCB-1221	0.100µ
(109P)	11141-16-5	PCB-1232	0.100µ
(110P)	12672-29-6	PCB-1248	0.100µ
(111P)	11096-82-5	PCB-1260	0.200µ
(112P)	12674-11-2	PCB-1016	0.050µ
(113P)	8001-35-2	toxaphene	0.050µ

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR

PP #	CAS #		(ug/l or ug/kg) (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	0.005µ

12/83
V3/21/84

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample No.
E 4337

Laboratory Name: VERSAR INC. Case No: 2681 QC Report No: 2681

B. Tentatively Identified Compounds

CAS NO.	Compound Name	Fraction	Scan No.	%Score VOA-PBM BNA-FIT	Est. Conc. (ug/L; ug/kg)	
1.	No Volatiles detected					J
2. 66-25-1	Hexanal	BNA	416	964	12.	J
3. —	unknown	BNA	489	—	5.	J
4. 108-94-1	Cyclohexanone	BNA	533	963	8	J
5. 4058-52-0	3,4-Pentadien-1-ol, 2,2-dimethyl-	BNA	875	817	7	J
6. 60-32-2	Hexanoic acid, 6-amino-	BNA	908	956	36.	J
7. 143-07-7	Dodecanoic acid	BNA	1151	966	10.	J
8. 80-39-7	Benzenesulfonamide, N-ethyl-4-methyl-	BNA	1284	999	5.	J
9. —	unknown	BNA	1628	—	63.	J
10.						J
11.						J
12.						J
13.						J
14.						J
15.						J
16.						J
17.						J
18.						J
19.						J
20.						J
21.						J
22.						J
23.						J
24.						J
25.						J
26.						J
27.						J
28.						J
29.						J
30.						J

000183

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J= Estimated Concentration

3/84

V3/21/84

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Sample Number
E 4338

94MHOS559

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 155
Sample Matrix: LOW LEVEL AQUEOUS
Data Release Authorized By:

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-4-84
DATE ANALYZED: 6-18-84
PERCENT MOISTURE: n/a
CONC./DILUTION FACTOR none

PP #	CAS #		(ug/l) or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10 u
(22A)	59-50-7	p-chloro-m-cresol	10 u
(24A)	95-57-8	2- chlorophenol	10 u
(31A)	120-83-2	2,4-dichlorophenol	10 u
(34A)	105-67-9	2,4-dimethylphenol	10 u
(57A)	88-75-5	2- nitrophenol	20 u
(58A)	100-02-7	4-nitrophenol	50 u
(59A)	51-28-5	2,4-dinitrophenol	50 u
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20 u
(64A)	87-86-5	pentachlorophenol	10 u
(65A)	108-95-2	phenol	10 u
	65-85-0	benzoic acid	100 u
	95-48-7	2-methylphenol	5 u
	108-39-4	4-methylphenol	5 u
	95-95-4	2,4,5-trichlorophenol	100 u
(1B)	83-32-9	acenaphthene	10 u
(5B)	92-87-5	benzidine	40 u
(8B)	120-82-1	1,2,4-trichlorobenzene	10 u
(9B)	118-74-1	hexachlorobenzene	10 u
(12B)	67-72-1	hexachloroethane	10 u
(18B)	111-44-4	bis(2-chloroethyl)ether	10 u
(20B)	91-58-7	2-chloronaphthalene	10 u
(25B)	95-50-1	1,2-dichlorobenzene	10 u
(26B)	541-73-1	1,3-dichlorobenzene	10 u
(27B)	106-46-7	1,4-dichlorobenzene	10 u
(28B)	91-94-1	3,3'-dichlorobenzidine	20 u
(35B)	121-14-2	2,4-dinitrotoluene	20 u
(36B)	606-20-2	2,6-dinitrotoluene	20 u
(37B)	122-66-7	1,2-diphenylhydrazine	20 u
(39B)	206-44-0	fluoranthene	10 u
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10 u
(41B)	101-55-3	4-bromophenyl phenyl ether	10 u
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20 u
(43B)	111-91-1	bis (2-chloroethoxy) methane	20 u

PP #	CAS #		(ug/l) or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10 u
(53B)	77-47-4	hexachlorocyclopentadiene	10 u
(54B)	78-59-1	isophorone	10 u
(55B)	91-20-3	naphthalene	10 u
(56B)	98-95-3	nitrobenzene	10 u
(62B)	86-30-6	N-nitrosodiphenylamine	10 u
(63B)	621-64-7	N-nitrosodipropylamine	10 u
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10 u
(67B)	85-68-7	benzyl butyl phthalate	10 u
(68B)	84-74-2	di-n-butyl phthalate	10 u
(69B)	117-84-0	di-n-octyl phthalate	10 u
(70B)	84-66-2	diethyl phthalate	10 u
(71B)	131-11-3	dimethyl phthalate	10 u
(72B)	56-55-3	benzo(a)anthracene	10 u
(73B)	50-32-8	benzo(a)pyrene	20 u
(74B)	205-99-2	benzo(b)fluoranthene	20 u
(75B)	207-08-9	benzo(k)fluoranthene	20 u
(76B)	218-01-9	chrysene	20 u
(77B)	208-96-8	acenaphthylene	10 u
(78B)	120-12-7	anthracene	10 u
(79B)	191-24-2	benzo(ghi)perylene	20 u
(80B)	86-73-7	fluorene	10 u
(81B)	85-01-8	phenanthrene	10 u
(82B)	53-70-3	dibenzo(a,h)anthracene	20 u
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20 u
(84B)	129-00-0	pyrene	10 u
	62-53-3	aniline	5 u
	100-51-6	benzyl alcohol	20 u
	106-47-8	4-chloroaniline	50 u
	132-64-9	dibenzofuran	10 u
	91-57-6	2-methylnaphthalene	20 u
	88-74-4	2-nitroaniline	100 u
	99-09-2	3-nitroaniline	100 u
	100-01-6	4-nitroaniline	100 u

12/83
V3/21/84

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Sample Number
E4338

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 155
Sample Matrix: LOW LEVEL AQUEOUS
Data Release Authorized By:

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - 68-01-6757 (825
Date Sample Received: 05-03-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one) PVM
DATE EXTRACTED/PREPARED: 5-11-84
DATE ANALYZED: 5-11-84
PERCENT MOISTURE: NA
CONC./DILUTION FACTOR 1

PP #	CAS #		(ug/l or ug/kg) (circle one)
(2V)	107-02-8	acrolein	100 µ
(3V)	107-13-1	acrylonitrile	100 µ
(4V)	71-43-2	benzene	5 µ
(6V)	56-23-5	carbon tetrachloride	5 µ
(7V)	108-90-7	chlorobenzene	5 µ
(10V)	107-06-2	1,2-dichloroethane	1 µ
(11V)	71-55-6	1,1,1-trichloroethane	5 µ
(13V)	75-34-3	1,1-dichloroethane	5 µ
(14V)	79-00-5	1,1,2-trichloroethane	5 µ
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10 µ
(16V)	75-00-3	chloroethane	10 µ
(19V)	110-75-8	2-chloroethylvinyl ether	10 µ
(23V)	67-66-3	chloroform	5 µ
(29V)	75-35-4	1,1-dichloroethene	5 µ
(30V)	156-60-5	trans-1,2-dichloroethene	5 µ
(32V)	78-87-5	1,2-dichloropropane	10 µ
(33V)	10061-02-6	trans-1,3-dichloropropene	5 µ
	10061-01-05	cis-1,3-dichloropropene	5 µ
(38V)	100-41-4	ethylbenzene	5 µ
(44V)	75-09-2	methylene chloride	5 µ
(45V)	74-87-3	chloromethane	10 µ
(46V)	74-83-9	bromomethane	10 µ
(47V)	75-25-2	bromoform	10 µ
(48V)	75-27-4	bromodichloromethane	5 µ
(49V)	75-69-4	fluorotrichloromethane	5 µ
(50V)	75-71-8	dichlorodifluoromethane	5 µ
(51V)	124-48-1	chlorodibromomethane	5 µ
(85V)	127-18-4	tetrachloroethene	5 µ
(86V)	108-88-3	toluene	5 µ
(87V)	79-01-6	trichloroethene	5 µ
(88V)	75-01-4	vinyl chloride	10 µ
	67-64-1	acetone	5 µ
	78-93-3	2-butanone	5 µ
	75-15-0	carbondisulfide	1 µ
	519-78-6	2-hexanone	5 µ
	108-10-1	4-methyl-2-pentanone	5 µ
	100-42-5	styrene	5 µ
	108-05-4	vinyl acetate	5 µ
	1330-20-7	total xylenes	5 µ

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one) LB Drew
DATE EXTRACTED/PREPARED: 5-8-84
DATE ANALYZED: 6-10-84
PERCENT MOISTURE: NA
CONC./DILUTION FACTOR 0.62l → 10ml

PP #	CAS #		(ug/l or ug/kg) (circle one)
(89P)	309-00-2	aldrin	0.005µ
(90P)	60-57-1	dieldrin	0.005µ
(91P)	57-74-9	chlordane	0.050µ
(92P)	50-29-3	4,4'-DDT	0.010µ
(93P)	72-55-9	4,4'-DDE	0.005µ
(94P)	72-54-8	4,4'-DDD	0.010µ
(95P)	115-29-7	α-endosulfan	0.005µ
(96P)	115-29-7	β-endosulfan	0.005µ
(97P)	1031-07-8	endosulfan sulfate	0.010µ
(98P)	72-20-8	endrin	0.005µ
(99P)	7421-93-4	endrin aldehyde	0.010µ
(100P)	76-44-8	heptachlor	0.005µ
(101P)	1024-57-3	heptachlor epoxide	0.005µ
(102P)	319-84-6	α-BHC	0.005µ
(103P)	319-85-7	β-BHC	0.005µ
(104P)	319-86-8	δ-BHC	0.005µ
(105P)	58-89-9	γ-BHC (lindane)	0.005µ
(106P)	53469-21-9	PCB-1242	0.050µ
(107P)	11097-69-1	PCB-1254	0.100µ
(108P)	11104-28-2	PCB-1221	0.100µ
(109P)	11141-16-5	PCB-1232	0.100µ
(110P)	12672-29-6	PCB-1248	0.100µ
(111P)	11096-82-5	PCB-1260	0.200µ
(112P)	12674-11-2	PCB-1016	0.050µ
(113P)	8001-35-2	toxaphene	0.050µ

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR

PP #	CAS #		(ug/l or ug/kg) (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	0.005µ

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000218

V3/21/84

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample No.
E 4338

Laboratory Name: VERSAR INC. Case No: 2681 QC Report No: 2681

B. Tentatively Identified Compounds

CAS NO.	Compound Name	Fraction	Scan No.	%Score VOA-PBM BNA-FIT	Est. Conc. (ug/L;ug/kg)
1.	No Volatiles detected				J
2.	NO BNA'S DETECTED				J
3.					J
4.					J
5.					J
6.					J
7.					J
8.					J
9.					J
10.					J
11.					J
12.					J
13.					J
14.					J
15.					J
16.					J
17.					J
18.					J
19.					J
20.					J
21.					J
22.					J
23.					J
24.					J
25.					J
26.					J
27.					J
28.					J
29.					J
30.					J

J= Estimated Concentration

3/84

V3/21/84

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000219

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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
E 4340

84MH05560

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 153
Sample Matrix: LOW LEVEL AQUEOUS
Data Release Authorized By: [signature]

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-4-84
DATE ANALYZED: 6-20-84
PERCENT MOISTURE: n/a
CONC./DILUTION FACTOR none

PP #	CAS #		(ug/l) or ug/kg (circle one)	PP #	CAS #		(ug/l) or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10 u	(52B)	87-68-3	hexachlorobutadiene	10 u
(22A)	59-50-7	p-chloro-m-cresol	10 u	(53B)	77-47-4	hexachlorocyclopentadiene	10 u
(24A)	95-57-8	2- chlorophenol	10 u	(54B)	78-59-1	isophorone	10 u
(31A)	120-83-2	2,4-dichlorophenol	10 u	(55B)	91-20-3	naphthalene	10 u
(34A)	105-67-9	2,4-dimethylphenol	10 u	(56B)	98-95-3	nitrobenzene	10 u
(57A)	88-75-5	2- nitrophenol	20 u	(62B)	86-30-6	N-nitrosodiphenylamine	10 u
(58A)	100-02-7	4-nitrophenol	50 u	(63B)	621-64-7	N-nitrosodipropylamine	10 u
(59A)	51-28-5	2,4-dinitrophenol	50 u	(66B)	117-81-7	bis (2-ethylhexyl) phthalate	18
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20 u	(67B)	85-68-7	benzyl butyl phthalate	10 u
(64A)	87-86-5	pentachlorophenol	10 u	(68B)	84-74-2	di-n-butyl phthalate	10 u
(65A)	108-95-2	phenol	10 u	(69B)	117-84-0	di-n-octyl phthalate	28
	65-85-0	benzoic acid	100 u	(70B)	84-66-2	diethyl phthalate	10 u
	95-48-7	2-methylphenol	5 u	(71B)	131-11-3	dimethyl phthalate	10 u
	108-39-4	4-methylphenol	5 u	(72B)	56-55-3	benzo(a)anthracene	10 u
	95-95-4	2,4,5-trichlorophenol	100 u	(73B)	50-32-8	benzo(a)pyrene	20 u
(1B)	83-32-9	acenaphthene	10 u	(74B)	205-99-2	benzo(b)fluoranthene	20 u
(5B)	92-87-5	benzidine	40 u	(75B)	207-08-9	benzo(k)fluoranthene	20 u
(8B)	120-82-1	1,2,4-trichlorobenzene	10 u	(76B)	218-01-9	chrysene	20 u
(9B)	118-74-1	hexachlorobenzene	10 u	(77B)	208-96-8	acenaphthylene	10 u
(12B)	67-72-1	hexachloroethane	10 u	(78B)	120-12-7	anthracene	10 u
(18B)	111-44-4	bis(2-chloroethyl)ether	10 u	(79B)	191-24-2	benzo(ghi)perylene	20 u
(20B)	91-58-7	2-chloronaphthalene	10 u	(80B)	86-73-7	fluorene	10 u
(25B)	95-50-1	1,2-dichlorobenzene	10 u	(81B)	85-01-8	phenanthrene	10 u
(26B)	541-73-1	1,3-dichlorobenzene	10 u	(82B)	53-70-3	dibenzo(a,h)anthracene	20 u
(27B)	106-46-7	1,4-dichlorobenzene	10 u	(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20 u
(28B)	91-94-1	3,3'-dichlorobenzidine	20 u	(84B)	129-00-0	pyrene	10 u
(35B)	121-14-2	2,4-dinitrotoluene	20 u		62-53-3	aniline	5 u
(36B)	606-20-2	2,6-dinitrotoluene	20 u		100-51-6	benzyl alcohol	20 u
(37B)	122-66-7	1,2-diphenylhydrazine	20 u		106-47-8	4-chloroaniline	50 u
(39B)	206-44-0	fluoranthene	10 u		132-64-9	dibenzofuran	10 u
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10 u		91-57-6	2-methylnaphthalene	20 u
(41B)	101-55-3	4-bromophenyl phenyl ether	10 u		88-74-4	2-nitroaniline	100 u
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20 u		99-09-2	3-nitroaniline	100 u
(43B)	111-91-1	bis (2-chloroethoxy) methane	20 u		100-01-6	4-nitroaniline	100 u

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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
E 4340

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 153
Sample Matrix: LOW LEVEL AQUEOUS
Data Release Authorized By:

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-11-84
DATE ANALYZED: 5-11-84
PERCENT MOISTURE: 100
CONC./DILUTION FACTOR 1

PP #	CAS #		ug/l or ug/kg (circle one)
(2V)	107-02-8	acrolein	100 u
(3V)	107-13-1	acrylonitrile	100 u
(4V)	71-43-2	benzene	5 u
(6V)	56-23-5	carbon tetrachloride	5 u
(7V)	108-90-7	chlorobenzene	5 u
(10V)	107-06-2	1,2-dichloroethane	1 u
(11V)	71-55-6	1,1,1-trichloroethane	5 u
(13V)	75-34-3	1,1-dichloroethane	5
(14V)	79-00-5	1,1,2-trichloroethane	5 u
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10 u
(16V)	75-00-3	chloroethane	10 u
(19V)	110-75-8	2-chloroethylvinyl ether	10 u
(23V)	67-66-3	chloroform	5 u
(29V)	75-35-4	1,1-dichloroethene	5 u
(30V)	156-60-5	trans-1,2-dichloroethene	5 u
(32V)	78-87-5	1,2-dichloropropane	10 u
(33V)	10061-02-6	trans-1,3-dichloropropene	5 u
	10061-01-05	cis-1,3-dichloropropene	5 u
(38V)	100-41-4	ethylbenzene	5 u
(44V)	75-09-2	methylene chloride	5 u
(45V)	74-87-3	chloromethane	10 u
(46V)	74-83-9	bromomethane	10 u
(47V)	75-25-2	bromoform	10 u
(48V)	75-27-4	bromodichloromethane	5 u
(49V)	75-69-4	fluorotrichloromethane	5 u
(50V)	75-71-8	dichlorodifluoromethane	5 u
(51V)	124-48-1	chlorodibromomethane	5 u
(85V)	127-18-4	tetrachloroethene	5 u
(86V)	108-88-3	toluene	5 u
(87V)	79-01-6	trichloroethene	5 u
(88V)	75-01-4	vinyl chloride	10 u
	67-64-1	acetone	5 u
	78-93-3	2-butanone	5 u
	75-15-0	carbondisulfide	1 u
	519-78-6	2-hexanone	5 u
	108-10-1	4-methyl-2-pentanone	5 u
	100-42-5	styrene	5 u
	108-05-4	vinyl acetate	5 u
	1330-20-7	total xylenes	5 u

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-8-84
DATE ANALYZED: 6-10-84
PERCENT MOISTURE: NA
CONC./DILUTION FACTOR 1.0 l → 10 ml

PP #	CAS #		ug/l or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.005 u
(90P)	60-57-1	dieldrin	0.005 u
(91P)	57-74-9	chlordane	0.050 u
(92P)	50-29-3	4,4'-DDT	0.010 u
(93P)	72-55-9	4,4'-DDE	0.005 u
(94P)	72-54-8	4,4'-DDD	0.010 u
(95P)	115-29-7	α-endosulfan	0.005 u
(96P)	115-29-7	β-endosulfan	0.005 u
(97P)	1031-07-8	endosulfan sulfate	0.010 u
(98P)	72-20-8	endrin	0.005 u
(99P)	7421-93-4	endrin aldehyde	0.010 u
(100P)	76-44-8	heptachlor	0.005 u
(101P)	1024-57-3	heptachlor epoxide	0.005 u
(102P)	319-84-6	α-BHC	0.005 u
(103P)	319-85-7	β-BHC	0.005 u
(104P)	319-86-8	δ-BHC	0.005 u
(105P)	58-89-9	γ-BHC (lindane)	0.005 u
(106P)	53469-21-9	PCB-1242	0.050 u
(107P)	11097-69-1	PCB-1254	0.100 u
(108P)	11104-28-2	PCB-1221	0.100 u
(109P)	11141-16-5	PCB-1232	0.100 u
(110P)	12672-29-6	PCB-1248	0.100 u
(111P)	11096-82-5	PCB-1260	0.200 u
(112P)	12674-11-2	PCB-1016	0.050 u
(113P)	8001-35-2	toxaphene	0.050 u

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR

PP #	CAS #		ug/l or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	0.005 u

12/83

V3/21/84

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample No.
E 4340

Laboratory Name: VERSAR INC. Case No: 2681 QC Report No: 2681

B. Tentatively Identified Compounds

	CAS NO.	Compound Name	Fraction	Scan No.	%Score VOA-PBM BNA-FIT	Est. Conc. (ug/L, ug/kg)	
1.	2681	No Volatiles detected					J
2.	544763	HEXADECANE	BNA	1184	990	67	J
3.	62108241	DECANE, 2,6,6-Trimethyl		1219	968	14	J
4.	629787	Heptadecane		1255	988	108	J
5.	—	Unknown		1259	—	2	J
6.	13151809	Undecane 5cyclohexyl - 5-cyclohexyl		1305	885	12	J
7.	629787	Heptadecane		1324	941	119	J
8.	3891983	Dodecane, 2,7,10-Trimethyl		1331	976	22	J
9.	629925	Nonadecane		1390	965	88	J
10.	74764117	Iron, Tricarbonyl [N-(Phenyl-2-pyridinylmethylene) Benzenamine-N,N'		1452	984	43	J
11.	62238113	Decane 2,3,5-Trimethyl		1511	955	14	J
12.	—	Unknown		1628	—	18	J
13.	17301303	Undecane 3,8-dimethyl		1644	935	8	J
14.	54105167	Cyclohexane, Undecyl-		1678	921	9	J
15.	—	Unknown		1698	—	5	J
16.	3648213	1,2-Benzenedicarboxylic Acid, Diheptyl Ester		1728	889	3	J
17.	131168	1,2-Benzenedicarboxylic Acid Dipropyl Ester		2052	770	4	J
18.	—	Unknown		2159	—	4	J
19.							J
20.							J
21.							J
22.							J
23.							J
24.							J
25.							J
26.							J
27.							J
28.							J
29.							J
30.							J

000233

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J= Estimated Concentration

3/84

V3/21/84

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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
E 4344

84MHOSR08

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 156
Sample Matrix: LOW LEVEL AQUEOUS
Data Release Authorized By:

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-4-84
DATE ANALYZED: 6-19-84
PERCENT MOISTURE: n/a
CONC./DILUTION FACTOR none

PP #	CAS #		(ug/l) or ug/kg (circle one)	PP #	CAS #		(ug/l) or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10 u	(52B)	87-68-3	hexachlorobutadiene	10 u
(22A)	59-50-7	p-chloro-m-cresol	10 u	(53B)	77-47-4	hexachlorocyclopentadiene	10 u
(24A)	95-57-8	2- chlorophenol	10 u	(54B)	78-59-1	isophorone	10 u
(31A)	120-83-2	2,4-dichlorophenol	10 u	(55B)	91-20-3	naphthalene	10 u
(34A)	105-67-9	2,4-dimethylphenol	10 u	(56B)	98-95-3	nitrobenzene	10 u
(57A)	88-75-5	2- nitrophenol	20 u	(62B)	86-30-6	N-nitrosodiphenylamine	10 u
(58A)	100-02-7	4-nitrophenol	50 u	(63B)	621-64-7	N-nitrosodipropylamine	10 u
(59A)	51-28-5	2,4-dinitrophenol	50 u	(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10 u
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20 u	(67B)	85-68-7	benzyl butyl phthalate	10 u
(64A)	87-86-5	pentachlorophenol	10 u	(68B)	84-74-2	di-n-butyl phthalate	10 u
(65A)	108-95-2	phenol	10 u	(69B)	117-84-0	di-n-octyl phthalate	10 u
	65-85-0	benzoic acid	100 u	(70B)	84-66-2	diethyl phthalate	10 u
	95-48-7	2-methylphenol	5 u	(71B)	131-11-3	dimethyl pnthalate	10 u
	108-39-4	4-methylphenol	5 u	(72B)	56-55-3	benzo(a)anthracene	10 u
	95-95-4	2,4,5-trichlorophenol	100 u	(73B)	50-32-8	benzo(a)pyrene	20 u
(1B)	83-32-9	acenaphthene	10 u	(74B)	205-99-2	benzo(b)fluoranthene	20 u
(5B)	92-87-5	benzidine	40 u	(75B)	207-08-9	benzo(k)fluoranthene	20 u
(8B)	120-82-1	1,2,4-trichlorobenzene	10 u	(76B)	218-01-9	chrysene	20 u
(9B)	118-74-1	hexachlorobenzene	10 u	(77B)	208-96-8	acenaphthylene	10 u
(12B)	67-72-1	hexachloroethane	10 u	(78B)	120-12-7	anthracene	10 u
(18B)	111-44-4	bis(2-chloroethyl)ether	10 u	(79B)	191-24-2	benzo(ghi)perylene	20 u
(20B)	91-58-7	2-chloronaphthalene	10 u	(80B)	86-73-7	fluorene	10 u
(25B)	95-50-1	1,2-dichlorobenzene	10 u	(81B)	85-01-8	phenanthrene	10 u
(26B)	541-73-1	1,3-dichlorobenzene	10 u	(82B)	53-70-3	dibenzo(a,h)anthracene	20 u
(27B)	106-46-7	1,4-dichlorobenzene	10 u	(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20 u
(28B)	91-94-1	3,3'-dichlorobenzidine	20 u	(84B)	129-00-0	pyrene	10 u
(35B)	121-14-2	2,4-dinitrotoluene	20 u		62-53-3	aniline	5 u
(36B)	606-20-2	2,6-dinitrotoluene	20 u		100-51-6	benzyl alcohol	20 u
(37B)	122-66-7	1,2-diphenylhydrazine	20 u		106-47-8	4-chloroaniline	50 u
(39B)	206-44-0	fluoranthene	10 u		132-64-9	dibenzofuran	10 u
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10 u		91-57-6	2-methylnaphthalene	20 u
(41B)	101-55-3	4-bromophenyl phenyl ether	10 u		88-74-4	2-nitroaniline	100 u
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20 u		99-09-2	3-nitroaniline	100 u
(43B)	111-91-1	bis (2-chloroethoxy) methane	20 u		100-01-6	4-nitroaniline	100 u

000547

12/83
V3/21/84

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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
E 4344

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Case No: 2681
Lab Sample ID No: 156
QC Report No: 2681
Sample Matrix: LOW LEVEL AQUEOUS
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825~~
Data Release Authorized By: Aef
Date Sample Received: 05-03-84

VOLATILES

PM

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-11-84
DATE ANALYZED: 5-11-84
PERCENT MOISTURE: 100
CONC./DILUTION FACTOR 1

PP #	CAS #		(ug/l or ug/kg) (circle one)
(2V)	107-02-8	acrolein	100 µ
(3V)	107-13-1	acrylonitrile	100 µ
(4V)	71-43-2	benzene	5 µ
(6V)	56-23-5	carbon tetrachloride	5 µ
(7V)	108-90-7	chlorobenzene	5 µ
(10V)	107-06-2	1,2-dichloroethane	1 µ
(11V)	71-55-6	1,1,1-trichloroethane	5 µ
(13V)	75-34-3	1,1-dichloroethane	5 µ
(14V)	79-00-5	1,1,2-trichloroethane	5 µ
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10 µ
(16V)	75-00-3	chloroethane	10 µ
(19V)	110-75-8	2-chloroethylvinyl ether	10 µ
(23V)	67-66-3	chloroform	5 µ
(29V)	75-35-4	1,1-dichloroethene	5 µ
(30V)	156-60-5	trans-1,2-dichloroethene	5 µ
(32V)	78-87-5	1,2-dichloropropane	10 µ
(33V)	10061-02-6	trans-1,3-dichloropropene	5 µ
	10061-01-05	cis-1,3-dichloropropene	5 µ
(38V)	100-41-4	ethylbenzene	5 µ
(44V)	75-09-2	methylene chloride	5 µ
(45V)	74-87-3	chloromethane	10 µ
(46V)	74-83-9	bromomethane	10 µ
(47V)	75-25-2	bromoform	10 µ
(48V)	75-27-4	bromodichloromethane	5 µ
(49V)	75-69-4	fluorotrichloromethane	5 µ
(50V)	75-71-8	dichlorodifluoromethane	5 µ
(51V)	124-48-1	chlorodibromomethane	5 µ
(85V)	127-18-4	tetrachloroethene	5 µ
(86V)	108-88-3	toluene	5 µ
(87V)	79-01-6	trichloroethene	5 µ
(88V)	75-01-4	vinyl chloride	10 µ
	67-64-1	acetone	5 µ
	78-93-3	2-butanone	5 µ
	75-15-0	carbondisulfide	1 µ
	519-78-6	2-hexanone	5 µ
	108-10-1	4-methyl-2-pentanone	5 µ
	100-42-5	styrene	5 µ
	108-05-4	vinyl acetate	5 µ
	1330-20-7	total xylenes	5 µ

PESTICIDES

WTDew

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-8-84
DATE ANALYZED: 6-10-84
PERCENT MOISTURE: NA
CONC./DILUTION FACTOR 1l → 10ml

PP #	CAS #		(ug/l or ug/kg) (circle one)
(89P)	309-00-2	aldrin	0.005µ
(90P)	60-57-1	dieldrin	0.005µ
(91P)	57-74-9	chlordane	0.050µ
(92P)	50-29-3	4,4'-DDT	0.010µ
(93P)	72-55-9	4,4'-DDE	0.005µ
(94P)	72-54-8	4,4'-DDD	0.010µ
(95P)	115-29-7	α-endosulfan	0.005µ
(96P)	115-29-7	β-endosulfan	0.005µ
(97P)	1031-07-8	endosulfan sulfate	0.010µ
(98P)	72-20-8	endrin	0.005µ
(99P)	7421-93-4	endrin aldehyde	0.010µ
(100P)	76-44-8	heptachlor	0.005µ
(101P)	1024-57-3	heptachlor epoxide	0.005µ
(102P)	319-84-6	α-BHC	0.005µ
(103P)	319-85-7	β-BHC	0.005µ
(104P)	319-86-8	δ-BHC	0.005µ
(105P)	58-89-9	γ-BHC (lindane)	0.005µ
(106P)	53469-21-9	PCB-1242	0.050µ
(107P)	11097-69-1	PCB-1254	0.100µ
(108P)	11104-28-2	PCB-1221	0.100µ
(109P)	11141-16-5	PCB-1232	0.100µ
(110P)	12672-29-6	PCB-1248	0.100µ
(111P)	11096-82-5	PCB-1260	0.200µ
(112P)	12674-11-2	PCB-1016	0.050µ
(113P)	8001-35-2	toxaphene	0.050µ

NA

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR

PP #	CAS #		(ug/l or ug/kg) (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	0.005µ

12/83

000548

V3/21/84

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample No.
E 4344

Laboratory Name: VERSAR INC. Case No: 2681 QC Report No: 2681

B. Tentatively Identified Compounds

CAS NO.	Compound Name	Fraction	Scan No.	%Score VOA-PBM BNA-FIT	Est. Conc. (ug/L;ug/kg)
1.	No Volatiles detected				J
2.					J
3.	NO BNA'S DETECTED				J
4.					J
5.					J
6.					J
7.					J
8.					J
9.					J
10.					J
11.					J
12.					J
13.					J
14.					J
15.					J
16.					J
17.					J
18.					J
19.					J
20.					J
21.					J
22.					J
23.					J
24.					J
25.					J
26.					J
27.					J
28.					J
29.					J
30.					J

J= Estimated Concentration

3/84

V3/21/84

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000549

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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
E 4345

84MHOSDS6

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 158
Sample Matrix: LOW LEVEL AQUEOUS
Data Release Authorized By: [signature]

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-4-84
DATE ANALYZED: 6-19-84
PERCENT MOISTURE: n/a
CONC./DILUTION FACTOR none

PP #	CAS #		(ug/l) or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	10 µ
(22A)	59-50-7	p-chloro-m-cresol	10 µ
(24A)	95-57-8	2- chlorophenol	10 µ
(31A)	120-83-2	2,4-dichlorophenol	10 µ
(34A)	105-67-9	2,4-dimethylphenol	10 µ
(57A)	88-75-5	2- nitrophenol	20 µ
(58A)	100-02-7	4-nitrophenol	50 µ
(59A)	51-28-5	2,4-dinitrophenol	50 µ
(60A)	534-52-1	4,6-dinitro-2-methylphenol	20 µ
(64A)	87-86-5	pentachlorophenol	10 µ
(65A)	108-95-2	phenol	10 µ
	65-85-0	benzoic acid	100 µ
	95-48-7	2-methylphenol	5 µ
	108-39-4	4-methylphenol	5 µ
	95-95-4	2,4,5-trichlorophenol	100 µ
(1B)	83-32-9	acenaphthene	10 µ
(5B)	92-87-5	benzidine	40 µ
(8B)	120-82-1	1,2,4-trichlorobenzene	10 µ
(9B)	118-74-1	hexachlorobenzene	10 µ
(12B)	67-72-1	hexachloroethane	10 µ
(18B)	111-44-4	bis(2-chloroethyl)ether	10 µ
(20B)	91-58-7	2-chloronaphthalene	10 µ
(25B)	95-50-1	1,2-dichlorobenzene	10 µ
(26B)	541-73-1	1,3-dichlorobenzene	10 µ
(27B)	106-46-7	1,4-dichlorobenzene	10 µ
(28B)	91-94-1	3,3'-dichlorobenzidine	20 µ
(35B)	121-14-2	2,4-dinitrotoluene	20 µ
(36B)	606-20-2	2,6-dinitrotoluene	20 µ
(37B)	122-66-7	1,2-diphenylhydrazine	20 µ
(39B)	206-44-0	fluoranthene	10 µ
(40B)	7005-72-3	4-chlorophenyl phenyl ether	10 µ
(41B)	101-55-3	4-bromophenyl phenyl ether	10 µ
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	20 µ
(43B)	111-91-1	bis (2-chloroethoxy) methane	20 µ

PP #	CAS #		(ug/l) or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	10 µ
(53B)	77-47-4	hexachlorocyclopentadiene	10 µ
(54B)	78-59-1	isophorone	10 µ
(55B)	91-20-3	naphthalene	10 µ
(56B)	98-95-3	nitrobenzene	10 µ
(62B)	86-30-6	N-nitrosodiphenylamine	10 µ
(63B)	621-64-7	N-nitrosodipropylamine	10 µ
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	10 µ
(67B)	85-68-7	benzyl butyl phthalate	10 µ
(68B)	84-74-2	di-n-butyl phthalate	10 µ
(69B)	117-84-0	di-n-octyl phthalate	10 µ
(70B)	84-66-2	diethyl phthalate	10 µ
(71B)	131-11-3	dimethyl phthalate	10 µ
(72B)	56-55-3	benzo(a)anthracene	10 µ
(73B)	50-32-8	benzo(a)pyrene	20 µ
(74B)	205-99-2	benzo(b)fluoranthene	20 µ
(75B)	207-08-9	benzo(k)fluoranthene	20 µ
(76B)	218-01-9	chrysene	20 µ
(77B)	208-96-8	acenaphthylene	10 µ
(78B)	120-12-7	anthracene	10 µ
(79B)	191-24-2	benzo(ghi)perylene	20 µ
(80B)	86-73-7	fluorene	10 µ
(81B)	85-01-8	phenanthrene	10 µ
(82B)	53-70-3	dibenzo(a,h)anthracene	20 µ
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	20 µ
(84B)	129-00-0	pyrene	10 µ
	62-53-3	aniline	5 µ
	100-51-6	benzyl alcohol	20 µ
	106-47-8	4-chloroaniline	50 µ
	132-64-9	dibenzofuran	10 µ
	91-57-6	2-methylnaphthalene	20 µ
	88-74-4	2-nitroaniline	100 µ
	99-09-2	3-nitroaniline	100 µ
	100-01-6	4-nitroaniline	100 µ

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P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
E 4345

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 158
Sample Matrix: LOW LEVEL AQUEOUS
Data Release Authorized By:

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825~~
Date Sample Received: 05-03-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-11-84
DATE ANALYZED: 5-11-84
PERCENT MOISTURE: 100
CONC./DILUTION FACTOR 1

PP #	CAS #		(ug/l) or ug/kg (circle one)
(2V)	107-02-8	acrolein	100 u
(3V)	107-13-1	acrylonitrile	100 u
(4V)	71-43-2	benzene	5 u
(6V)	56-23-5	carbon tetrachloride	5 u
(7V)	108-90-7	chlorobenzene	5 u
(10V)	107-06-2	1,2-dichloroethane	1 u
(11V)	71-55-6	1,1,1-trichloroethane	5 u
(13V)	75-34-3	1,1-dichloroethane	5 u
(14V)	79-00-5	1,1,2-trichloroethane	5 u
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10 u
(16V)	75-00-3	chloroethane	10 u
(19V)	110-75-8	2-chloroethylvinyl ether	10 u
(23V)	67-66-3	chloroform	5 u
(29V)	75-35-4	1,1-dichloroethene	5 u
(30V)	156-60-5	trans-1,2-dichloroethene	5 u
(32V)	78-87-5	1,2-dichloropropane	10 u
(33V)	10061-02-6	trans-1,3-dichloropropene	5 u
	10061-01-05	cis-1,3-dichloropropene	5 u
(38V)	100-41-4	ethylbenzene	5 u
(44V)	75-09-2	methylene chloride	5 u
(45V)	74-87-3	chloromethane	10 u
(46V)	74-83-9	bromomethane	10 u
(47V)	75-25-2	bromoform	10 u
(48V)	75-27-4	bromodichloromethane	5 u
(49V)	75-69-4	fluorotrichloromethane	5 u
(50V)	75-71-8	dichlorodifluoromethane	5 u
(51V)	124-48-1	chlorodibromomethane	5 u
(85V)	127-18-4	tetrachloroethene	5 u
(86V)	108-88-3	toluene	5 u
(87V)	79-01-6	trichloroethene	5 u
(88V)	75-01-4	vinyl chloride	10 u
	67-64-1	acetone	5 u
	78-93-3	2-butanone	5 u
	75-15-0	carbondisulfide	1 u
	519-78-6	2-hexanone	5 u
	108-10-1	4-methyl-2-pentanone	5 u
	100-42-5	styrene	5 u
	108-05-4	vinyl acetate	5 u
	1330-20-7	total xylenes	5 u

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-8-84
DATE ANALYZED: 6-10-84
PERCENT MOISTURE: NA
CONC./DILUTION FACTOR 1l → 10ml

PP #	CAS #		(ug/l) or ug/kg (circle one)
(89P)	309-00-2	aldrin	0.005u
(90P)	60-57-1	dieldrin	0.005u
(91P)	57-74-9	chlordane	0.050u
(92P)	50-29-3	4,4'-DDT	0.010u
(93P)	72-55-9	4,4'-DDE	0.005u
(94P)	72-54-8	4,4'-DDD	0.010u
(95P)	115-29-7	α-endosulfan	0.005u
(96P)	115-29-7	β-endosulfan	0.005u
(97P)	1031-07-8	endosulfan sulfate	0.010u
(98P)	72-20-8	endrin	0.005u
(99P)	7421-93-4	endrin aldehyde	0.010u
(100P)	76-44-8	heptachlor	0.005u
(101P)	1024-57-3	heptachlor epoxide	0.005u
(102P)	319-84-6	α-BHC	0.005u
(103P)	319-85-7	β-BHC	0.005u
(104P)	319-86-8	δ-BHC	0.005u
(105P)	58-89-9	γ-BHC (lindane)	0.005u
(106P)	53469-21-9	PCB-1242	0.050u
(107P)	11097-69-1	PCB-1254	0.100u
(108P)	11104-28-2	PCB-1221	0.100u
(109P)	11141-16-5	PCB-1232	0.100u
(110P)	12672-29-6	PCB-1248	0.100u
(111P)	11096-82-5	PCB-1260	0.200u
(112P)	12674-11-2	PCB-1016	0.050u
(113P)	8001-35-2	toxaphene	0.050u

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR

PP #	CAS #		(ug/l) or ug/kg (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	0.005u

12/83
V3/21/84

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample No.
E 4345

Laboratory Name: VERSAR INC. Case No: 2681 QC Report No: 2681

B. Tentatively Identified Compounds

	CAS NO.	Compound Name	Fraction	Scan No.	%Score VOA-PBM BNA-FIT	Est. Conc. (ug/L, ug/kg)	
1.		UNKNOWN	BNA	489	—	6	J
2.	108941	Cyclohexanone		533	886	9	J
3.	17312662	Dodecane, 3 ethyl-3-methyl		1183	954	15	J
4.	629787	Heptadecane		1255	965	42	J
5.	1921706	Pentadecane, 2,6,10,14-tetramethyl		1259	968	9	J
6.	629787	Heptadecane		1324	941	41	J
7.	3891983	Dodecane 2,6,10-Trimethyl		1330	968	9	J
8.	629925	Nonadecane		1389	978	49	J
9.	62238135	Decane 2,3,7 Trimethyl		1451	980	9	J
10.	62238113	Decane 2,3,5 Trimethyl		1511	968	5	J
11.		UNKNOWN		1645	—	5	J
12.		UNKNOWN		1679	—	4	J
13.							J
14.							J
15.							J
16.							J
17.							J
18.							J
19.							J
20.							
21.							
22.							
23.							
24.							
25.							
26.							
27.							
28.							
29.							
30.							

J= Estimated Concentration

3/84

V3/21/84

RESTRICTED FILE 4 - 1984

000567

SEDIMENT

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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
E 4341

84M40556

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 160
Sample Matrix: LOW LEVEL SOIL
Data Release Authorized By: [signature]

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-7-84
DATE ANALYZED: 6-16-84
PERCENT MOISTURE: 42.4% DWF 1.90
CONC./DILUTION FACTOR 1/2 Bfactor = 449

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	200 u
(22A)	59-50-7	p-chloro-m-cresol	200 u
(29A)	95-57-8	2- chlorophenol	200 u
(31A)	120-83-2	2,4-dichlorophenol	200 u
(34A)	105-67-9	2,4-dimethylphenol	200 u
(57A)	88-75-5	2- nitrophenol	400 u
(58A)	100-02-7	4-nitrophenol	1000 u
(59A)	51-28-5	2,4-dinitrophenol	1000 u
(60A)	534-52-1	4,6-dinitro-2-methylphenol	400 u
(64A)	87-86-5	pentachlorophenol	200 u
(65A)	108-95-2	phenol	200 u
	65-85-0	benzoic acid	2000 u
	95-48-7	2-methylphenol	200 u
	108-39-4	4-methylphenol	200 u
	95-95-4	2,4,5-trichlorophenol	2000 u
(1B)	83-32-9	acenaphthene	200 u
(5B)	92-87-5	benzidine	800 u
(8B)	120-82-1	1,2,4-trichlorobenzene	200 u
(9B)	118-74-1	hexachlorobenzene	200 u
(12B)	67-72-1	hexachloroethane	200 u
(18B)	111-44-4	bis(2-chloroethyl)ether	200 u
(20B)	91-58-7	2-chloronaphthalene	200 u
(25B)	95-50-1	1,2-dichlorobenzene	200 u
(26B)	541-73-1	1,3-dichlorobenzene	200 u
(27B)	106-46-7	1,4-dichlorobenzene	200 u
(28B)	91-94-1	3,3'-dichlorobenzidine	400 u
(35B)	121-14-2	2,4-dinitrotoluene	400 u
(36B)	606-20-2	2,6-dinitrotoluene	400 u
(37B)	122-66-7	1,2-diphenylhydrazine	400 u
(39B)	206-44-0	fluoranthene	200 u
(40B)	7005-72-3	4-chlorophenyl phenyl ether	200 u
(41B)	101-55-3	4-bromophenyl phenyl ether	200 u
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	200 u
(43B)	111-91-1	bis (2-chloroethoxy) methane	200 u

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	200 u
(53B)	77-47-4	hexachlorocyclopentadiene	200 u
(54B)	78-59-1	isophorone	200 u
(55B)	91-20-3	naphthalene	200 u
(56B)	98-95-3	nitrobenzene	200 u
(62B)	86-30-6	N-nitrosodiphenylamine	200 u
(63B)	621-64-7	N-nitrosodipropylamine	200 u
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	200 u
(67B)	85-68-7	benzyl butyl phthalate	200 u
(68B)	84-74-2	di-n-butyl phthalate	200 u
(69B)	117-84-0	di-n-octyl phthalate	200 u
(70B)	84-66-2	diethyl phthalate	200 u
(71B)	131-11-3	dimethyl phthalate	200 u
(72B)	56-55-3	benzo(a)anthracene	200 u
(73B)	50-32-8	benzo(a)pyrene	400 u
(74B)	205-99-2	benzo(b)fluoranthene	400 u
(75B)	207-08-9	benzo(k)fluoranthene	400 u
(76B)	218-01-9	chrysene	400 u
(77B)	208-96-8	acenaphthylene	200 u
(78B)	120-12-7	anthracene	200 u
(79B)	191-24-2	benzo(ghi)perylene	400 u
(80B)	86-73-7	fluorene	200 u
(81B)	85-01-8	phenanthrene	200 u
(82B)	53-70-3	dibenzo(a,h)anthracene	400 u
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	400 u
(84B)	129-00-0	pyrene	200 u
	62-53-3	aniline	200 u
	100-51-6	benzyl alcohol	400 u
	106-47-8	4-chloroaniline	1000 u
	132-64-9	dibenzofuran	200 u
	91-57-6	2-methylnaphthalene	400 u
	88-74-4	2-nitroaniline	2000 u
	99-09-2	3-nitroaniline	2000 u
	100-01-6	4-nitroaniline	2000 u

12/83
V3/21/84

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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
E 4341

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 160
Sample Matrix: LOW LEVEL SOIL
Data Release Authorized By: [illegible]

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-14-84
DATE ANALYZED: 5-14-84
PERCENT MOISTURE: 47.4% DWF 1.90

PP #	CAS #		ug/l or (ug/kg) (circle one)
(2V)	107-02-8	acrolein	100µ
(3V)	107-13-1	acrylonitrile	100µ
(4V)	71-43-2	benzene	5µ
(6V)	56-23-5	carbon tetrachloride	5µ
(7V)	108-90-7	chlorobenzene	5µ
(10V)	107-06-2	1,2-dichloroethane	1µ
(11V)	71-55-6	1,1,1-trichloroethane	5µ
(13V)	75-34-3	1,1-dichloroethane	5µ
(14V)	79-00-5	1,1,2-trichloroethane	5µ
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10µ
(16V)	75-00-3	chloroethane	10µ
(19V)	110-75-8	2-chloroethylvinyl ether	10µ
(23V)	67-66-3	chloroform	5µ
(29V)	75-35-4	1,1-dichloroethene	5µ
(30V)	156-60-5	trans-1,2-dichloroethene	5µ
(32V)	78-87-5	1,2-dichloropropane	10µ
(33V)	10061-02-6	trans-1,3-dichloropropene	5µ
	10061-01-05	cis-1,3-dichloropropene	5µ
(38V)	100-41-4	ethylbenzene	5µ
(44V)	75-09-2	methylene chloride	9
(45V)	74-87-3	chloromethane	10µ
(46V)	74-83-9	bromomethane	10µ
(47V)	75-25-2	bromoform	10µ
(48V)	75-27-4	bromodichloromethane	5µ
(49V)	75-69-4	fluorotrichloromethane	5µ
(50V)	75-71-8	dichlorodifluoromethane	5µ
(51V)	124-48-1	chlorodibromomethane	5µ
(85V)	127-18-4	tetrachloroethene	5µ
(86V)	108-88-3	toluene	5µ
(87V)	79-01-6	trichloroethene	5µ
(88V)	75-01-4	vinyl chloride	10µ
	67-64-1	acetone	100
	78-93-3	2-butanone	5µ
	75-15-0	carbondisulfide	1µ
	519-78-6	2-hexanone	5µ
	108-10-1	4-methyl-2-pentanone	5µ
	100-42-5	styrene	5µ
	108-05-4	vinyl acetate	5µ
	1330-20-7	total xylenes	5µ

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-10-84
DATE ANALYZED: 6-10-84
PERCENT MOISTURE: 47.4% DWF 1.90

PP #	CAS #		ug/l or (ug/kg) (circle one)
(89P)	309-00-2	aldrin	20
(90P)	60-57-1	dieldrin	20
(91P)	57-74-9	chlordane	20
(92P)	50-29-3	4,4'-DDT	20
(93P)	72-55-9	4,4'-DDE	47. ~~80~~
(94P)	72-54-8	4,4'-DDD	51. ~~80~~
(95P)	115-29-7	α-endosulfan	20
(96P)	115-29-7	β-endosulfan	20
(97P)	1031-07-8	endosulfan sulfate	20
(98P)	72-20-8	endrin	20
(99P)	7421-93-4	endrin aldehyde	20
(100P)	76-44-8	heptachlor	20
(101P)	1024-57-3	heptachlor epoxide	20
(102P)	319-84-6	α-BHC	20
(103P)	319-85-7	β-BHC	20
(104P)	319-86-8	δ-BHC	20
(105P)	58-89-9	γ-BHC (lindane)	20
(106P)	53469-21-9	PCB-1242	20
(107P)	11097-69-1	PCB-1254	20
(108P)	11104-28-2	PCB-1221	20
(109P)	11141-16-5	PCB-1232	20
(110P)	12672-29-6	PCB-1248	20
(111P)	11096-82-5	PCB-1260	20
(112P)	12674-11-2	PCB-1016	20
(113P)	8001-35-2	toxaphene	80

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-14-84
DATE ANALYZED: 6-10-84
PERCENT MOISTURE: 47.4% DWF 1.90

PP #	CAS #		ug/l or (ug/kg) (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	20

12/
V3/21/84

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample No.
E 4341

Laboratory Name: VERSAR INC. Case No: 2681 QC Report No: 2681

B. Tentatively Identified Compounds

	CAS NO.	Compound Name	Fraction	Scan No.	%Score VOA-PBM BNA-FIT	Est. Conc. (ug/L ug/kg)	
1.	3891983	Dodecane, 2,6,10-Trimethyl	BNA	1008	984	7660	J
2.	—	UNKNOWN	BNA	1030	—	4240	J
3.	62238183	Decane, 2,3,5-Trimethyl	BNA	1078	959	13900	J
4.	—	UNKNOWN	BNA	1102	—	8570	J
5.	—	UNKNOWN	BNA	1108	—	5970	J
6.	—	UNKNOWN	BNA	1150	—	4900	J
7.	—	UNKNOWN	BNA	1159	—	5260	J
8.	—	UNKNOWN	BNA	1168	—	4800	J
9.	—	UNKNOWN	BNA	1179	—	7500	J
10.	544763	Hexadecane	BNA	1184	975	13500	J
11.	—	UNKNOWN	BNA	1203	—	4370	J
12.	55045119	Tridecane, 5-Propyl	BNA	1220	953	35300	J
13.	—	UNKNOWN	BNA	1249	—	6900	J
14.	629787	Heptadecane	BNA	1256	953	14700	J
15.	55045119	Tridecane 5-Propyl	BNA	1261	931	52500	J
16.	21078659	1-Decanol, 2-Ethyl	BNA	1293	946	10000	J
17.	—	UNKNOWN	BNA	1324	—	7280	J
18.	31081182	Nonane, 3-Methyl-5-Propyl	BNA	1332	966	33190	J
19.	—	UNKNOWN	BNA	1389	—	4000	J
20.	140034	9-octadecenoic Acid, 12-(Acetyloxy)-methyl ester	BNA	1406	979	7200	J
21.	109999	Tetrahydrofuran	VOA	253	98	25	J
22.	625069	2-Pentanol, 2,4-dimethyl	VOA	261	87	10	J
23.	1779197	1,3,6-Trioxocane	VOA	326	100	25	J
24.	1066406	Trimethylsilanol	VOA	329	96	25	J
25.	108941	Cyclohexanone	VOA	661	95	25	J
26.	—	Unknown	VOA	702	—	50	J
27.							
28.							
29.							
30.							

J= Estimated Concentration

3/84

V3/21/84

000307

USEPA SMO JUL 19 1984

SEDIMENT

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U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
E 4342

84MH0 SS62

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 161
Sample Matrix: LOW LEVEL SOIL
Data Release Authorized By:

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-7-84
DATE ANALYZED: 6-16-84
PERCENT MOISTURE: 30.5% DWF 1.44
CONC./DILUTION FACTOR: B, dilu = 167

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6- trichlorophenol	200 u
(22A)	59-50-7	p-chloro-m-cresol	200 u
(24A)	95-57-8	2- chlorophenol	200 u
(31A)	120-83-2	2,4-dichlorophenol	200 u
(34A)	105-67-9	2,4-dimethylphenol	200 u
(57A)	88-75-5	2- nitrophenol	400 u
(58A)	100-02-7	4-nitrophenol	1000 u
(59A)	51-28-5	2,4-dinitrophenol	1000 u
(60A)	534-52-1	4,6-dinitro-2-methylphenol	400 u
(64A)	87-86-5	pentachlorophenol	200 u
(65A)	108-95-2	phenol	200 u
	65-85-0	benzoic acid	2000 u
	95-48-7	2-methylphenol	200 u
	108-39-4	4-methylphenol	200 u
	95-95-4	2,4,5-trichlorophenol	2000 u
(1B)	83-32-9	acenaphthene	200 u
(5B)	92-87-5	benzidine	800 u
(8B)	120-82-1	1,2,4-trichlorobenzene	200 u
(9B)	118-74-1	hexachlorobenzene	200 u
(12B)	67-72-1	hexachloroethane	200 u
(18B)	111-44-4	bis(2-chloroethyl)ether	200 u
(20B)	91-58-7	2-chloronaphthalene	200 u
(25B)	95-50-1	1,2-dichlorobenzene	200 u
(26B)	541-73-1	1,3-dichlorobenzene	200 u
(27B)	106-46-7	1,4-dichlorobenzene	200 u
(28B)	91-94-1	3,3'-dichlorobenzidine	400 u
(35B)	121-14-2	2,4-dinitrotoluene	400 u
(36B)	606-20-2	2,6-dinitrotoluene	400 u
(37B)	122-66-7	1,2-diphenylhydrazine	400 u
(39B)	206-44-0	fluoranthene	200 u
(40B)	7005-72-3	4-chlorophenyl phenyl ether	200 u
(41B)	101-55-3	4-bromophenyl phenyl ether	200 u
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	200 u
(43B)	111-91-1	bis (2-chloroethoxy) methane	200 u

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	200 u
(53B)	77-47-4	hexachlorocyclopentadiene	200 u
(54B)	78-59-1	isophorone	200 u
(55B)	91-20-3	naphthalene	200 u
(56B)	98-95-3	nitrobenzene	200 u
(62B)	86-30-6	N-nitrosodiphenylamine	200 u
(63B)	621-64-7	N-nitrosodipropylamine	200 u
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	200 u
(67B)	85-68-7	benzyl butyl phthalate	200 u
(68B)	84-74-2	di-n-butyl phthalate	200 u
(69B)	117-84-0	di-n-octyl phthalate	200 u
(70B)	84-66-2	diethyl phthalate	200 u
(71B)	131-11-3	dimethyl phthalate	200 u
(72B)	56-55-3	benzo(a)anthracene	200 u
(73B)	50-32-8	benzo(a)pyrene	400 u
(74B)	205-99-2	benzo(b)fluoranthene	400 u
(75B)	207-08-9	benzo(k)fluoranthene	400 u
(76B)	218-01-9	chrysene	400 u
(77B)	208-96-8	acenaphthylene	200 u
(78B)	120-12-7	anthracene	200 u
(79B)	191-24-2	benzo(ghi)perylene	400 u
(80B)	86-73-7	fluorene	200 u
(81B)	85-01-8	phenanthrene	200 u
(82B)	53-70-3	dibenzo(a,h)anthracene	400 u
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	400 u
(84B)	129-00-0	pyrene	200 u
	62-53-3	aniline	200 u
	100-51-6	benzyl alcohol	400 u
	106-47-8	4-chloroaniline	1000 u
	132-64-9	dibenzofuran	200 u
	91-57-6	2-methylnaphthalene	400 u
	88-74-4	2-nitroaniline	2000 u
	99-09-2	3-nitroaniline	2000 u
	100-01-6	4-nitroaniline	2000 u

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Sample Number
E 4342

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 161
Sample Matrix: LOW LEVEL SOIL
Data Release Authorized By: [illegible]

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-14-84
DATE ANALYZED: 5-14-84
PERCENT MOISTURE: 30.5% DWF 1.44

PP #	CAS #		ug/l or (ug/kg) (circle one)
(2V)	107-02-8	acrolein	100µ
(3V)	107-13-1	acrylonitrile	100µ
(4V)	71-43-2	benzene	5µ
(6V)	56-23-5	carbon tetrachloride	5µ
(7V)	108-90-7	chlorobenzene	370
(10V)	107-06-2	1,2-dichloroethane	1µ
(11V)	71-55-6	1,1,1-trichloroethane	5µ
(13V)	75-34-3	1,1-dichloroethane	5µ
(14V)	79-00-5	1,1,2-trichloroethane	5µ
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10µ
(16V)	75-00-3	chloroethane	10µ
(19V)	110-75-8	2-chloroethylvinyl ether	10µ
(23V)	67-66-3	chloroform	5µ
(29V)	75-35-4	1,1-dichloroethene	5µ
(30V)	156-60-5	trans-1,2-dichloroethene	5µ
(32V)	78-87-5	1,2-dichloropropane	10µ
(33V)	10061-02-6	trans-1,3-dichloropropene	5µ
	10061-01-05	cis-1,3-dichloropropene	5µ
(38V)	100-41-4	ethylbenzene	36
(44V)	75-09-2	methylene chloride	5µ
(45V)	74-87-3	chloromethane	10µ
(46V)	74-83-9	bromomethane	10µ
(47V)	75-25-2	bromoform	10µ
(48V)	75-27-4	bromodichloromethane	5µ
(49V)	75-69-4	fluorotrichloromethane	5µ
(50V)	75-71-8	dichlorodifluoromethane	5µ
(51V)	124-48-1	chlorodibromomethane	5µ
(85V)	127-18-4	tetrachloroethene	5µ
(86V)	108-88-3	toluene	5µ
(87V)	79-01-6	trichloroethene	5µ
(88V)	75-01-4	vinyl chloride	10µ
	67-64-1	acetone	5µ
	78-93-3	2-butanone	5µ
	75-15-0	carbondisulfide	1µ
	519-78-6	2-hexanone	5µ
	108-10-1	4-methyl-2-pentanone	5µ
	100-42-5	styrene	5µ
	108-05-4	vinyl acetate	5µ
	1330-20-7	total xylenes	5µ

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-10-84
DATE ANALYZED: 6-10-84
PERCENT MOISTURE: 30.5% DWF 1.44

PP #	CAS #		ug/l or (ug/kg) (circle one)
(89P)	309-00-2	aldrin	20
(90P)	60-57-1	dieldrin	20
(91P)	57-74-9	chlordane	20
(92P)	50-29-3	4,4'-DDT	20
(93P)	72-55-9	4,4'-DDE	20
(94P)	72-54-8	4,4'-DDD	20
(95P)	115-29-7	α-endosulfan	20
(96P)	115-29-7	β-endosulfan	20
(97P)	1031-07-8	endosulfan sulfate	20
(98P)	72-20-8	endrin	20
(99P)	7421-93-4	endrin aldehyde	20
(100P)	76-44-8	heptachlor	20
(101P)	1024-57-3	heptachlor epoxide	20
(102P)	319-84-6	α-BHC	20
(103P)	319-85-7	β-BHC	20
(104P)	319-86-8	δ-BHC	20
(105P)	58-89-9	γ-BHC (lindane)	20
(106P)	53469-21-9	PCB-1242	20
(107P)	11097-69-1	PCB-1254	20
(108P)	11104-28-2	PCB-1221	20
(109P)	11141-16-5	PCB-1232	20
(110P)	12672-29-6	PCB-1248	20
(111P)	11096-82-5	PCB-1260	20
(112P)	12674-11-2	PCB-1016	20
(113P)	8001-35-2	toxaphene	80

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-14-84
DATE ANALYZED: 6-10-84
PERCENT MOISTURE: 30.5% DWF 1.44

PP #	CAS #		ug/l or (ug/kg) (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	20

12/
V3/21/84

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample No.
E 4342

Laboratory Name: VERSAR INC. Case No: 2681 QC Report No: 2681

B. Tentatively Identified Compounds

	CAS NO.	Compound Name	Fraction	Scan No.	%Score VOA-PBM BNA-FIT	Est. Conc. (ug/L;ug/kg)	
1.	95476	Benzene, 1,2-Dimethyl	BNA	505	995	500	J
2.	—	UNKNOWN	BNA	533	—	450	J
3.	611143	Benzene, 1-ethyl-2-methyl	BNA	614	974	400	J
4.	—	UNKNOWN	BNA	628	—	400	J
5.	611143	Benzene, 1-ethyl-2-methyl	BNA	634	960	300	J
6.	620144	Benzene, 1-ethyl-3-methyl	BNA	649	984	500	J
7.	95636	Benzene, 1,2,4-Trimethyl	BNA	682	955	300	J
8.	611154	Benzene, 1-ethenyl-2-methyl	BNA	698	969	200	J
9.	289167	1,2,4-Trithiolane	BNA	762	933	900	J
10.	—	UNKNOWN	BNA	1273	—	300	J
11.	—	UNKNOWN	BNA	1316	—	450	J
12.	—	UNKNOWN	BNA	1323	—	400	J
13.	—	UNKNOWN	BNA	1356	—	300	J
14.	—	UNKNOWN	BNA	1395	—	600	J
15.	140034	9-octadecenoic Acid, 12-(Acetyloxy)methyl Ester	BNA	1406	978	1800	J
16.							J
17.		No Volatiles detected					J
18.							J
19.							J
20.							J
21.							J
22.							J
23.							J
24.							J
25.							J
26.							J
27.							J
28.							J
29.							J
30.							J

J= Estimated Concentration

3/84

V3/21/84

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000406

SEDIMENT

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P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

Sample Number
E 4343

84MHO 5 S63

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 162
Sample Matrix: LOW LEVEL SOIL
Data Release Authorized By: [signature]

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) - ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-7-84
DATE ANALYZED: 6-16-84
PERCENT MOISTURE: 23.8% DWF 1.52
CONC./DILUTION FACTOR: B factor = 164

PP #	CAS #		ug/l or ug/kg (circle one)
(21A)	88-06-2	2,4,6-trichlorophenol	200 µ
(22A)	59-50-7	p-chloro-m-cresol	200 µ
(24A)	95-57-8	2-chlorophenol	200 µ
(31A)	120-83-2	2,4-dichlorophenol	200 µ
(34A)	105-67-9	2,4-dimethylphenol	200 µ
(57A)	88-75-5	2-nitrophenol	400 µ
(58A)	100-02-7	4-nitrophenol	1000 µ
(59A)	51-28-5	2,4-dinitrophenol	1000 µ
(60A)	534-52-1	4,6-dinitro-2-methylphenol	400 µ
(64A)	87-86-5	pentachlorophenol	200 µ
(65A)	108-95-2	phenol	200 µ
	65-85-0	benzoic acid	2000 µ
	95-48-7	2-methylphenol	200 µ
	108-39-4	4-methylphenol	200 µ
	95-95-4	2,4,5-trichlorophenol	2000 µ
(1B)	83-32-9	acenaphthene	200 µ
(5B)	92-87-5	benzidine	800 µ
(8B)	120-82-1	1,2,4-trichlorobenzene	200 µ
(9B)	118-74-1	hexachlorobenzene	200 µ
(12B)	67-72-1	hexachloroethane	200 µ
(18B)	111-44-4	bis(2-chloroethyl)ether	200 µ
(20B)	91-58-7	2-chloronaphthalene	200 µ
(25B)	95-50-1	1,2-dichlorobenzene	200 µ
(26B)	541-73-1	1,3-dichlorobenzene	200 µ
(27B)	106-46-7	1,4-dichlorobenzene	200 µ
(28B)	91-94-1	3,3'-dichlorobenzidine	400 µ
(35B)	121-14-2	2,4-dinitrotoluene	400 µ
(36B)	606-20-2	2,6-dinitrotoluene	400 µ
(37B)	122-66-7	1,2-diphenylhydrazine	400 µ
(39B)	206-44-0	fluoranthene	200 µ
(40B)	7005-72-3	4-chlorophenyl phenyl ether	200 µ
(41B)	101-55-3	4-bromophenyl phenyl ether	200 µ
(42B)	39638-32-9	bis (2-chloroisopropyl) ether	200 µ
(43B)	111-91-1	bis (2-chloroethoxy) methane	200 µ

PP #	CAS #		ug/l or ug/kg (circle one)
(52B)	87-68-3	hexachlorobutadiene	200 µ
(53B)	77-47-4	hexachlorocyclopentadiene	200 µ
(54B)	78-59-1	isophorone	200 µ
(55B)	91-20-3	naphthalene	200 µ
(56B)	98-95-3	nitrobenzene	200 µ
(62B)	86-30-6	N-nitrosodiphenylamine	200 µ
(63B)	621-64-7	N-nitrosodipropylamine	200 µ
(66B)	117-81-7	bis (2-ethylhexyl) phthalate	200 µ
(67B)	85-68-7	benzyl butyl phthalate	200 µ
(68B)	84-74-2	di-n-butyl phthalate	200 µ
(69B)	117-84-0	di-n-octyl phthalate	200 µ
(70B)	84-66-2	diethyl phthalate	200 µ
(71B)	131-11-3	dimethyl phthalate	200 µ
(72B)	56-55-3	benzo(a)anthracene	200 µ
(73B)	50-32-8	benzo(a)pyrene	400 µ
(74B)	205-99-2	benzo(b)fluoranthene	400 µ
(75B)	207-08-9	benzo(k)fluoranthene	400 µ
(76B)	218-01-9	chrysene	400 µ
(77B)	208-96-8	acenaphthylene	200 µ
(78B)	120-12-7	anthracene	200 µ
(79B)	191-24-2	benzo(ghi)perylene	400 µ
(80B)	86-73-7	fluorene	200 µ
(81B)	85-01-8	phenanthrene	200 µ
(82B)	53-70-3	dibenzo(a,h)anthracene	400 µ
(83B)	193-39-5	indeno(1,2,3-cd)pyrene	400 µ
(84B)	129-00-0	pyrene	200 µ
	62-53-3	aniline	200 µ
	100-51-6	benzyl alcohol	400 µ
	106-47-8	4-chloroaniline	1000 µ
	132-64-9	dibenzofuran	200 µ
	91-57-6	2-methylnaphthalene	400 µ
	88-74-4	2-nitroaniline	2000 µ
	99-09-2	3-nitroaniline	2000 µ
	100-01-6	4-nitroaniline	2000 µ

12/83
V3/21/84

U.S. ENVIRONMENTAL PROTECTION AGENCY - CLP Sample Management Office
P.O. Box 818, Alexandria, Virginia 22313 - 703/557-2490

RECEIVED JUL 1 9 1984

Sample Number
E 4343

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: VERSAR INC.
Lab Sample ID No: 162
Sample Matrix: LOW LEVEL SOIL
Data Release Authorized By:

Case No: 2681
QC Report No: 2681
Contract No.: 68-01-6756 (824) ~~68-01-6757 (825)~~
Date Sample Received: 05-03-84

VOLATILES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-14-84
DATE ANALYZED: 5-14-84
PERCENT MOISTURE: 23.8% DWF 1.52

PP #	CAS #		ug/l or (ug/kg) (circle one)
(2V)	107-02-8	acrolein	100µ
(3V)	107-13-1	acrylonitrile	100µ
(4V)	71-43-2	benzene	5µ
(6V)	56-23-5	carbon tetrachloride	5µ
(7V)	108-90-7	chlorobenzene	5µ
(10V)	107-06-2	1,2-dichloroethane	1µ
(11V)	71-55-6	1,1,1-trichloroethane	5µ
(13V)	75-34-3	1,1-dichloroethane	5µ
(14V)	79-00-5	1,1,2-trichloroethane	5µ
(15V)	79-34-5	1,1,2,2-tetrachloroethane	10µ
(16V)	75-00-3	chloroethane	10µ
(19V)	110-75-8	2-chloroethylvinyl ether	10µ
(23V)	67-66-3	chloroform	5µ
(29V)	75-35-4	1,1-dichloroethene	5µ
(30V)	156-60-5	trans-1,2-dichloroethene	5µ
(32V)	78-87-5	1,2-dichloropropane	10µ
(33V)	10061-02-6	trans-1,3-dichloropropene	5µ
	10061-01-05	cis-1,3-dichloropropene	5µ
(38V)	100-41-4	ethylbenzene	5µ
(44V)	75-09-2	methylene chloride	5µ
(45V)	74-87-3	chloromethane	10µ
(46V)	74-83-9	bromomethane	10µ
(47V)	75-25-2	bromoform	10µ
(48V)	75-27-4	bromodichloromethane	5µ
(49V)	75-69-4	fluorotrichloromethane	5µ
(50V)	75-71-8	dichlorodifluoromethane	5µ
(51V)	124-48-1	chlorodibromomethane	5µ
(85V)	127-18-4	tetrachloroethene	5µ
(86V)	108-88-3	toluene	5µ
(87V)	79-01-6	trichloroethene	5µ
(88V)	75-01-4	vinyl chloride	10µ
	67-64-1	acetone	5µ
	78-93-3	2-butanone	5µ
	75-15-0	carbondisulfide	1µ
	519-78-6	2-hexanone	5µ
	108-10-1	4-methyl-2-pentanone	5µ
	100-42-5	styrene	5µ
	108-05-4	vinyl acetate	5µ
	1330-20-7	total xylenes	5µ

PESTICIDES

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-10-84
DATE ANALYZED: 6-10-84
PERCENT MOISTURE: 23.8% DWF 1.52

PP #	CAS #		ug/l or (ug/kg) (circle one)
(89P)	309-00-2	aldrin	20
(90P)	60-57-1	dieldrin	20
(91P)	57-74-9	chlordane	20
(92P)	50-29-3	4,4'-DDT	20
(93P)	72-55-9	4,4'-DDE	20
(94P)	72-54-8	4,4'-DDD	20
(95P)	115-29-7	α-endosulfan	20
(96P)	115-29-7	β-endosulfan	20
(97P)	1031-07-8	endosulfan sulfate	20
(98P)	72-20-8	endrin	20
(99P)	7421-93-4	endrin aldehyde	20
(100P)	76-44-8	heptachlor	20
(101P)	1024-57-3	heptachlor epoxide	20
(102P)	319-84-6	α-BHC	20
(103P)	319-85-7	β-BHC	20
(104P)	319-86-8	δ-BHC	20
(105P)	58-89-9	γ-BHC (lindane)	20
(106P)	53469-21-9	PCB-1242	20
(107P)	11097-69-1	PCB-1254	20
(108P)	11104-28-2	PCB-1221	20
(109P)	11141-16-5	PCB-1232	20
(110P)	12672-29-6	PCB-1248	20
(111P)	11096-82-5	PCB-1260	20
(112P)	12674-11-2	PCB-1016	20
(113P)	8001-35-2	toxaphene	80

DIOXINS

CONCENTRATION: (LOW) MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-14-84
DATE ANALYZED: 6-10-84
PERCENT MOISTURE: 23.8% 1.52 DWF

PP #	CAS #		ug/l or (ug/kg) (circle one)
(129B)	1746-01-6	2,3,7,8-tetrachlorodibenzo-p-dioxin	20

ORGANICS ANALYSIS DATA SHEET - Page 3

Sample No.
E 4343

Laboratory Name: VERSAR INC. Case No: 2681 QC Report No: 2681

B. Tentatively Identified Compounds

	CAS NO.	Compound Name	Fraction	Scan No.	%Score VOA-PBM BNA-FIT	Est. Conc. (ug/L;ug/kg)	
1.	7094260	Cyclohexane, 1,1,2-Trimethyl	BNA	464	970	700	J
2.	—	UNKNOWN	BNA	533	—	600	J
3.	—	UNKNOWN	BNA	565	—	400	J
4.	—	UNKNOWN	BNA	577	—	400	J
5.	—	UNKNOWN	BNA	609	—	500	J
6.	—	UNKNOWN	BNA	629	—	450	J
7.	—	UNKNOWN	BNA	649	—	550	J
8.	—	UNKNOWN	BNA	682	—	500	J
9.	—	UNKNOWN	BNA	817	—	400	J
10.	2471832	1H-Indene, 1-ethylidene	BNA	972	985	600	J
11.	581408	Naphthalene, 2,3-Dimethyl	BNA	1064	979	600	J
12.	62238135	Decane, 2,3,7-Trimethyl	BNA	1077	967	300	J
13.	573988	Napthalene 1,2-Dimethyl	BNA	1081	980	550	J
14.	54789229	1H-Inden-1-one, 2,3-Dihydro-3,3,5,6-Tetramethyl	BNA	1143	959	500	J
15.	2131411	Napthalene, 1,4,5-Trimethyl	BNA	1180	988	400	J
16.	2131411	Napthalene, 1,4,5-Trimethyl	BNA	1200	981	300	J
17.	—	UNKNOWN	BNA	1235	—	300	J
18.	—	UNKNOWN	BNA	1259	—	2100	J
19.	118467	2-naphthalenol, 8-Amino-	BNA	1272	958	340	J
20.	118467	2-naphthalenol, 8-Amino-	BNA	1316	937	500	J
21.							
22.		No Volatiles detected					
23.							
24.							
25.							
26.							
27.							
28.							
29.							
30.							

J= Estimated Concentration

3/84

V3/21/84

RECEIVED JUL 19 1984

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