EPA Region 5 Records Ctr
350910

FOCUSED SITE INSPECTION PRIORITIZATION
SITE EVALUATION REPORT
ANALYTICAL DATA PACKAGE

WAUKEGAN MUNICIPAL LANDFILL #1
SOUTHWEST CORNER OF YORKHOUSE ROAD & MCAREE ROAD
WAUKEGAN, ILLINOIS

CERCLIS ID No ILD980902175

Prepared for

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
SITE ASSESSMENT SECTION
77 West Jackson Boulevard
Chicago Illinois 60604

Date Prepared	September 14 1995
U S EPA Region	5
Contract No	68-W0-0037
Technical Direction Document No	T05-9503-262
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International Specialists in the Environment
recycled paper

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE 06-05-95

SUBJECT Review of Region V CLP Data Received for Review on May 30, 1995

FROM Dennis Wesolowski, Chief (SQC-14J) Contract Analytical Services Section L Finkelberg for D Wesolowski

TO Data User E & E

We have reviewed the data for the following case

SITE NAME Waukegan Muni LF #1 (IL)

CASE NUMBER 23582 SDG NUMBER MEHJ80

Number and Type of Samples 9 (Soil/Water)

Sample Numbers MEHJ80-88

Laboratory SWOK Hrs for Review 10 to 5 TN

Following are our findings

WATER ~~SOIL~~ samples

The duplicate audits for Fe and Zn are out of control
The preparation blank was found to contain Al and Ca

soil samples

The matrix spike recovery of Sb is out of control
The duplicate audits of Al, Ca, Cr and Mg are out of control

The data are acceptable with the qualifications described in the attached review

L Finkelberg
06-05-95

cc Regional TPO

SOIL SAMPLES(MEHJ84-88)

ICP ANALYSES:

The duplicate audit of K(35 4 RPD) was not flagged by the laboratory because the duplicate difference did not exceed the technical criterion(+/- 2X CRDL) for soil samples K data are not qualified on this basis All K data are acceptable

The matrix spike recovery of Mn(809 7%) was not flagged by the laboratory because the sample result was greater than 4X the spike concentration Mn data are not qualified on this basis The duplicate RPD of Mn(57 6) is out of control All Mn data are estimated(J) due to poor precision

The duplicate audits of Fe(30 RPD) and Se(+/- 2X CRDL) were flagged(*) by the lab, however, the technical criteria for soils(35 RPD and +/- 2X CRDL) were not exceeded All Fe and Se data are acceptable

The duplicate audits of Al(35 3 RPD), Ca(60 3 RPD), Cr(+/- 2X CRDL), and Mg(+/- 2X CRDL) are out of control All Al, Ca, Cr, and Mg data are estimated(J) due to poor precision

OTHER ANALYSES

All Hg and CN data are acceptable

Reviewed by M. Fletcher Lockheed/ESAT
Date 5/31/95

NARRATIVE

SITE	Waukegan Muni LF#1	CASE	23582
LABORATORY	SWOK	SDG	MEHJ80

The laboratory's portion of this case contains 5 low level soil samples and 4 low level water samples assayed for total metals The following narrative lists the out of control audits and their possible effects on the results

EVIDENTIAL AUDIT:

The DC-1 forms, DC-2 forms, sample tags, airbills, and chain of custody forms are originals The CN raw data for pages 224-229 are with case 23577, SDG MBHX84 The Hg raw data for pages 214-220 are with case 23546, SDG MBHX80 The remaining raw data and forms are originals All forms are present and in the order indicated on the DC-2 form(s)[inventory sheet]

WATER SAMPLES(MEHJ80-83)

ICP ANALYSES:

The duplicate audits of Al(31 RPD), Cu(200 RPD), and Pb(22 4 RPD) were not flagged by the laboratory because the duplicate differences did not exceed the technical criterion(+/- CRDL) for water samples Pb, Cu, and Al data are not qualified on this basis All Pb and Cu data are acceptable Al data are qualified below in the next paragraph

The preparation blank was found to contain Al(78 175 ug/L) and Ca(169 348 ug/L) Ca data for sample MEHJ83 and Al data for samples MEHJ80-83 are estimated(J) due to contamination

The duplicate audits of Fe(+/- CRDL) and Zn(+/- CRDL) are out of control All Fe and Zn data are estimated(J) due to poor precision

OTHER ANALYSES.

All Hg and CN data are acceptable

SOIL SAMPLES(MEHJ84-88)

ICP ANALYSES:

The matrix spike recovery of Sb(64 5%) is out of control All Sb data are estimated(UJ) due to possible elevation of detection limit

Reviewed by M. Fletcher Lockheed/ESAT
Date 5/31/95

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DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature utinized in this document the following code letters and associated definitions are provide

U Indicates the material was analyzed, but was not detected above the level of the associated value The associated value is either the sample quantitation limit or the sample detection limit

J Indicates the associated value is an estimated quantity

R Indicates the data are unusable (Note The analyte may or may not be present)

UJ Indicates the material was analyzed for, but was not detected The associated value is an estimate and may be inaccurate or imprecise

E Indicates the reported value is estimated because of the presence of interferences An explanatory note shall be included under Comments on the Cover Page (if the problem applies to all samples) or on the specific FORM I-IN (if it is an isolated problem)

M Indicates duplicate injection precision is not met

N Indictaes the spike sample recovery is not within control limits

S Indicates the reported value was determined by the Method of Standard Addition (MSA)

W Indicates the post-digestion spike for furnace AA analysis is out of control limits (85%-115%), while sample absorbance is less than 50% of the spike absorbance

+ Indicates the correlation coefficient for the MSA is less than 0 995

* Indicates the duplicate analysis is not within control limits

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

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COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

002

b Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582 SAS No _____ SDG No MEHJ80

SOW No ILM03

EPA Sample No	Lab Sample ID
MEHJ80	2226101
MEHJ80D	2226101D
MEHJ80S	2226101S
MEHJ81	2226102
MEHJ82	2226103
MEHJ83	2226104
MEHJ84	2226105
MEHJ84D	2226105D
MEHJ84S	2226105S
MEHJ85	2226106
MEHJ86	2226107
MEHJ87	2226108
MEHJ88	2226109

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MAY 30 1995
US EPA CENTRAL REGIONAL LAB
536 S CLARK ST
CHICAGO, ILLINOIS 60605

Were ICP interelement corrections applied ? Yes/No YES

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

Comments

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

Signature _____ Name Jason D Ruckman

Date May 26, 1995 Title Inorganic Program Manager

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO

MEHJ80 W1

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Matrix (soil/water) WATER Lab Sample ID 2226101___

Level (low/med) LOW__ Date Received 05/17/95

% Solids __0 0

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

CAS No	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	332	J		P_
7440-36-0	Antimony_	3 0	U	J	P_
7440-38-2	Arsenic__	5 0	U		P_
7440-39-3	Barium___	35 4	B		P_
7440-41-7	Beryllium	1 0	U		P_
7440-43-9	Cadmium__	1 0	U		P_
7440-70-2	Calcium__	78100	J	6/27/95	P_
7440-47-3	Chromium_	1 0	U		P_
7440-48-4	Cobalt___	1 0	U	CS	P_
7440-50-8	Copper___	3 1	B		P_
7439-89-6	Iron____	516	J	*	P_
7439-92-1	Lead____	4 2			P_
7439-95-4	Magnesium	41200	J		P_
7439-96-5	Manganese	82 3	J		P_
7439-97-6	Mercury__	0 20	U		CV
7440-02-0	Nickel___	1 0	U		P_
7440-09-7	Potassium	1580	B		P_
7782-49-2	Selenium_	4 0	U		P_
7440-22-4	Silver___	1 0	U		P_
7440-23-5	Sodium___	62100		6/27/95	P_
7440-28-0	Thallium_	5 0	U		P_
7440-62-2	Vanadium_	1 1	B	CS	P_
7440-66-6	Zinc____	89 2	J	*	P_
_____	Cyanide__	10 0	U		CA

Color Before COLORLESS Clarity Before CLEAR_ Texture _____

Color After COLORLESS Clarity After CLEAR_ Artifacts _____

Comments

FORM I - IN

U S EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO

MEHJ81
W2

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Matrix (soil/water) WATER Lab Sample ID 2226102___

Level (low/med) LOW__ Date Received 05/17/95

% Solids __0 0

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

CAS No	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	118	B	J	P_
7440-36-0	Antimony_	3 0	U	J	P_
7440-38-2	Arsenic__	5 0	U		P_
7440-39-3	Barium___	33 4	B		P_
7440-41-7	Beryllium	1 0	U		P_
7440-43-9	Cadmium__	1 0	U		P_
7440-70-2	Calcium__	77100	J		P_
7440-47-3	Chromium_	1 0	U	6/27/95	P_
7440-48-4	Cobalt___	1 0	U	CS	P_
7440-50-8	Copper___	2 0	U		P_
7439-89-6	Iron_____	704	J	*	P_
7439-92-1	Lead____	2 0	U		P_
7439-95-4	Magnesium	37800	J		P_
7439-96-5	Manganese	147	J		P_
7439-97-6	Mercury__	0 20	U		CV
7440-02-0	Nickel___	1 0	U		P_
7440-09-7	Potassium	2490	B		P_
7782-49-2	Selenium_	4 0	U		P_
7440-22-4	Silver___	1 0	U		P_
7440-23-5	Sodium___	73700		6/27/95	P_
7440-28-0	Thallium_	5 0	U	CS	P_
7440-62-2	Vanadium_	1 0	U		P_
7440-66-6	Zinc_____	2 0	U	*	P_
_____	Cyanide__	10 0	U		CA

Color Before COLORLESS Clarity Before CLEAR_ Texture _____

Color After COLORLESS Clarity After CLEAR_ Artifacts _____

Comments

FORM I - IN

ILMO2 1

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO

MEHJ82 W3

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Matrix (soil/water) WATER Lab Sample ID 2226103___

Level (low/med) LOW__ Date Received 05/17/95

% Solids __0 0

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

CAS No	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	105	B	J	P_
7440-36-0	Antimony_	3 0	U	J	P_
7440-38-2	Arsenic__	5 0	U		P_
7440-39-3	Barium___	36 8	B		P_
7440-41-7	Beryllium	1 0	U		P_
7440-43-9	Cadmium__	2 9	B		P_
7440-70-2	Calcium__	86200	J		P_
7440-47-3	Chromium_	1 0	U		P_
7440-48-4	Cobalt___	1 0	U		P_
7440-50-8	Copper___	2 0	U		P_
7439-89-6	Iron____	777	J		P_
7439-92-1	Lead____	2 1	B		P_
7439-95-4	Magnesium	43400			P_
7439-96-5	Manganese	129	J		P_
7439-97-6	Mercury__	0 20	U		CV
7440-02-0	Nickel___	2 0	B		P_
7440-09-7	Potassium	2560	B		P_
7782-49-2	Selenium_	4 0	U		P_
7440-22-4	Silver___	1 0	U		P_
7440-23-5	Sodium___	86500			P_
7440-28-0	Thallium_	5 0	U		P_
7440-62-2	Vanadium_	1 0	U		P_
7440-66-6	Zinc____	2 0	U		P_
_____	Cyanide__	10 0	U		CA

Color Before COLORLESS Clarity Before CLEAR_ Texture _____

Color After COLORLESS Clarity After CLEAR_ Artifacts _____

Comments

FORM I - IN

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO

MEHJ83 W4

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Matrix (soil/water) WATER Lab Sample ID 2226104___

Level (low/med) LOW__ Date Received 05/17/95

% Solids __0 0

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

CAS No	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	18 5	B	J	P_
7440-36-0	Antimony_	3 0	U	J	P_
7440-38-2	Arsenic__	5 0	U		P_
7440-39-3	Barium___	1 0	U		P_
7440-41-7	Beryllium	1 0	U		P_
7440-43-9	Cadmium__	1 0	U		P_
7440-70-2	Calcium__	69 8	B	J 6/27/95	P_
7440-47-3	Chromium_	1 0	U		P_
7440-48-4	Cobalt___	1 0	U		P_
7440-50-8	Copper___	2 0	U	CS	P_
7439-89-6	Iron____	128	J	*	P_
7439-92-1	Lead____	2 0	U		P_
7439-95-4	Magnesium	27 0	B	J	P_
7439-96-5	Manganese	1 8	B	J	P_
7439-97-6	Mercury__	0 20	U		CV
7440-02-0	Nickel___	1 0	U		P_
7440-09-7	Potassium	408	B		P_
7782-49-2	Selenium_	4 0	U		P_
7440-22-4	Silver___	1 0	U		P_
7440-23-5	Sodium___	199	B	6/27/95	P_
7440-28-0	Thallium_	5 0	U		P_
7440-62-2	Vanadium_	1 0	U	CS	P_
7440-66-6	Zinc____	2 0	U	*	P_
	Cyanide__	10 0	U		CA

Color Before COLORLESS Clarity Before CLEAR_ Texture _____

Color After COLORLESS Clarity After CLEAR_ Artifacts _____

Comments

SAMPLE_RESULTS_REFLECT_RINSATE

FORM I - IN

ILMO2 1

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO

S1 MEHJ84

Lab Name SOUTHWEST_LAB_OF_OK Contract 68-D3-0040

Lab Code SWOK Case No 23582 SAS No SDG No MEHJ80

Matrix (soil/water) SOIL Lab Sample ID 2226105

Level (low/med) LOW Date Received 05/17/95

% Solids 64 4

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

CAS No	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12300	J	*	P
7440-36-0	Antimony	0 93	U	JN	P
7440-38-2	Arsenic	7 2			P
7440-39-3	Barium	109			P
7440-41-7	Beryllium	0 84	B		P
7440-43-9	Cadmium	0 31	U		P
7440-70-2	Calcium	10400	J	*	P
7440-47-3	Chromium	22 5	J	*	P
7440-48-4	Cobalt	8 7	B		P
7440-50-8	Copper	25 7			P
7439-89-6	Iron	23900	J	*	P
7439-92-1	Lead	24 9			P
7439-95-4	Magnesium	6450	J	*	P
7439-96-5	Manganese	656	J	*	P
7439-97-6	Mercury	0 16	U		CV
7440-02-0	Nickel	23 9			P
7440-09-7	Potassium	1270	B		P
7782-49-2	Selenium	2 3			P
7440-22-4	Silver	0 31	U		P
7440-23-5	Sodium	283	B		P
7440-28-0	Thallium	1 6	U		P
7440-62-2	Vanadium	28 5			P
7440-66-6	Zinc	88 8	J		P
	Cyanide	0 78	U		CA

Color Before BLACK Clarity Before Texture MEDIUM

Color After YELLOW Clarity After Artifacts

Comments

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO

MEHJ85
52

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Matrix (soil/water) SOIL_ Lab Sample ID 2226106___

Level (low/med) LOW__ Date Received 05/17/95

% Solids _55 7

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

CAS No	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum_	8010	J	*	P_
7440-36-0	Antimony_	1 1	U	JN	P_
7440-38-2	Arsenic__	6 9			P_
7440-39-3	Barium___	55 7	B		P_
7440-41-7	Beryllium	0 61	B		P_
7440-43-9	Cadmium__	0 36	U		P_
7440-70-2	Calcium__	26500	J	*	P_
7440-47-3	Chromium_	14 5	J	*	P_
7440-48-4	Cobalt___	8 6	B		P_
7440-50-8	Copper___	53 1			P_
7439-89-6	Iron_____	19100	J	* cs 6/27/95	P_
7439-92-1	Lead_____	25 0			P_
7439-95-4	Magnesium	14400	J	*	P_
7439-96-5	Manganese	759	J	*	P_
7439-97-6	Mercury__	0 18	U		CV
7440-02-0	Nickel___	19 2			P_
7440-09-7	Potassium	896	B		P_
7782-49-2	Selenium_	1 4	U	cs 6/27/95	P_
7440-22-4	Silver___	0 36	U		P_
7440-23-5	Sodium___	290	B		P_
7440-28-0	Thallium_	2 4	B		P_
7440-62-2	Vanadium_	21 0			P_
7440-66-6	Zinc_____	161	J		P_
_____	Cyanide__	0 90	U		CA

Color Before BLACK____ Clarity Before _____ Texture MEDIUM

Color After YELLOW___ Clarity After _____ Artifacts _____

Comments

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO 000

MEHJ86 53

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Matrix (soil/water) SOIL_ Lab Sample ID 2226107___

Level (low/med) LOW__ Date Received 05/17/95

% Solids _63 7

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

CAS No	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6480	J	*	P
7440-36-0	Antimony	0 94	U	JN	P
7440-38-2	Arsenic	5 4			P
7440-39-3	Barium	48 9	B		P
7440-41-7	Beryllium	0 47	B		P
7440-43-9	Cadmium	0 31	U		P
7440-70-2	Calcium	26700	J	*	P
7440-47-3	Chromium	12 7	J	*	P
7440-48-4	Cobalt	7 9	B		P
7440-50-8	Copper	18 6			P
7439-89-6	Iron	15000	J	* CS 6/27/95	P
7439-92-1	Lead	13 0			P
7439-95-4	Magnesium	14800	J	*	P
7439-96-5	Manganese	364	J	*	P
7439-97-6	Mercury	0 16	U		CV
7440-02-0	Nickel	17 5			P
7440-09-7	Potassium	717	B		P
7782-49-2	Selenium	1 3	U	* CS 6/27/95	P
7440-22-4	Silver	0 31	U		P
7440-23-5	Sodium	236	B		P
7440-28-0	Thallium	1 6	U		P
7440-62-2	Vanadium	18 2			P
7440-66-6	Zinc	50 2	J		P
	Cyanide	0 78	U		CA

Color Before BLACK____ Clarity Before _____ Texture MEDIUM

Color After YELLOW___ Clarity After _____ Artifacts _____

Comments

FORM I - IN

ILMO2 1

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO
MEHJ87
S4

Lab Name SOUTHWEST_LAB_OF_OK Contract 68-D3-0040

Lab Code SWOK Case No 23582 SAS No SDG No MEHJ80

Matrix (soil/water) SOIL Lab Sample ID 2226108

Level (low/med) LOW Date Received 05/17/95

% Solids 57 1

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

CAS No	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6760	J	*	P
7440-36-0	Antimony	1 1	U	JN	P
7440-38-2	Arsenic	6 8			P
7440-39-3	Barium	51 1	B		P
7440-41-7	Beryllium	0 66	B		P
7440-43-9	Cadmium	0 35	U		P
7440-70-2	Calcium	50800	J	*	P
7440-47-3	Chromium	12 5	J	*	P
7440-48-4	Cobalt	9 1	B		P
7440-50-8	Copper	38 5			P
7439-89-6	Iron	16200	J	*	P
7439-92-1	Lead	22 6			P
7439-95-4	Magnesium	28500	J	*	P
7439-96-5	Manganese	424	J	*	P
7439-97-6	Mercury	0 18	U		CV
7440-02-0	Nickel	20 1			P
7440-09-7	Potassium	723	B		P
7782-49-2	Selenium	1 4	U		P
7440-22-4	Silver	0 35	U		P
7440-23-5	Sodium	242	B		P
7440-28-0	Thallium	1 8	U		P
7440-62-2	Vanadium	22 7			P
7440-66-6	Zinc	143	J		P
	Cyanide	0 88	U		CA

Color Before BLACK Clarity Before Texture MEDIUM

Color After YELLOW Clarity After Artifacts

Comments

FORM I - IN

ILMO2 1

U S EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO

MEHJ88
55

Lab Name SOUTHWEST_LAB_OF_OK Contract 68-D3-0040

Lab Code SWOK Case No 23582 SAS No SDG No MEHJ80

Matrix (soil/water) SOIL Lab Sample ID 2226109

Level (low/med) LOW Date Received 05/17/95

% Solids 48 4

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

CAS No	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7840	J	*	P
7440-36-0	Antimony	1 2	U	J N	P
7440-38-2	Arsenic	5 8			P
7440-39-3	Barium	66 7	B		P
7440-41-7	Beryllium	0 55	B		P
7440-43-9	Cadmium	0 41	U		P
7440-70-2	Calcium	26800	J	*	P
7440-47-3	Chromium	15 2	J	*	P
7440-48-4	Cobalt	9 9	B		P
7440-50-8	Copper	21 7	J		P
7439-89-6	Iron	16600		*	P
7439-92-1	Lead	19 4			P
7439-95-4	Magnesium	13700	J	*	P
7439-96-5	Manganese	539	J	*	P
7439-97-6	Mercury	0 21	U		CV
7440-02-0	Nickel	21 3			P
7440-09-7	Potassium	825	B		P
7782-49-2	Selenium	1 7	B	*	P
7440-22-4	Silver	0 41	U		P
7440-23-5	Sodium	244	B		P
7440-28-0	Thallium	2 1	U		P
7440-62-2	Vanadium	19 4	B		P
7440-66-6	Zinc	73 0	J		P
	Cyanide	1 0	U		CA

Color Before BLACK Clarity Before Texture MEDIUM

Color After YELLOW Clarity After Artifacts

Comments

FORM I - IN

3
BLANKS

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Preparation Blank Matrix (soil/water) SOIL_

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

Analyte	Initial Calib Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	12 0	U	12 0	U	12 0	U	12 0	U	2 400	U	P
Antimony	3 0	U	3 0	U	3 0	U	3 0	U	0 600	U	P
Arsenic	5 0	U	5 0	U	5 0	U	5 0	U	1 000	U	P
Barium	1 0	U	1 0	U	1 0	U	1 0	U	0 200	U	P
eryllium	1 0	U	1 0	U	1 0	U	1 0	U	0 200	U	P
admium	1 0	U	1 0	U	1 0	U	1 0	U	0 200	U	P
Calcium	46 0	U	46 0	U	46 0	U	46 0	U	9 200	U	P
Chromium	1 0	U	1 0	U	1 0	U	1 0	U	0 200	U	P
Cobalt	1 0	U	1 0	U	1 0	U	1 0	U	0 200	U	P
Copper	2 0	U	2 0	U	2 0	U	2 0	U	0 400	U	P
Iron	12 0	U	12 0	U	12 0	U	12 0	U	2 400	U	P
Lead	2 0	U	2 0	U	2 0	U	2 0	U	0 400	U	P
Magnesium	10 0	U	10 0	U	10 0	U	10 0	U	2 000	U	P
Manganese	1 0	U	1 0	U	1 0	U	1 0	U	0 200	U	P
Mercury	0 2	U	0 2	U	0 2	U			0 100	U	CV
Nickel	1 0	U	1 0	U	1 0	U	1 0	U	0 200	U	P
Potassium	320 0	U	320 0	U	320 0	U	320 0	U	64 000	U	P
Selenium	4 0	U	4 0	U	4 0	U	4 0	U	0 800	U	P
Silver	1 0	U	1 0	U	1 0	U	1 0	U	0 200	U	P
Sodium	30 0	U	30 0	U	30 0	U	30 0	U	6 000	U	P
Thallium	5 0	U	5 0	U	5 0	U	5 0	U	1 000	U	P
Vanadium	1 0	U	1 0	U	1 0	U	1 0	U	0 200	U	P
Zinc	2 0	U	2 0	U	2 0	U	2 0	U	-1 091	B	P
Cyanide	10 0	U	10 0	U	10 0	U	10 0	U	0 500	U	CA

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3
BLANKS

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Preparation Blank Matrix (soil/water) WATER

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

Analyte	Initial Calib Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			12 0	U	12 0	U	12 0	U	78 175	B	P
Antimony			3 0	U	3 0	U	3 0	U	3 000	U	P
Arsenic			5 0	U	5 0	U	5 0	U	5 000	U	P
Barium			1 0	U	1 0	U	1 0	U	1 000	U	P
eryllium			1 0	U	1 0	U	1 0	U	1 000	U	P
admium			1 0	U	1 0	U	1 0	U	1 000	U	P
Calcium			46 0	U	46 0	U	46 0	U	169 348	B	P
Chromium			1 0	U	1 0	U	1 0	U	1 000	U	P
Cobalt			1 0	U	1 0	U	1 0	U	1 000	U	P
Copper			-2 4	B	-2 3	B	-2 4	B	2 000	U	P
Iron			12 0	U	12 0	U	12 0	U	12 000	U	P
Lead			2 0	U	2 0	U	2 0	U	2 000	U	P
Magnesium			10 0	U	10 0	U	10 0	U	10 000	U	P
Manganese			1 0	U	1 0	U	1 0	U	1 000	U	P
Mercury	0 2	U	0 2	U	0 2	U	0 2	U	0 200	U	CV
Nickel			1 0	U	-1 2	B	-1 4	B	-1 161	B	P
Potassium			320 0	U	320 0	U	320 0	U	320 000	U	P
Selenium			4 0	U	4 0	U	4 0	U	4 000	U	P
Silver			1 0	U	1 0	U	1 0	U	1 000	U	P
Sodium			30 0	U	30 0	U	30 0	U	30 000	U	P
Thallium			5 0	U	5 0	U	6 4	B	5 000	U	P
Vanadium			1 0	U	1 0	U	1 0	U	1 000	U	P
Zinc			2 0	U	2 0	U	2 0	U	-5 711	B	P
Cyanide			10 0	U					10 000	U	CA

3
BLANKS

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Preparation Blank Matrix (soil/water) _____

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

Analyte	Initial Calib Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony			30	U	30	U	30	U			P
Arsenic			50	U	50	U	50	U			P
Barium			10	U	10	U	10	U			P
Beryllium			10	U	10	U	10	U			P
Cadmium			10	U	10	U	10	U			P
Calcium											NR
Chromium			10	U	10	U	10	U			P
Cobalt			10	U	10	U	10	U			P
Copper			20	U	20	U	20	U			P
Iron			120	U	120	U	120	U			P
Lead			20	U	20	U	20	U			P
Magnesium			100	U	100	U	100	U			P
Manganese			10	U	10	U	10	U			P
Mercury											NR
Nickel			10	U	10	U	10	U			P
Potassium											NR
Selenium			40	U	40	U	40	U			P
Silver			10	U	10	U	10	U			P
Sodium			300	U	300	U	300	U			P
Thallium			50	U	50	U	50	U			P
Vanadium			10	U	10	U	10	U			P
Zinc			20	U	20	U	20	U			P
Cyanide											NR

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3
BLANKS

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Preparation Blank Matrix (soil/water) _____

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

Analyte	Initial Calib Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	120	U	120	U	120	U	120	U			P
Antimony	30	U	30	U	30	U	30	U			P
Arsenic	50	U	50	U	50	U	50	U			P
Barium	10	U	10	U	10	U	10	U			P
eryllium	10	U	10	U	10	U	10	U			P
admium	10	U	10	U	10	U	10	U			P
Calcium	460	U	460	U	460	U	460	U			P
Chromium	10	U	10	U	10	U	10	U			P
Cobalt	10	U	10	U	10	U	10	U			P
Copper	20	U	20	U	20	U	20	U			P
Iron	120	U	120	U	120	U	120	U			P
Lead	20	U	20	U	20	U	20	U			P
Magnesium	100	U	100	U	100	U	100	U			P
Manganese	10	U	10	U	10	U	10	U			P
Mercury											NR
Nickel	10	U	10	U	10	U	10	U			P
Potassium	3200	U	3200	U	3200	U	3200	U			P
Selenium	40	U	40	U	40	U	40	U			P
Silver	10	U	10	U	10	U	11	B			P
Sodium	300	U	300	U	300	U	300	U			P
Thallium	50	U	50	U	50	U	50	U			P
Vanadium	10	U	10	U	10	U	10	U			P
Zinc	20	U	20	U	20	U	20	U			P
Cyanide											NR

FORM III - IN

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3
BLANKS

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Preparation Blank Matrix (soil/water) _____

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

Analyte	Initial Calib Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead											NR
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium											NR
Silver											NR
Sodium	30 0	U	30 0	U	30 0	U	30 0	U			P
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

FORM III - IN

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5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO

MEHJ80S

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582 SAS No _____ SDG No MEHJ80

Matrix (soil/water) WATER_ Level (low/med) LOW___

% Solids for Sample __0 0

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	2236 7810		331 9200		2000 00	95 2		P
Antimony	75-125	507 0990		3 0000	U	500 00	101 4		P
Arsenic	75-125	2013 4080		5 0000	U	2000 00	100 7		P
Barium	75-125	1987 3620		35 4330	B	2000 00	97 6		P
Beryllium	75-125	49 0570		1 0000	U	50 00	98 1		P
Cadmium	75-125	47 6470		1 0000	U	50 00	95 3		P
Calcium									NR
Chromium	75-125	194 8360		1 0000	U	200 00	97 4		P
Cobalt	75-125	475 8010		1 0000	U	500 00	95 2		P
Copper	75-125	246 4280		3 1370	B	250 00	97 3		P
Iron	75-125	1389 0130		515 6340		1000 00	87 3		P
Lead	75-125	486 4030		4 2030		500 00	96 4		P
Magnesium									NR
Manganese	75-125	571 6620		82 3080		500 00	97 9		P
Mercury	75-125	1 1700		0 2000	U	1 00	117 0		CV
Nickel	75-125	477 3580		1 0000	U	500 00	95 5		P
Potassium									NR
Selenium	75-125	2069 8170		4 0000	U	2000 00	103 5		P
Silver	75-125	49 3500		1 0000	U	50 00	98 7		P
Sodium									NR
Thallium	75-125	1901 6220		5 0000	U	2000 00	95 1		P
Vanadium	75-125	484 9110		1 1000	B	500 00	96 8		P
Zinc	75-125	500 7840		89 1590		500 00	82 3		P
Cyanide	75-125	75 4610		10 0000	U	100 00	75 5		CA

Comments

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5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO

MEHJ84S

Lab Name SOUTHWEST_LAB_OF_OK Contract 68-D3-0040

Lab Code SWOK Case No 23582 SAS No SDG No MEHJ80

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

% Solids for Sample 64 4

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony	75-125	100 1783		0 9317	U	155 28	64 5	N	P
Arsenic	75-125	627 5301		7 1978		621 12	99 9		P
Barium	75-125	749 8276		109 2618		621 12	103 1		P
Beryllium	75-125	16 0661		0 8398	B	15 53	98 0		P
Cadmium	75-125	15 3345		0 3106	U	15 53	98 7		P
Calcium									NR
Chromium	75-125	80 9463		22 4708		62 11	94 1		P
Cobalt	75-125	164 4795		8 7292	B	155 28	100 3		P
Copper	75-125	100 1609		25 7497		77 64	95 8		P
Iron									NR
Lead	75-125	184 3789		24 9255		155 28	102 7		P
Magnesium									NR
Manganese		1913 2140		655 9025		155 28	809 7		P
Mercury	75-125	0 6949		0 1553	U	0 78	89 1		CV
Nickel	75-125	175 7143		23 9056		155 28	97 8		P
Potassium									NR
Selenium	75-125	613 1522		2 2624		621 12	98 4		P
Silver	75-125	15 4668		0 3106	U	15 53	99 6		P
Sodium									NR
Thallium	75-125	583 4519		1 5528	U	621 12	93 9		P
Vanadium	75-125	180 5102		28 4866		155 28	97 9		P
Zinc	75-125	259 2174		88 7786		155 28	109 8		P
Cyanide	75-125	6 1996		0 7764	U	7 76	79 9		CA

Comments

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5B
POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO

MEHJ84A

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Matrix (soil/water) SOIL__ Level (low/med) LOW___

Concentration Units ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									NR
Antimony		119 41		3 00	U	120 0	99 5		P
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments

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6
DUPLICATES

EPA SAMPLE NO

MEHJ80D

Lab Name SOUTHWEST_LAB_OF_OK Contract 68-D3-0040

Lab Code SWOK Case No 23582 SAS No SDG No MEHJ80

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

% Solids for Sample 0 0 % Solids for Duplicate 0 0

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum	200 0	331 9200		242 7430		31 0		P
Antimony		3 0000	U	3 0000	U			P
Arsenic		5 0000	U	5 0000	U			P
Barium		35 4330	B	34 8630	B	1 6		P
Beryllium		1 0000	U	1 0000	U			P
Cadmium		1 0000	U	1 0000	U			P
Calcium		78142 6870		76529 8280		2 1		P
Chromium		1 0000	U	1 0000	U			P
Cobalt		1 0000	U	1 0000	U			P
Copper		3 1370	B	2 0000	U	200 0		P
Iron	100 0	515 6340		383 9220		29 3	*	P
Lead	3 0	4 2030		3 3560		22 4		P
Magnesium		41229 7540		41322 6050		0 2		P
Manganese		82 3080		82 4670		0 2		P
Mercury		0 2000	U	0 2000	U			CV
Nickel		1 0000	U	1 0000	U			P
Potassium		1581 4560	B	1743 9340	B	9 8		P
Selenium		4 0000	U	4 0000	U			P
Silver		1 0000	U	1 0000	U			P
Sodium		62072 8510		60861 7460		2 0		P
Thallium		5 0000	U	5 0000	U			P
Vanadium		1 1000	B	1 3220	B	18 3		P
Zinc	20 0	89 1590		12 4170	B	151 1	*	P
Cyanide		10 0000	U	10 0000	U			CA

FORM VI - IN

ILMO2 1

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6
DUPLICATES

EPA SAMPLE NO

MEHJ84D

Lab Name SOUTHWEST_LAB_OF_OK Contract 68-D3-0040

Lab Code SWOK Case No 23582 SAS No SDG No MEHJ80

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

% Solids for Sample 64 4 % Solids for Duplicate 60 2

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		12292 0820		8607 4419		35 3	*	P
Antimony		0 9317	U	0 9317	U			P
Arsenic	3 1	7 1978		6 4273		11 3		P
Barium	62 1	109 2618		78 7351		32 5		P
Beryllium		0 8398	B	0 6146	B	31 0		P
Cadmium		0 3106	U	0 3106	U			P
Calcium		10440 4795		19457 5795		60 3	*	P
Chromium	3 1	22 4708		14 6146		42 4	*	P
Cobalt		8 7292	B	6 7422	B	25 7		P
Copper	7 8	25 7497		20 9901		20 4		P
Iron		23921 0065		17686 2978		30 0	*	P
Lead		24 9255		27 6065		10 2		P
Magnesium	1552 8	6452 9516		11679 0264		57 6	*	P
Manganese		655 9025		425 0155		42 7	*	P
Mercury		0 1553	U	0 1553	U			CV
Nickel	12 4	23 9056		18 1702		27 3		P
Potassium		1269 5525	B	887 6258	B	35 4		P
Selenium	1 6	2 2624		1 2422	U	200 0	*	P
Silver		0 3106	U	0 3106	U			P
Sodium		283 0978	B	280 1789	B	1 0		P
Thallium		1 5528	U	1 5528	U			P
Vanadium	15 5	28 4866		20 0705		34 7		P
Zinc		88 7786		88 2463		0 6		P
Cyanide		0 7764	U	0 7764	U			CA

10
Instrument Detection Limits (Quarterly)

ɔ Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

ICP ID Number TJA#2_____ Date 04/04/95

Flame AA ID Number _____

Furnace AA ID Number _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308 22		200	7 0	P
Antimony	206 83		60	3 0	P
Arsenic	189 04		10	5 0	P
Barium	493 41		200	1 0	P
Beryllium	313 04		5	1 0	P
Cadmium	226 50		5	1 0	P
Calcium	317 93		5000	8 0	P
Chromium	267 72		10	1 0	P
Cobalt	228 61		50	1 0	P
Copper	324 75		25	2 0	P
Iron	271 44		100	12 0	P
Lead	220 35		3	2 0	P
Magnesium	279 08		5000	10 0	P
Manganese	257 61		15	1 0	P
Mercury			0 2		NR
Nickel	231 60		40	1 0	P
Potassium	766 49		5000	23 0	P
Selenium	196 02		5	4 0	P
Silver	328 07		10	1 0	P
Sodium	588 99		5000	6 0	P
Thallium	190 68		10	5 0	P
Vanadium	292 40		50	1 0	P
Zinc	213 86		20	2 0	P

Comments

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Instrument Detection Limits (Quarterly)

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

ICP ID Number TJA61_____ Date 04/01/95

Flame AA ID Number _____

Furnace AA ID Number _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308 22		200	12 0	P
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium	317 93		5000	46 0	P
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0 2		NR
Nickel			40		NR
Potassium	776 49		5000	320 0	P
Selenium			5		NR
Silver			10		NR
Sodium	588 99		5000	30 0	P
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments

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Instrument Detection Limits (Quarterly)

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

ICP ID Number _____ Date 04/14/95

Flame AA ID Number PS200B_____

Furnace AA ID Number _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury	253 30		0 2	0 2	CV
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments

FORM X - IN ILMO2

14
ANALYSIS RUN LOG

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Instrument ID Number TJA#2_____ Method P_

Start Date 05/22/95 End Date 05/22/95

EPA Sample No	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1 00	0901		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
S	1 00	0906		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ICV	1 00	0911		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ICB	1 00	0916		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ICSA	1 00	0932		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ICSAB	1 00	0937		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CRI	1 00	0942			X	X		X	X		X	X	X		X		X		X		X	X		X	X	X	
CCV	1 00	0947		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCB	1 00	0952		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
PBS	1 00	0957		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X		
CSS	1 00	1002		X	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CSS	5 00	1007								X																	
MEHJ84	1 00	1012		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MEHJ84L	5 00	1017		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MEHJ84D	1 00	1022		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MEHJ84S	1 00	1027			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X	
MEHJ85	1 00	1032		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MEHJ86	1 00	1037		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZZZ	1 00	1042																									
CCV	1 00	1047		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCB	1 00	1052		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MEHJ87	1 00	1057		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MEHJ88	1 00	1102		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
MEHJ84A	1 00	1108			X																						
ZZZZZZ	1 00	1113																									
CCV	1 00	1118		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCB	1 00	1123		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZZZ	1 00	1128																									
ZZZZZZ	1 00	1133																									
ZZZZZZ	1 00	1138																									
ZZZZZZ	1 00	1143																									
ZZZZZZ	1 00	1150																									

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ANALYSIS RUN LOG

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Instrument ID Number TJA#2_____ Method P_

Start Date 05/22/95 End Date 05/22/95

EPA Sample No	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1 00	1155																									
ZZZZZZ	1 00	1159																									
ZZZZZZ	1 00	1204																									
ZZZZZZ	1 00	1209																									
CCV	1 00	1214		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCB	1 00	1219		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ZZZZZZ	1 00	1224																									
ZZZZZZ	1 00	1229																									
ZZZZZZ	1 00	1234																									
ZZZZZZ	1 00	1239																									
ZZZZZ	1 00	1244																									
ZZZZZZ	1 00	1249																									
CCV	1 00	1254		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCB	1 00	1300		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ICSA	1 00	1305		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
ICSAB	1 00	1310		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CRI	1 00	1315			X	X		X	X		X	X	X		X		X		X		X	X		X	X	X	
CCV	1 00	1320		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
CCB	1 00	1325		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	

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ANALYSIS RUN LOG

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Instrument ID Number TJA61_____ Method P_

Start Date 05/22/95 End Date 05/23/95

EPA Sample No	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1 00	2355		X						X										X			X				
S	1 00	0002		X						X										X			X				
ICV	1 00	0006		X						X										X			X				
ICB	1 00	0010		X						X										X			X				
ICSA	1 00	0014		X						X										X			X				
ICSAB	1 00	0018		X						X										X			X				
CRI	1 00	0023																									
CCV	1 00	0027		X						X										X			X				
CCB	1 00	0031		X						X										X			X				
PBW	1 00	0035		X						X										X							
CSW	1 00	0039		X						X										X							
CSW	1 00	0043																									
MEHJ80	1 00	0047		X						X										X			X				
MEHJ80L	5 00	0051		X						X										X			X				
MEHJ80D	1 00	0055		X						X										X			X				
MEHJ80S	1 00	0059		X																							
MEHJ81	1 00	0103		X						X										X			X				
MEHJ82	1 00	0112		X						X										X			X				
MEHJ83	1 00	0117		X						X										X							
CCV	1 00	0121		X						X										X			X				
CCB	1 00	0125		X						X										X			X				
ICSA	1 00	0129		X						X										X			X				
ICSAB	1 00	0133		X						X										X			X				
CRI	1 00	0137																									
CCV	1 00	0141		X						X										X			X				
CCB	1 00	0145		X						X										X			X				

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ANALYSIS RUN LOG

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Instrument ID Number PS200B_____ Method CV

Start Date 05/19/95 End Date 05/19/95

EPA Sample No	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1 00	0911																X									
S0 2	1 00	0913																X									
S1	1 00	0915																X									
S5	1 00	0917																X									
S10	1 00	0920																X									
ICV	1 00	0935																X									
ICB	1 00	0937																X									
CRA	1 00	0939																X									
CCV	1 00	0942																X									
CCB	1 00	0944																X									
3S	1 00	1000																X									
LCSS	10 00	1002																X									
MEHJ84	1 00	1004																X									
MEHJ84D	1 00	1007																X									
MEHJ84S	1 00	1009																X									
MEHJ85	1 00	1011																X									
MEHJ86	1 00	1013																X									
MEHJ87	1 00	1016																X									
MEHJ88	1 00	1018																X									
ZZZZZZ	1 00	1020																									
CCV	1 00	1022																X									
CCB	1 00	1025																X									

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ANALYSIS RUN LOG

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Instrument ID Number PS200B_____ Method CV

Start Date 05/19/95 End Date 05/19/95

EPA Sample No	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1 00	1255																X									
S0 2	1 00	1258																X									
S1	1 00	1300																									
S5	1 00	1302																									
S10	1 00	1305																X									
S1	1 00	1308																X									
S5	1 00	1310																X									
ICV	1 00	1316																X									
ICB	1 00	1319																X									
CRA	1 00	1321																X									
CV	1 00	1323																X									
CB	1 00	1326																X									
ZZZZZZ	1 00	1328																									
ZZZZZZ	1 00	1330																									
ZZZZZZ	1 00	1332																									
ZZZZZZ	1 00	1335																									
PBW	1 00	1337																X									
MEHJ80	1 00	1339																X									
MEHJ80D	1 00	1342																X									
MEHJ80S	1 00	1344																X									
MEHJ81	1 00	1346																X									
MEHJ82	1 00	1348																X									
CCV	1 00	1351																X									
CCB	1 00	1353																X									
MEHJ83	1 00	1355																X									
ZZZZZZ	1 00	1358																									
ZZZZZZ	1 00	1400																									
ZZZZZZ	1 00	1402																									
ZZZZZZ	1 00	1404																									
ZZZZZZ	1 00	1407																									
ZZZZZZ	1 00	1409																									
ZZZZZZ	1 00	1411																									

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ANALYSIS RUN LOG

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Instrument ID Number PS200B_____ Method CV

Start Date 05/19/95 End Date 05/19/95

EPA Sample No	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV	1 00	1414																X									
CCB	1 00	1416																X									

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ANALYSIS RUN LOG

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Instrument ID Number LACHAT_____ Method CA

Start Date 05/23/95 End Date 05/23/95

EPA Sample No	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S200	1 00	1248																									X
S100	1 00	1249																									X
S50	1 00	1250																									X
S10	1 00	1251																									X
S0	1 00	1252																									X
ICV	1 00	1254																									X
ICB	1 00	1255																									X
CCV	1 00	1256																									X
CCB	1 00	1257																									X
ZZZZZZ	1 00	1257																									
ZZZZZ	1 00	1258																									
PBS	1 00	1259																									X
LCSS	1 00	1300																									X
MEHJ84	1 00	1300																									X
MEHJ84D	1 00	1301																									X
CCV	1 00	1302																									X
CCB	1 00	1302																									X
MEHJ84S	1 00	1305																									X
MEHJ85	1 00	1305																									X
MEHJ86	1 00	1306																									X
MEHJ87	1 00	1307																									X
MEHJ88	1 00	1308																									X
PBW	1 00	1308																									X
MEHJ80	1 00	1309																									X
MEHJ80D	1 00	1310																									X
MEHJ80S	1 00	1310																									X
MEHJ81	1 00	1311																									X
CCV	1 00	1312																									X
CCB	1 00	1313																									X
MEHJ82	1 00	1315																									X
MEHJ83	1 00	1315																									X
ZZZZZZ	1 00	1316																									

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ANALYSIS RUN LOG

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Instrument ID Number LACHAT_____ Method CA

Start Date 05/23/95 End Date 05/23/95

EPA Sample No	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1 00	1317																									
ZZZZZZ	1 00	1318																									
ZZZZZZ	1 00	1318																									
ZZZZZZ	1 00	1319																									
ZZZZZZ	1 00	1320																									
ZZZZZZ	1 00	1320																									
ZZZZZZ	1 00	1321																									
CCV	1 00	1322																									X
CCB	1 00	1323																									X

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ANALYSIS RUN LOG

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Instrument ID Number TJA#2_____ Method P_

Start Date 05/22/95 End Date 05/22/95

EPA Sample No	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1	00 0303			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
S	1	00 0308			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
ICV	1	00 0313			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
ICB	1	00 0318			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
ICSA	1	00 0323			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
ICSAB	1	00 0329			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
CRI	1	00 0334			X	X		X	X		X	X	X		X		X		X		X	X		X	X	X	
CCV	1	00 0339			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
CCB	1	00 0344			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
PBW	1	00 0349			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	Y	
CSW	1	00 0354			X		X	X	X		X	X	X	X		X	X		X			X			X	λ	
LCSW	2	00 0359																					X				
LCSW	1	00 0405				X									X						X			X			
MEHJ80	1	00 0410			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X		X	X	X	
MEHJ80L	5	00 0415			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X		X	X	X	
MEHJ80D	1	00 0420			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X		X	X	X	
MEHJ80S	1	00 0425			X	X	X	X	X		X	X	X	X	X		X		X		X	X		X	X	X	
MEHJ81	1	00 0430			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X		X	X	X	
ZZZZZZ	1	00 0435																									
CCV	1	00 0440			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
CCB	1	00 0446			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
MEHJ82	1	00 0451			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X		X	X	X	
MEHJ83	1	00 0456			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
ZZZZZZ	1	00 0501																									
CCV	1	00 0506			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
CCB	1	00 0511			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
ZZZZZZ	1	00 0516																									
ZZZZZZ	1	00 0521																									
ZZZZZZ	1	00 0527																									
ZZZZZZ	1	00 0532																									
ZZZZZZ	1	00 0537																									
ZZZZZZ	1	00 0542																									

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ANALYSIS RUN LOG

Lab Name SOUTHWEST_LAB_OF_OK_____ Contract 68-D3-0040

Lab Code SWOK__ Case No 23582_ SAS No _____ SDG No MEHJ80

Instrument ID Number TJA#2_____ Method P_

Start Date 05/22/95 End Date 05/22/95

EPA Sample No	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1 00	0547																									
CCV	1 00	0552			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
CCB	1 00	0557			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
ZZZZZZ	1 00	0602																									
ZZZZZZ	1 00	0608																									
ZZZZZZ	1 00	0613																									
ZZZZZZ	1 00	0618																									
ZZZZZZ	1 00	0623																									
ZZZZZZ	1 00	0628																									
ZZZZZZ	1 00	0633																									
ZZZZZ	1 00	0638																									
ZZZZZZ	1 00	0644																									
ZZZZZZ	1 00	0649																									
CCV	1 00	0654			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
CCB	1 00	0659			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
ZZZZZZ	1 00	0704																									
ZZZZZZ	1 00	0709																									
ZZZZZZ	1 00	0720																									
ZZZZZZ	1 00	0725																									
ICSA	1 00	0730			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
ICSAB	1 00	0735			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
CRI	1 00	0740			X	X		X	X		X	X	X		X		X		X		X	X		X	X	X	
CCV	1 00	0745			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	
CCB	1 00	0750			X	X	X	X	X		X	X	X	X	X	X	X		X		X	X	X	X	X	X	

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QC EXCEPTION SUMMARY REPORT

CASE\SAS#: 23582
SITE: Waukegan Mun LF#1
MATRIX: soil/water
WATER SAMPLE SPK:
DATA SET: MPHJ80
LAB: SWDK
CONC: 100
WATER SAMPLE DUP:
LAB QC #
REVIEWED BY: DM Fletcher
SOIL SAMPLE SPK:
DATE: 5/30/95
SOIL SAMPLE DUP:

FORM #		FORM 2	FORM 2	FORM 3	FORM 3	FORM 3	FORM 4	FORM 5	FORM 6	FORM 7	FORM 7	FORM 9	FORM 9	FORM 6	FORM 5	FIELD	FIELD	FIELD	FIELD		
ELEMENT	HOLD TIME	INITIAL CALIB	CONTI N CALIB	CALIB BLANK	PREP WATER BLANK	PREP SOIL BLANK	ICS %R	SOIL SPIKE %R	SOIL DUP RPD	LCS AQ	LCS SOIL	SERIAL DILUTION AQUEOUS	SERIAL DILUTION SOIL	AQ DUP RPD	AQ SPIKE %R	BLANK	DUP RPD	BLANK	DUP RPD	GFAA DUP	GFAA ANALYT SPIKE
ALUMINUM					78,175				35.3												
ANTIMONY								64.1													
ARSENIC																					
BARIUM																					
BERYLLIUM																					
CADMIUM																					
CALCIUM					164 348				60 3												
CHROMIUM									42.4												
COBALT																					
COPPER																					
IRON														29 3							
LEAD																					
MAGNESIUM									57 6												
MANGANESE									42.7												
MERCURY																					
NICKEL																					
POTASSIUM																					
SELENIUM																					
SILVER																					
SODIUM																					
THALLIUM																					
TIN																					
VANADIUM																					
ZINC														151 1							
CYANIDE																					

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria VA 22313
703-557 2490 FTS 557 2490

Inorganic Traffic Report & Chain of Custody Record

(For Inorganic CLP Analysis)

SAS No (if applicable): NA

Case No: 20572

1 Sample Description (Enter in Column A)
1 Surface Water
2 Ground Water
3 Leachate
4 Rinsate
5 Soil/Sediment
6 Oil (High only)
7 Waste (High only)
8 Other (Specify)

2 Preservative (Enter in Column D)
1 HCl
2 HNO3
3 NaOH
4 H_2SO_4
5 $K_2CR_2O_7$
6 Ice only
7 Other (Specify)
N Not preserved

3 Region No: V

Sampling Co: ETC INT

5 Date Shipped: 5/16/95 Carrier: FEDEX

Sampler (Name): Kelly Mooney

Airbill Number: 4805097426

Sampler Signature: Kelly Mooney

6 Ship To: Sulphur, 1100 Milam, Suite 2, Houston, TX 77012 ATTN Chuck Hoover

4 Type of Activity: Lead: SF, PRP, ST, FED; Pre-Remedial: PA, SSI, LSI; Remedial: RIFS, RD, RA, O&M, NPLD; Removal: CLEM, REMA, REM, OIL, UST

7 Date Received: 5-17-95 Received by: K Collins

Laboratory Contract Number: 68-D3-0040

Unit Price: $226.00

8 Transfer to

Date Received

Received by

Contract Number

Price

CLP Sample Numbers (from labels)	A Enter # from Box 1	B Conc Low Med High	C Sample Type Comp / Grab	D Preservative from Box 6	E RAS Analysis: Metals Total	Metals Dissolved	Cyanide	Low Conc only: Nitrate/Nitrite	Fluoride	High only: pH	Conductivity	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp CLP Org Samp No	K Sample Condition on Receipt	L High Conc. Phases (Check below): Solids	Water - MS Liq	Non Water - MS Liq.
MEHJ80	1	L	G	2	X							112411	W1	5/16/95 1310	KM	ETC57	intact			
MEHJ80	1	L	G	3			X					112412	W1	5/16/95 1310	KM	ETC87				
MEHJ81	1	L	G	2	X							112417	W2	5/16/95 1035	KM	ETC86				
MEHJ81	1	L	G	3			X					112418	W2	5/16/95 1035	KM	ETC66				
MEHJ82	1	L	G	2	X							112423	W3	5/16/95 1056	KM	ETC81				
MEHJ82	1	L	G	3			X					112424	W3	5/16/95 1056	KM	ETC91				
MEHJ83	4	L	G	2	X							112421	W4	5/16/95 1115	KM	ETC70				
MEHJ83	4	L	G	3			X					112430	W4	5/16/95 1115	KM	ETC70				

Shipment for Case complete? (Y/N): Y

Page 1 of 1

Sample used for a spike and/or duplicate: MEHJ80

Additional Sampler Signatures:

Chain of Custody Seal Number: 45680-81

CHAIN OF CUSTODY RECORD

Relinquished by (Signature)	Date / Time	Received by (Signature)	Relinquished by (Signature)	Date / Time	Received by (Signature)
Kelly Mooney	5/16/95 1500				
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 Is custody seal intact? Y/N/none	
		K Collins	5/17/95 1000		

Split Samples: ☐ Accepted (Signature) ☐ Declined

EPA Form 9110-1 (Rev 5-91) Replaces EPA Form (2075-6) previous edition which may be used

DISTRIBUTION
Green Region Copy Pink SMO Copy White Lab Copy for Return to Region Yellow Lab Copy for Return to SMO

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

Inorg-2

248

1 315268

EPA

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria VA 22313
703-557 2490 FTS 557 2490

Inorganic Traffic Report & Chain of Custody Record

(For Inorganic CLP Analysis)

SAS No (if applicable): NA

Case No: 23582

1 Sample Description (Enter in Column A)
1 Surface Water
2 Ground Water
3 Leachate
4 Rinsate
5 Soil/Sediment
6 Oil (High only)
7 Waste (High only)
8 Other (Specify)

2 Preservative (Enter in Column D)
1 HCl
2 HNO3
3 NaOH
4 H_2SO_4
5 $K_2CR_2O_7$
6 Ice only
7 Other (Specify)
N Not preserved

3 Region No: V

Sampling Co: E&E TAT

Sampler (Name): Kelly Malloy

Sampler Signature: Kelly Malloy

4 Type of Activity: Lead; Pre-Remedial; Remedial; Removal

SE, PRP, ST, FED; PA, SSI, LSI; RIFS, RD, RA, O&M, NPLD; CLEM, REMA, REM, OIL, UST

5 Date Shipped: 5/16/95

Carrier: Fed Ex

Airbill Number: 4805017426

6 Ship To: Sooner
1700 West Albany, Suite C
Broken Arrow, OK 74012
ATTN Chuck Hoover

7 Date Received: 5-17-95

Received by: K. Collins

Laboratory Contract Number: 68-D3-0040

Unit Price: $226 00

8 Transfer to:

Date Received:

Received by:

Contract Number:

Price:

CLP Sample Numbers (from labels)	A Enter # from Box 1	B Conc Low Med High	C Sample Type Comp / Grab	D Preservative from Box 6	E RAS Analysis: Metals Total	Metals Dissolved	Cyanide	Low Conc only: Nitrate/Nitrite	Fluoride	High only: pH	Conductivity	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp CLP Org Samp No	K Sample Condition on Receipt	L High Conc. Phases (Check below): Solids	Water - Mis Liq	Non Water - Mis Liq
MEHJ84	5	L	G	6	X		X					112434	51	5/16/95 1330	KM	ETC 71	intact			
MEHJ85	5	L	G	6	X		X					112438	52	5/16/95 1245	KM	ETC 72	↓			
MEHJ86	5	L	G	6	X		X					112442	53	5/16/95 1100	KM	ETC 73	↓			
MEHJ87	5	L	G	6	X		X					112446	54	5/16/95 1126	KM	ETC 74	↓			
MEHJ88	5	L	G	6	X		X					112450	55	5/16/95 1150	KM	ETC 75	↓	* final sample need in SDG		

05-19-95

Shipment for Case Complete? (Y/N): Y

Page 1 of ___

Sample used for a spike and/or duplicate: MEHJ84

Additional Sampler Signatures:

Chain of Custody Seal Number: 45678-77

CHAIN OF CUSTODY RECORD

Relinquished by (Signature)	Date / Time	Received by (Signature)	Relinquished by (Signature)	Date / Time	Received by (Signature)
Kelly Malloy	5/16/95 1500				
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 Is custody seal intact? Y/N/none	
		K. Collins	5/17/95 1000		

Split Samples: ☐ Accepted (Signature) ☐ Declined

EPA Form 9110-1 (Rev 5-91) Replaces EPA Form (2075-6) previous edition which may be used

DISTRIBUTION
Green Region Copy Pink SMO Copy White Lab Copy for Return to Region Yellow Lab Copy for Return to SMO

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No _____ CERCLIS No ILD980902175

Case No 23582 Site Name Location Waukegan Muni LF #1

Contractor or EPA Lab SWOK Data User E & E

No of Samples. 9 Date Sampled or Data Received 5-30-95

Have Chain-of-Custody records been received? Yes ✓ No ___
Have traffic reports or packing lists been received? Yes ✓ No ___
If no, are traffic report or packing list numbers written on the chain-of-custody record? Yes ✓ No ___
If no, which traffic report or packing list numbers are missing?

_____ _____ _____ _____

_____ _____ _____ _____

Are basic data forms in? Yes ✓ No ___
No of samples claimed 9 No of samples received 9

Received by Lynette Burnett Date 5-30-95

Received by LSSS Alison C Harvey Date 5-30-95

Review started 5/30/95 Reviewer Signature M. Fletcher

Total time spent on review 10 + 0.5 TA Date review completed 5/31/95

Copied by L Finkelberg Date 06-05-95

Mailed to User by _____ Date _____

DATA USERS.
Please fill in the blanks below and return this form to
Sylvia Griffin, Data Mgmt Coordinator, Region V, 5SCRL

Data received by _____ Date _____

Data review received by _____ Date _____

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Dioxin Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK

PROBLEMS Please indicate reasons why data are not suitable for your uses

_____

_____

Received by Data Mgmt Coordinator for Files Data _____

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE.

SUBJECT Review of Region V CLP Data Received for Review on May 30, 1995

FROM Dennis Wesolowski, Chief (SQC-14J)
Contract Analytical Services Section

TO Data User: E & E

We have reviewed the data for the following case

SITE NAME Waukegan Muni LF #1 (1L)

CASE NUMBER 23582 SDG NUMBER MEHJ80

Number and Type of Samples 9 (Soil/Water)

Sample Numbers MEHJ80-88

Laboratory SWOK Hrs for Review 2.5 +0.5 TM

Following are our findings

Cadre review

RECEIVED
JUN 22 1995
EMERGENCY RESPONSE
SECTION II

cc Regional TPO

BELOW IS A REVIEW OF CASE 23582, SDG: MEHJ80 BY THE CADRE SYSTEM.

DC-373 The following inorganic samples are associated with a CRDL standard with low percent recovery Hits and non-detects are flagged 'VS'

Arsenic MEHJ84, MEHJ85, MEHJ86, MEHJ87, MEHJ88, PBS04
Selenium MEHJ80, MEHJ81, MEHJ82, MEHJ83, MEHJ84, MEHJ85
MEHJ86, MEHJ87, MEHJ88, PBS04, PBW03
Zinc MEHJ80, MEHJ81, MEHJ82, MEHJ83, MEHJ84, MEHJ85
MEHJ86, MEHJ87, MEHJ88, PBS04, PBW03

There are no limits for CRDL standards. No qualification is necessary.

DC-374 The following inorganic samples are associated with a CRDL standard with high percent recovery Hits and non-detects are flagged 'VS'

Lead MEHJ84, MEHJ85, MEHJ86, MEHJ87, MEHJ88, PBS04
Thallium MEHJ80, MEHJ81, MEHJ82, MEHJ83, MEHJ84, MEHJ85
MEHJ86, MEHJ87, MEHJ88, PBS04, PBW03

There are no limits for CRDL standards No qualification is necessary

DC-376 The following inorganic samples have no associated CRDL standard Hits and non-detects are flagged 'M'

Aluminum Calcium Potassium
MEHJ80, MEHJ81, MEHJ82, MEHJ83, PBW05
Sodium
MEHJ80, MEHJ81, MEHJ82

No qualification is necessary.

LABORATORY BLANKS CRITERIA

DC-283 The following inorganic samples are associated with a blank analyte with negative concentration whose absolute value is greater than the instrument detection limit (IDL) Data must be qualified using professional judgement Hits and non-detects are flagged "VS"

Nickel, Zinc
MEHJ80 MEHJ80D MEHJ80S MEHJ81 MEHJ82 MEHJ83

No qualification is necessary

DC-284 The following inorganic samples are associated with a blank concentration which is greater than the instrument detection limit (IDL) The sample concentration is also greater than the IDL and less than five times the blank concentration Hits are qualified "U" and non-detects are not flagged

Aluminum	Aluminum, Calcium
MEHJ80 MEHJ80D MEHJ81 MEHJ82	MEHJ83

The reviewer agrees with the qualification.

DC-338 During review of the following inorganic samples, the reported IDL/default CRDL value was used for cyanide

MEHJ80, MEHJ80D, MEHJ80S, MEHJ81, MEHJ82, MEHJ83
MEHJ84, MEHJ84D, MEHJ84S, MEHJ85, MEHJ86, MEHJ87
MEHJ88

No qualification is necessary

DC-312 The following inorganic samples have elements other than Al, Ca, Fe, and Mg at concentrations higher than 10 ppm that may cause potential interference Hits and non-detects are flagged "VS"

Sodium
MEHJ80, MEHJ81, MEHJ82

No qualification is necessary.

MATRIX SPIKE CRITERIA INORGANICS

Percent Recovery Limits		
Upper	125	0
Lower	75	0
Extreme lower	30	0

DC-268 The following inorganic samples are associated with a matrix spike recovery which is low, indicating that sample results may be biased low Hits are qualified "J" and non-detects are qualified "UJ"

Antimony
MEHJ84, MEHJ84A, MEHJ84D, MEHJ85, MEHJ86, MEHJ87
MEHJ88

The reviewer agrees with the qualification

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DC-256 The following inorganic samples are associated with duplicate results which did not meet relative percent difference (RPD) criteria Hits are qualified "J" and non-detects are qualified "UJ"

Aluminum
MEHJ84, MEHJ85, MEHJ86, MEHJ87, MEHJ88
Calcium
MEHJ84, MEHJ85, MEHJ86, MEHJ87, MEHJ88
Manganese
MEHJ84, MEHJ84S, MEHJ85, MEHJ86, MEHJ87, MEHJ88

The reviewer agrees with the qualification

DC-257 The following inorganic samples are not qualified for duplicates due to missing information Hits and non-detects are flagged "M"

Aluminum Antimony Arsenic Barium Beryllium Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Nickel Potassium Selenium Silver Sodium Thallium Vanadium Zinc Cyanide

MEHJ80, MEHJ81, MEHJ82, MEHJ83

After visual inspection of the case, all necessary data were present.

DC-330 The following inorganic samples are associated with duplicate results which did not meet absolute difference criteria Hits are qualified "J" and non-detects are qualified "UJ"

Chromium
MEHJ84, MEHJ84S, MEHJ85, MEHJ86, MEHJ87, MEHJ88
Iron
MEHJ80, MEHJ80S, MEHJ81, MEHJ82, MEHJ83
Magnesium
MEHJ84, MEHJ85, MEHJ86, MEHJ87, MEHJ88
Zinc
MEHJ80, MEHJ80S, MEHJ81, MEHJ82, MEHJ83

The reviewer agrees with the qualification.

DC-259 The following inorganic samples are associated with laboratory control samples (LCS) which were not run in the required analytical frequency Hits and non-detects are flagged "VS"

Aluminum Iron
MEHJ80, MEHJ80D, MEHJ80S, MEHJ81, MEHJ82, MEHJ83
MEHJ84, MEHJ84D, MEHJ85, MEHJ86, MEHJ87, MEHJ88

Antimony
MEHJ80, MEHJ80D, MEHJ80S, MEHJ81, MEHJ82, MEHJ83
MEHJ84, MEHJ84A, MEHJ84D, MEHJ84S, MEHJ85, MEHJ86
MEHJ87, MEHJ88

Arsenic Barium Beryllium Cadmium Chromium Cobalt
Copper Lead Manganese Nickel Selenium Silver
Thallium Vanadium Zinc
MEHJ80, MEHJ80D, MEHJ80S, MEHJ81, MEHJ82, MEHJ83
MEHJ84, MEHJ84D, MEHJ84S, MEHJ85, MEHJ86, MEHJ87
MEHJ88

Calcium Magnesium Potassium Sodium
MEHJ80, MEHJ80D, MEHJ81, MEHJ82, MEHJ83, MEHJ84
MEHJ84D, MEHJ85, MEHJ86, MEHJ87, MEHJ88

The defect code DC-259 occurs when two consecutive LCSs are analyzed. This does not affect the data and no qualification is necessary.

Reviewed by. M. Fletcher **Lockheed Martin/ESAT**
Date· 5/31/95

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FILENAME MEHJ80 DATE 06/01/95 TIME 10 01

CRITERIA FILE FGDRI93

DATA

	Original	X	Qualified

QUALIFICATIONS PERFORMED

	Quantitation Limit		Sample Cleanup
	Percent Moisture	X	ICS
X	Holding Time	X	LCS
X	Calibration	X	Duplicates
X	Matrix Spike	X	Furnace AA QC
	IPC	X	Serial Dilutions
	Internal Standards	X	Sample Result Verif
	SMC/Surrogate	X	Laboratory Blanks
	System Performance	X	Field QC

PRINT NON-DETECTS

X	Yes		No

PRINT REJECTED RESULTS

X	Yes		No

TAL QUALIFIED SPREADSHEET

CASE NO 23582
SDG NO MEHJ80

SITE
LABORATORY SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER	MEHJ80		MEHJ80D		MEHJ80S		MEHJ81		MEHJ82	
REGIONAL SAMPLE NUMBER	MEHJ80						MEHJ81		MEHJ82	
SAMPLE LOCATION										
SAMPLE TYPE	Routine Sample		Duplicate Sampl		Matrix Spike		Routine Sample		Routine Sample	
MATRIX/ANALYSIS	WATER/LOW		WATER/LOW		WATER/LOW		WATER/LOW		WATER/LOW	
DILUTION FACTOR										
PERCENT SOLID										
INORG										
Aluminum	332	M	243	VS	2240	VS	118	M	105	M
Antimony	3 0	M	3 0	VS	507	VS	3 0	M	3 0	M
Arsenic	5 0	M	5 0	VS	2010	VS	5 0	M	5 0	M
Barium	35 4	M	34 9	VS	1990	VS	33 4	M	36 8	M
Beryllium	1 0	M	1 0	VS	49 1	VS	1 0	M	1 0	M
Cadmium	1 0	M	1 0	VS	47 6	VS	1 0	M	2 9	M
Calcium	78100	M	76500	VS			77000	M	86200	M
Chromium	1 0	M	1 0	VS	195	VS	1 0	M	1 0	M
Cobalt	1 0	M	1 0	VS	476	VS	1 0	M	1 0	M
Copper	3 1	M	2 0	VS	246	VS	2 0	M	2 0	M
Iron	516	M	384	VS	1390	VS	704	M	777	M
Lead	4 2	M	3 4	VS	486	VS	2 0	M	2 1	M
Magnesium	41200	M	41300	VS			37800	M	43400	M
Manganese	82 3	M	82 5	VS	572	VS	147	M	129	M
Mercury	0 20	M	0 20	U	1 2		0 20	M	0 20	M
Nickel	1 0	M	1 0	VS	477	VS	1 0	M	2 0	M
Potassium	1580	M	1740	VS			2490	M	2560	M
Selenium	4 0	M	4 0	VS	2070	VS	4 0	M	4 0	M
Silver	1 0	M	1 0	VS	49 4	VS	1 0	M	1 0	M
Sodium	62100	M	60900	VS			73700	M	86500	M
Thallium	5 0	M	5 0	VS	1900	VS	5 0	M	5 0	M
Vanadium	1 1	M	1 3	VS	485	VS	1 0	M	1 0	M
Zinc	89 2	M	12 4	VS	501	VS	2 0	M	2 0	M
Cyanide	10 0	M	10 0	U	75 5		10 0	M	10 0	M

FILENAME MEHJ80 SDG DATE 06/01/95 TIME 10 01 CADRE 2 10 PAGE 1

Water units are reported in ug/L
Soil units are reported in ug/Kg

TAL QUALIFIED SPREADSHEET

CASE NO 23582
SDG NO MEHJ80

SITE
LABORATORY SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER	MEHJ83		MEHJ84		MEHJ84A		MEHJ84D		MEHJ84S	
REGIONAL SAMPLE NUMBER	MEHJ83		MEHJ84							
SAMPLE LOCATION										
SAMPLE TYPE	Routine Sample		Routine Sample		Post Digest Spi		Duplicate Sampl		Matrix Spike	
MATRIX/ANALYSIS	WATER/LOW		SOIL/LOW		SOIL/LOW		SOIL/LOW		SOIL/LOW	
DILUTION FACTOR										
PERCENT SOLID			64 4		64 4		64 4		64 4	
INORG										
Aluminum	18 5	M	12300	VS			8610	VS		
Antimony	3 0	M	0 93	VS	119	VS	0 93	VS	100	VS
Arsenic	5 0	M	7 2	VS			6 4	VS	628	VS
Barium	1 0	M	109	VS			78 7	VS	750	VS
Beryllium	1 0	M	0 84	VS			0 62	VS	16 1	VS
Cadmium	1 0	M	0 31	VS			0 31	VS	15 3	VS
Calcium	69 8	M	10400	VS			19400	VS		
Chromium	1 0	M	22 5	VS			14 6	VS	81 0	VS
Cobalt	1 0	M	8 7	VS			6 7	VS	164	VS
Copper	2 0	M	25 8	VS			21 0	VS	100	VS
Iron	128	M	23900	VS			17700	VS		
Lead	2 0	M	24 9	VS			27 6	VS	184	VS
Magnesium	27 0	M	6450	VS			11700	VS		
Manganese	1 8	M	656	VS			425	VS	1910	VS
Mercury	0 20	M	0 16	U			0 16	U	0 70	
Nickel	1 0	M	23 9	VS			18 2	VS	176	VS
Potassium	408	M	1270	VS			888	VS		
Selenium	4 0	M	2 3	VS			1 2	VS	613	VS
Silver	1 0	M	0 31	VS			0 31	VS	15 5	VS
Sodium	199	M	283	VS			280	VS		
Thallium	5 0	M	1 6	VS			1 6	VS	583	VS
Vanadium	1 0	M	28 5	VS			20 1	VS	180	VS
Zinc	2 0	M	88 8	VS			88 2	VS	259	VS
Cyanide	10 0	M	0 78	U			0 78	U	6 2	

FILENAME MEHJ80 SDG DATE 06/01/95 TIME 10 01 CADRE 2 10 PAGE 2

Water units are reported in ug/L
Soil units are reported in ug/Kg

TAL QUALIFIED SPREADSHEET

CASE NO 23582
SDG NO MEHJ80

SITE
LABORATORY SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER	MEHJ85		MEHJ86		MEHJ87		MEHJ88	
REGIONAL SAMPLE NUMBER	MEHJ85		MEHJ86		MEHJ87		MEHJ88	
SAMPLE LOCATION								
SAMPLE TYPE	Routine Sample		Routine Sample		Routine Sample		Routine Sample	
MATRIX/ANALYSIS	SOIL/LOW		SOIL/LOW		SOIL/LOW		SOIL/LOW	
DILUTION FACTOR								
PERCENT SOLID	55 7		63 7		57 1		48 4	
INORG								
Aluminum	8010	VS	6480	VS	6760	VS	7840	VS
Antimony	1 1	VS	0 94	VS	1 0	VS	1 2	VS
Arsenic	6 9	VS	5 4	VS	6 8	VS	5 8	VS
Barium	55 7	VS	48 9	VS	51 1	VS	66 7	VS
Beryllium	0 61	VS	0 47	VS	0 66	VS	0 55	VS
Cadmium	0 36	VS	0 31	VS	0 35	VS	0 41	VS
Calcium	26500	VS	26600	VS	50800	VS	26800	VS
Chromium	14 5	VS	12 7	VS	12 5	VS	15 2	VS
Cobalt	8 6	VS	7 9	VS	9 1	VS	9 9	VS
Copper	53 1	VS	18 6	VS	38 5	VS	21 7	VS
Iron	19100	VS	15000	VS	16200	VS	16600	VS
Lead	25 0	VS	13 0	VS	22 6	VS	19 4	VS
Magnesium	14400	VS	14800	VS	28500	VS	13700	VS
Manganese	759	VS	364	VS	424	VS	539	VS
Mercury	0 18	U	0 16	U	0 18	U	0 21	U
Nickel	19 2	VS	17 5	VS	20 1	VS	21 3	VS
Potassium	896	VS	717	VS	723	VS	825	VS
Selenium	1 4	VS	1 3	VS	1 4	VS	1 7	VS
Silver	0 36	VS	0 31	VS	0 35	VS	0 41	VS
Sodium	290	VS	236	VS	242	VS	244	VS
Thallium	2 4	VS	1 6	VS	1 8	VS	2 1	VS
Vanadium	21 0	VS	18 2	VS	22 7	VS	19 4	VS
Zinc	161	VS	50 2	VS	143	VS	73 0	VS
Cyanide	0 90	U	0 78	U	0 88	U	1 0	U

FILENAME MEHJ80 SDG DATE 06/01/95 TIME 10 01 CADRE 2 10 PAGE 3

Water units are reported in ug/L
Soil units are reported in ug/Kg

Holding Time Report

SDG NO MEHJ80 LABORATORY SOUTHWEST LAB
CASE NO 23582 AGENCY INPUT FILE MEHJ80 CRI

HOLDING TIME CRITERIA

INORGANICS

	Holding Time		pH	
	Primary	Expanded	Primary	Expanded
Metals	180	0	2 0	0 0
Mercury	28	0	2 0	0 0
Cyanide	14	0	12 0	0 0

DC 280 The following inorganic soil samples were reviewed for holding time violations using criteria developed for water samples

MEHJ84 MEHJ84A MEHJ84D, MEHJ84S MEHJ85 MEHJ86
MEHJ87 MEHJ88

Calibration Report

SDG NO MEHJ80 LABORATORY SOUTHWEST LAB
CASE NO 23582 AGENCY INPUT FILE MEHJ80 CRI

CALIBRATION CRITERIA
-

INORGANICS
-

Percent Recovery Limits
- - -

	- Primary		Expanded	
	Low	High	Low	High
	-			
Cyanide	85 00	115 00	70 00	130 00
AA	90 00	110 00	75 00	125 00
ICP	90 00	110 00	75 00	125 00
Mercury	80 00	120 00	65 00	135 00

No problems found for this qualification

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CRDL Standards Report

SDG NO MEHJ80 LABORATORY SOUTHWEST LAB
CASE NO 23582 AGENCY INPUT FILE MEHJ80 CRI

DC 373 The following inorganic samples are associated with a CRDL standard with low percent recovery
Hits and non-detects are flagged 'VS'

Arsenic
MEHJ84, MEHJ85 MEHJ86, MEHJ87 MEHJ88, PBS04

Selenium
MEHJ80, MEHJ81 MEHJ82 MEHJ83, MEHJ84 MEHJ85
MEHJ86 MEHJ87, MEHJ88 PBS04 PBW03

Zinc
MEHJ80 MEHJ81 MEHJ82 MEHJ83 MEHJ84 MEHJ85
MEHJ86 MEHJ87 MEHJ88 PBS04 PBW03

DC 374 The following inorganic samples are associated with a CRDL standard with high percent recovery
Hits and non-detects are flagged 'VS'

Lead
MEHJ84 MEHJ85 MEHJ86 MEHJ87 MEHJ88 PBS04

Thallium
MEHJ80, MEHJ81 MEHJ82 MEHJ83 MEHJ84 MEHJ85
MEHJ86 MEHJ87 MEHJ88 PBS04 PBW03

DC 376 The following inorganic samples have no associated CRDL standard
Hits and non detects are flagged 'M'

Aluminum
MEHJ80 MEHJ81 MEHJ82 MEHJ83 PBW05

Calcium
MEHJ80 MEHJ81 MEHJ82 MEHJ83 PBW05

Potassium
MEHJ80 MEHJ81 MEHJ82 MEHJ83 PBW05

Sodium
MEHJ80 MEHJ81 MEHJ82

LABORATORY BLANKS CRITERIA

DC-283 The following inorganic samples are associated with a blank analyte with negative concentration whose absolute value is greater than the instrument detection limit (IDL) Data must be qualified using professional judgement
Hits and non-detects are flagged "VS"

MEHJ80
Nickel, Zinc

MEHJ80D
Nickel Zinc

MEHJ80S
Nickel Zinc

MEHJ81
Nickel Zinc

MEHJ82
Nickel Zinc

MEHJ83
Nickel Zinc

DC 284 The following inorganic samples are associated with a blank concentration which is greater than the instrument detection limit (IDL) The sample concentration is also greater than the IDL and less than five times the blank concentration
Hits are qualified "U" and non detects are not flagged

MEHJ80
Aluminum

MEHJ80D
Aluminum

MEHJ81
Aluminum

MEHJ82
Aluminum

MEHJ83

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Aluminum, Calcium

DC 338 During review of the following inorganic samples the reported IDL/default CRDL value was used for cyanide

MEHJ80 MEHJ80D MEHJ80S MEHJ81 MEHJ82 MEHJ83
MEHJ84, MEHJ84D MEHJ84S, MEHJ85 MEHJ86 MEHJ87
MEHJ88

ICS Report

SDG NO	MEHJ80	LABORATORY	SOUTHWEST LAB
CASE NO	23582	AGENCY INPUT FILE	MEHJ80 CRI

DC 312 The following inorganic samples have elements other than Al Ca Fe and Mg at concentrations higher than 10 ppm that may cause potential interference
Hits and non-detects are flagged "VS"

Sodium
MEHJ80 MEHJ81 MEHJ82

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Matrix Spike Report

SDG NO MEHJ80 LABORATORY SOUTHWEST LAB
CASE NO 23582 AGENCY INPUT FILE MEHJ80 CRI

MATRIX SPIKE CRITERIA

INORGANICS

Percent Recovery Limits

Upper	125 0
Lower	75 0
Extreme lower	30 0

DC 268 The following inorganic samples are associated with a matrix spike recovery which is low indicating that sample results may be biased low
Hits are qualified "J" and non-detects are qualified "UJ"

Antimony
MEHJ84 MEHJ84A MEHJ84D MEHJ85 MEHJ86 MEHJ87
MEHJ88

DC 256 The following inorganic samples are associated with duplicate results which did not meet relative percent difference (RPD) criteria
Hits are qualified "J" and non detects are qualified "UJ"

Aluminum
MEHJ84 MEHJ85 MEHJ86 MEHJ87 MEHJ88

Calcium
MEHJ84 MEHJ85 MEHJ86 MEHJ87 MEHJ88

Manganese
MEHJ84 MEHJ84S MEHJ85 MEHJ86 MEHJ87 MEHJ88

DC 257 The following inorganic samples are not qualified for duplicates due to missing information
Hits and non detects are flagged 'M"

Aluminum
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Antimony
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Arsenic
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Barium
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Beryllium
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Cadmium
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Calcium
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Chromium
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Cobalt
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Copper

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MEHJ80 MEHJ81 MEHJ82 MEHJ83

Iron
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Lead
MEHJ80, MEHJ81 MEHJ82 MEHJ83

Magnesium
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Manganese
MEHJ80, MEHJ81 MEHJ82 MEHJ83

Mercury
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Nickel
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Potassium
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Selenium
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Silver
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Sodium
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Thallium
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Vanadium
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Zinc
MEHJ80 MEHJ81 MEHJ82 MEHJ83

Cyanide
MEHJ80 MEHJ81 MEHJ82 MEHJ83

DC 330 The following inorganic samples are associated with duplicate results which did not meet absolute difference criteria

Hits are qualified "J" and non detects are qualified "UJ"

Chromium
MEHJ84 MEHJ84S MEHJ85 MEHJ86 MEHJ87 MEHJ88

Iron
MEHJ80 MEHJ80S MEHJ81 MEHJ82 MEHJ83

Magnesium
MEHJ84 MEHJ85 MEHJ86 MEHJ87 MEHJ88

Zinc
MEHJ80 MEHJ80S MEHJ81 MEHJ82 MEHJ83

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LCS Report

SDG NO MEHJ80 LABORATORY SOUTHWEST LAB
CASE NO 23582 AGENCY INPUT FILE MEHJ80 CRI

DC 259 The following inorganic samples are associated with laboratory control samples (LCS) which were not run in the required analytical frequency
Hits and non-detects are flagged "VS"

Aluminum
MEHJ80, MEHJ80D MEHJ80S MEHJ81 MEHJ82 MEHJ83
MEHJ84, MEHJ84D MEHJ85 MEHJ86 MEHJ87, MEHJ88

Antimony
MEHJ80 MEHJ80D MEHJ80S MEHJ81 MEHJ82 MEHJ83
MEHJ84 MEHJ84A MEHJ84D MEHJ84S MEHJ85 MEHJ86
MEHJ87 MEHJ88

Arsenic
MEHJ80 MEHJ80D MEHJ80S MEHJ81 MEHJ82 MEHJ83
MEHJ84 MEHJ84D MEHJ84S MEHJ85 MEHJ86 MEHJ87
MEHJ88

Barium
MEHJ80 MEHJ80D MEHJ80S MEHJ81 MEHJ82 MEHJ83
MEHJ84 MEHJ84D MEHJ84S MEHJ85 MEHJ86 MEHJ87
MEHJ88

Beryllium
MEHJ80 MEHJ80D MEHJ80S MEHJ81 MEHJ82 MEHJ83
MEHJ84, MEHJ84D MEHJ84S MEHJ85 MEHJ86 MEHJ87
MEHJ88

Cadmium
MEHJ80, MEHJ80D MEHJ80S MEHJ81 MEHJ82 MEHJ83
MEHJ84, MEHJ84D MEHJ84S MEHJ85 MEHJ86 MEHJ87
MEHJ88

Calcium
MEHJ80 MEHJ80D MEHJ81 MEHJ82, MEHJ83 MEHJ84
MEHJ84D MEHJ85 MEHJ86 MEHJ87 MEHJ88

Chromium
MEHJ80 MEHJ80D MEHJ80S MEHJ81 MEHJ82 MEHJ83
MEHJ84 MEHJ84D MEHJ84S, MEHJ85 MEHJ86 MEHJ87
MEHJ88

Cobalt
MEHJ80 MEHJ80D MEHJ80S MEHJ81 MEHJ82 MEHJ83
MEHJ84 MEHJ84D MEHJ84S MEHJ85 MEHJ86 MEHJ87
MEHJ88

Copper
MEHJ80, MEHJ80D MEHJ80S, MEHJ81 MEHJ82 MEHJ83
MEHJ84, MEHJ84D MEHJ84S, MEHJ85, MEHJ86, MEHJ87
MEHJ88

Iron
MEHJ80 MEHJ80D MEHJ80S MEHJ81 MEHJ82 MEHJ83
MEHJ84, MEHJ84D MEHJ85 MEHJ86 MEHJ87 MEHJ88

Lead
MEHJ80 MEHJ80D MEHJ80S MEHJ81 MEHJ82 MEHJ83
MEHJ84 MEHJ84D MEHJ84S MEHJ85 MEHJ86 MEHJ87
MEHJ88

Magnesium
MEHJ80 MEHJ80D MEHJ81 MEHJ82 MEHJ83 MEHJ84
MEHJ84D MEHJ85 MEHJ86 MEHJ87 MEHJ88

Manganese
MEHJ80 MEHJ80D MEHJ80S MEHJ81 MEHJ82 MEHJ83
MEHJ84 MEHJ84D MEHJ84S MEHJ85 MEHJ86 MEHJ87
MEHJ88

Nickel
MEHJ80 MEHJ80D MEHJ80S MEHJ81 MEHJ82 MEHJ83
MEHJ84, MEHJ84D MEHJ84S, MEHJ85, MEHJ86 MEHJ87
MEHJ88

Potassium
MEHJ80, MEHJ80D MEHJ81 MEHJ82 MEHJ83 MEHJ84
MEHJ84D MEHJ85 MEHJ86 MEHJ87 MEHJ88

Selenium
MEHJ80, MEHJ80D MEHJ80S MEHJ81 MEHJ82, MEHJ83
MEHJ84 MEHJ84D MEHJ84S MEHJ85 MEHJ86 MEHJ87
MEHJ88

Silver
MEHJ80 MEHJ80D MEHJ80S MEHJ81 MEHJ82 MEHJ83
MEHJ84 MEHJ84D, MEHJ84S MEHJ85 MEHJ86, MEHJ87
MEHJ88

Sodium
MEHJ80 MEHJ80D MEHJ81 MEHJ82 MEHJ83 MEHJ84
MEHJ84D MEHJ85 MEHJ86 MEHJ87 MEHJ88

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Thallium

MEHJ80 MEHJ80D MEHJ80S MEHJ81 MEHJ82 MEHJ83
MEHJ84 MEHJ84D MEHJ84S MEHJ85 MEHJ86 MEHJ87
MEHJ88

Vanadium

MEHJ80 MEHJ80D MEHJ80S, MEHJ81 MEHJ82 MEHJ83
MEHJ84 MEHJ84D MEHJ84S MEHJ85 MEHJ86 MEHJ87
MEHJ88

Zinc

MEHJ80, MEHJ80D, MEHJ80S MEHJ81 MEHJ82, MEHJ83
MEHJ84 MEHJ84D MEHJ84S MEHJ85 MEHJ86 MEHJ87
MEHJ88

Furnace AA QC Report

SDG NO	MEHJ80	LABORATORY	SOUTHWEST LAB
CASE NO	23582	AGENCY INPUT FILE	MEHJ80 CRI

No problems found for this qualification

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Serial Dilution Report

SDG NO	MEHJ80	LABORATORY	SOUTHWEST LAB
CASE NO	23582	AGENCY INPUT FILE	MEHJ80 CRI

No problems found for this qualification

Sample Result Verification Report

SDG NO	MEHJ80	LABORATORY	SOUTHWEST LAB
CASE NO	23582	AGENCY INPUT FILE	MEHJ80 CRI

No problems found for this qualification

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FILENAME MEHJ80 DATE 05/31/95 TIME 11 19

CRITERIA FILE FGDRI93

DATA

	Original	X	Qualified

QUALIFICATIONS PERFORMED

	Quantitation Limit		Sample Cleanup
	Percent Moisture	X	ICS
X	Holding Time	X	LCS
X	Calibration	X	Duplicates
X	Matrix Spike	X	Furnace AA QC
	IPC	X	Serial Dilutions
	Internal Standards	X	Sample Result Verif
	SMC/Surrogate	X	Laboratory Blanks
	System Performance	X	Field QC

PRINT NON-DETECTS

X	Yes		No

PRINT REJECTED RESULTS

X	Yes		No

TAL QUALIFIED SPREADSHEET

CASE NO 23582
SDG NO MEHJ80

SITE
LABORATORY SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER	MEHJ80		MEHJ80D		MEHJ80S		MEHJ81		MEHJ82	
REGIONAL SAMPLE NUMBER	MEHJ80						MEHJ81		MEHJ82	
SAMPLE LOCATION										
SAMPLE TYPE	Routine Sample		Duplicate Sampl		Matrix Spike		Routine Sample		Routine Sample	
MATRIX/ANALYSIS	WATER/LOW		WATER/LOW		WATER/LOW		WATER/LOW		WATER/LOW	
DILUTION FACTOR										
PERCENT SOLID										
INORG										
Aluminum	332	M	243	VS	2240	VS	118	M	105	M
Antimony	3 0	M	3 0	VS	507	VS	3 0	M	3 0	M
Arsenic	5 0	M	5 0	VS	2010	VS	5 0	M	5 0	M
Barium	35 4	M	34 9	VS	1990	VS	33 4	M	36 8	M
Beryllium	1 0	M	1 0	VS	49 1	VS	1 0	M	1 0	M
Cadmium	1 0	M	1 0	VS	47 6	VS	1 0	M	2 9	M
Calcium	78100	M	76500	VS			77000	M	86200	M
Chromium	1 0	M	1 0	VS	195	VS	1 0	M	1 0	M
Cobalt	1 0	M	1 0	VS	476	VS	1 0	M	1 0	M
Copper	3 1	M	2 0	VS	246	VS	2 0	M	2 0	M
Iron	516	M	384	VS	1390	VS	704	M	777	M
Lead	4 2	M	3 4	VS	486	VS	2 0	M	2 1	M
Magnesium	41200	M	41300	VS			37800	M	43400	M
Manganese	82 3	M	82 5	VS	572	VS	147	M	129	M
Mercury	0 20	M	0 20	U	1 2		0 20	M	0 20	M
Nickel	1 0	M	1 0	VS	477	VS	1 0	M	2 0	M
Potassium	1580	M	1740	VS			2490	M	2560	M
Selenium	4 0	M	4 0	VS	2070	VS	4 0	M	4 0	M
Silver	1 0	M	1 0	VS	49 4	VS	1 0	M	1 0	M
Sodium	62100	M	60900	VS			73700	M	86500	M
Thallium	5 0	M	5 0	VS	1900	VS	5 0	M	5 0	M
Vanadium	1 1	M	1 3	VS	485	VS	1 0	M	1 0	M
Zinc	89 2	M	12 4	VS	501	VS	2 0	M	2 0	M
Cyanide	10 0	M	10 0	U	75 5		10 0	M	10 0	M

FILENAME MEHJ80 SDG DATE 05/31/95 TIME 11 19 CADRE 2 10 PAGE 1

Water units are reported in ug/L
Soil units are reported in ~~ug/Kg~~ mg/Kg

TAL QUALIFIED SPREADSHEET

CASE NO 23582
SDG NO MEHJ80

SITE
LABORATORY SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER	MEHJ83		MEHJ84		MEHJ84A		MEHJ84D		MEHJ84S	
REGIONAL SAMPLE NUMBER	MEHJ83		MEHJ84							
SAMPLE LOCATION										
SAMPLE TYPE	Routine Sample		Routine Sample		Post Digest Spi		Duplicate Sampl		Matrix Spike	
MATRIX/ANALYSIS	WATER/LOW		SOIL/LOW		SOIL/LOW		SOIL/LOW		SOIL/LOW	
DILUTION FACTOR										
PERCENT SOLID			64 4		64 4		64 4		64 4	
INORG										
Aluminum	18 5	M	12300	VS			8610	VS		
Antimony	3 0	M	0 93	VS	119	VS	0 93	VS	100	VS
Arsenic	5 0	M	7 2	VS			6 4	VS	628	VS
Barium	1 0	M	109	VS			78 7	VS	750	VS
Beryllium	1 0	M	0 84	VS			0 62	VS	16 1	VS
Cadmium	1 0	M	0 31	VS			0 31	VS	15 3	VS
Calcium	69 8	M	10400	VS			19400	VS		
Chromium	1 0	M	22 5	VS			14 6	VS	81 0	VS
Cobalt	1 0	M	8 7	VS			6 7	VS	164	VS
Copper	2 0	M	25 8	VS			21 0	VS	100	VS
Iron	128	M	23900	VS			17700	VS		
Lead	2 0	M	24 9	VS			27 6	VS	184	VS
Magnesium	27 0	M	6450	VS			11700	VS		
Manganese	1 8	M	656	VS			425	VS	1910	VS
Mercury	0 20	M	0 16	U			0 16	U	0 70	
Nickel	1 0	M	23 9	VS			18 2	VS	176	VS
Potassium	408	M	1270	VS			888	VS		
Selenium	4 0	M	2 3	VS			1 2	VS	613	VS
Silver	1 0	M	0 31	VS			0 31	VS	15 5	VS
Sodium	199	M	283	VS			280	VS		
Thallium	5 0	M	1 6	VS			1 6	VS	583	VS
Vanadium	1 0	M	28 5	VS			20 1	VS	180	VS
Zinc	2 0	M	88 8	VS			88 2	VS	259	VS
Cyanide	10 0	M	0 78	U			0 78	U	6 2	

FILENAME MEHJ80 SDG DATE 05/31/95 TIME 11 19 CADRE 2 10 PAGE 2

Water units are reported in ug/L
Soil units are reported in ~~ug/Kg~~
mg/kg

TAL QUALIFIED SPREADSHEET

CASE NO 23582
SDG NO MEHJ80

SITE
LABORATORY SOUTHWEST LABS OF OKLAHOM

EPA SAMPLE NUMBER	MEHJ85		MEHJ86		MEHJ87		MEHJ88	
REGIONAL SAMPLE NUMBER	MEHJ85		MEHJ86		MEHJ87		MEHJ88	
SAMPLE LOCATION								
SAMPLE TYPE	Routine Sample		Routine Sample		Routine Sample		Routine Sample	
MATRIX/ANALYSIS	SOIL/LOW		SOIL/LOW		SOIL/LOW		SOIL/LOW	
DILUTION FACTOR								
PERCENT SOLID	55 7		63 7		57 1		48 4	
INORG								
Aluminum	8010	VS	6480	VS	6760	VS	7840	VS
Antimony	1 1	VS	0 94	VS	1 0	VS	1 2	VS
Arsenic	6 9	VS	5 4	VS	6 8	VS	5 8	VS
Barium	55 7	VS	48 9	VS	51 1	VS	66 7	VS
Beryllium	0 61	VS	0 47	VS	0 66	VS	0 55	VS
Cadmium	0 36	VS	0 31	VS	0 35	VS	0 41	VS
Calcium	26500	VS	26600	VS	50800	VS	26800	VS
Chromium	14 5	VS	12 7	VS	12 5	VS	15 2	VS
Cobalt	8 6	VS	7 9	VS	9 1	VS	9 9	VS
Copper	53 1	VS	18 6	VS	38 5	VS	21 7	VS
Iron	19100	VS	15000	VS	16200	VS	16600	VS
Lead	25 0	VS	13 0	VS	22 6	VS	19 4	VS
Magnesium	14400	VS	14800	VS	28500	VS	13700	VS
Manganese	759	VS	364	VS	424	VS	539	VS
Mercury	0 18	U	0 16	U	0 18	U	0 21	U
Nickel	19 2	VS	17 5	VS	20 1	VS	21 3	VS
Potassium	896	VS	717	VS	723	VS	825	VS
Selenium	1 4	VS	1 3	VS	1 4	VS	1 7	VS
Silver	0 36	VS	0 31	VS	0 35	VS	0 41	VS
Sodium	290	VS	236	VS	242	VS	244	VS
Thallium	2 4	VS	1 6	VS	1 8	VS	2 1	VS
Vanadium	21 0	VS	18 2	VS	22 7	VS	19 4	VS
Zinc	161	VS	50 2	VS	143	VS	73 0	VS
Cyanide	0 90	U	0 78	U	0 88	U	1 0	U

FILENAME MEHJ80 SDG DATE 05/31/95 TIME 11 19 CADRE 2 10 PAGE 3

Water units are reported in ug/L
Soil units are reported in ~~ug/Kg~~

mg/kg

SDG NO MEHJ80 LABORATORY SOUTHWEST LAB
CASE NO 23582 AGENCY INPUT FILE MEHJ80 CRI

DATA QUALIFIER DEFINITIONS

The following definitions provide a brief explanation of the national qualifiers assigned to results in the data review process Special CADRE flags are also defined here

U The analyte was analyzed for, but was not detected above the reported sample quantitation limit

J The analyte was positively identified the associated numerical value is the approximate concentration of the analyte in the sample

UJ The analyte was not detected above the reported sample quantitation limit However the reported quantitation limit is approximate and may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria The presence or absence of the analyte cannot be verified

M The data review for this result could not be completed by CADRE due to missing information

VS Some quality control criteria were not met but CADRE was unable to assess the full impact of the problem Such an assessment requires the professional judgement of a data reviewer and additional information not available to CADRE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE

SUBJECT Review of Region V CLP Data
Received for Review on June 6, 1995

FROM. Dennis Wesolowski, Chief (SQC-14J)
Contract Analytical Services Section

TO Data User E+E Patricia J Scott for D Wesolowski 06/27/19

We have reviewed the data for the following case

SITE NAME Waukegan Mune LF #1 (IL)

CASE NUMBER 23582 SDG NUMBER ETC 87

Number and Type of Samples 4 (Water)

Sample Numbers ETC87-90

Laboratory Compuchem Hrs for Review 6

Following are our findings

Please ignore carbon dioxide TICs in VOA fraction These peaks are caused by GC contamination The data are acceptable and usable with the qualifications described in the attached narrative

Patricia J Scott

cc Regional TPO

TO Patrick J Churilla, TPO

FROM Steffanie N Tobin/ESAT Data reviewer
Ira W Wilson/ESAT Organic supervisor

DATE June 26, 1995

RE CADRE review for case 23582, SDG ETC87

CADRE review was not performed for case 23582, SDG# ETC87 since this file is not in the main frame

NARRATIVE

LABORATORY:	**COMPUCHEM**	**CASE.**	**23582**
SITE:	**WAUKEGAN MUNI LF#1**	**SDG:**	**ETC87**

Below is a summary of the out-of-control audits and the possible effect on the data for this case.

Four (4) low level water samples, numbered ETC87 - 90 were collected on 05-16-95 CompuChem Environmental Corporation of RTP, NC received the samples on 05-17-95 in good condition All samples were analyzed for the full list of organic analytes All were analyzed according to CLP SOW OLM03 1 8/94

Sample ETC87 was used as the low level MS/MSD for all three fractions, VOA, SV, and Pest/PCBs

Sample ETC89 was identified as a field duplicate of ETC88 No samples were identified as either trip blanks or field blanks

The VOA analyses were performed within the technical holding time of 14 days after sample collection for preserved water samples, therefore, the results are acceptable All pesticide and semi-volatile sample extractions were performed within seven (7) days and all analyses were performed within forty (40) days after extraction, therefore, the results are acceptable

Reviewed by. Allison C. Harvey_____ Lockheed/ESAT
Date· June 20, 1995

NARRATIVE

LABORATORY:	**COMPUCHEM**	**CASE.**	**23582**
SITE	**WAUKEGAN MUNI LF#1**	**SDG.**	**ETC87**

1. HOLDING TIME

Four (4) low level water samples, numbered ETC87 - 90 were collected on 05-16-95 CompuChem Environmental Corporation of RTP, NC received the samples on 05-17-95 in good condition All samples were analyzed for the full list of organic analytes All were analyzed according to CLP SOW OLMO3 1 8/94

The VOA analyses were performed within the technical holding time of 14 days after sample collection for preserved water samples, therefore, the results are acceptable All pesticide and semi-volatile sample extractions were performed within seven (7) days and all analyses were performed within forty (40) days after extraction, therefore, the results are acceptable

2. GC/MS TUNING AND GC INSTRUMENT PROCEDURE

All GC/MS tuning complied with the mass list and ion abundance criteria for BFB, and all samples were analyzed within the twelve (12) hour periods for instrument performance checks

GC/MS tuning complied with the mass list and ion abundance criteria for DFTPP,and all samples were analyzed within the twelve (12) hour periods for instrument performance checks

GC Resolution Check Mixtures met the 60% resolution criteria Endrin and DDT degradation checks using PEM Mix on the DB-608 and RTX-1701 columns were <20%, therefore the results are acceptable

The Florisil Cartridge Check met the QC criteria, therefore, the results are acceptable

3. CALIBRATION

Initial and continuing calibrations of the Volatile, Semi-Volatile, and PEST/PCB standards were evaluated for the target compounds list and outliers were recorded on the outlier forms included as a part of this narrative

4 BLANKS.

VOA

VBLKJZ is the low level water volatile method blank VBLKJZ contained Ethylbenzene at 1 µg/Kg, Xylene (total) at 2 µg/Kg

Reviewed by: Allison C. Harvey_____ Lockheed/ESAT
Date June 20, 1995

NARRATIVE

LABORATORY: COMPUCHEM CASE: 23582
SITE: WAUKEGAN MUNI LF#1 SDG: ETC87

and no TICs The presence of Ethylbenzene and Xylene in any of the samples associated with the method blank is flagged as undetected (U) when the sample result is less than five (5) times the blank result The volatile method blank summary (FORM IV VOA) lists the samples associated with each blank

VHBLK20 is the volatile storage blank VHBLK20 contained Methylene Chloride at 11 µg/Kg and 1 TIC - CO2 These compounds were not present in the method blank, therefore the source of the contamination may be in the storage of the samples The results of VHBLK20 had no effect on the samples

SV:

SBLK27 is the low level water semivolatile method blank SBLK27 contained no TCLs and no TICs, therefore the results are acceptable The semivolatile method blank summary (FORM IV SV) lists the samples associated with each blank

Pesticide\PCB.

PBLK24 is the low level water pesticide method blank PBLK24 had no contaminants, therefore, the results are acceptable The pesticide method blank summary (FORM IV PEST) lists the samples associated with each blank

There were six (6) pesticide instrument method blanks No samples were associated with the instrument blanks

5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

VOA

The volatile system monitoring compounds were within the QC limits for all samples, therefore, the results are acceptable

SV:

The semivolatile surrogates were within the QC limits for all samples, therefore, the results are acceptable

Pesticide\PCB.

The pesticide surrogates were within the QC limits for all samples, therefore, the results are acceptable

Reviewed by: Allison C. Harvey_____ Lockheed/ESAT
Date: June 20, 1995

NARRATIVE

LABORATORY.	COMPUCHEM	CASE:	23582
SITE·	WAUKEGAN MUNI LF#1	SDG	ETC87

6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE.

Sample ETC87 was used as the MS/MSD in all three fractions

VOA.

All spike recoveries and RPDs were within the QC limits, therefore, the results are acceptable

SV.

The recovery of 4-Nitrophenol in both the MS and MSD reported above the QC limits, but less than 100%, therefore, positive results in the unspiked sample require no qualification

PEST

All spike recoveries and RPDs were within the QC limits, therefore, the results are acceptable

7 FIELD BLANK AND FIELD DUPLICATE

Sample ETC89 was identified as a field duplicate of ETC88 ETC88 reported no TCL compounds and one (1) TIC for the VOA fraction and ETC89 reported no TCL compounds and one (1) TIC for the VOA fraction ETC88 reported two (2) TCL compounds and five (5) TICs for the SV fraction and ETC89 reported two (2) TCL compounds and five (5) TICs for the SV fraction ETC88 reported two (2) TCL compounds for the Pest/PCB fraction and ETC89 reported two (2) TCL compounds for the Pest/PCB fraction No samples were identified as either trip blanks or field blanks

8. INTERNAL STANDARDS

VOA The internal standard retention times and area counts for the VOA were within the required QC limits, therefore the results are acceptable

SV

The internal standard retention times and area counts for the SV were within the required QC limits, therefore the results are acceptable

Reviewed by Allison C. Harvey_____ Lockheed/ESAT
Date. June 20, 1995

NARRATIVE

LABORATORY·	COMPUCHEM	CASE.	23582
SITE.	WAUKEGAN MUNI LF#1	SDG:	ETC87

9. COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms it appears that all VOA, SV, and Pesticide/PCB compounds were correctly identified

10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

Waters - All VOAs, SVs and Pesticide target CRQLs were properly reported All target compound quantitation was properly reported

11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance The GC baseline for the pesticide analysis was acceptable

12 ADDITIONAL INFORMATION

None

Reviewed by: Allison C. Harvey_____ Lockheed/ESAT
Date: June 20, 1995

CALIBRATION OUTLIERS
VOLATILE TCL COMPOUNDS
(Page 1 of 1)

CASE\SAS# 23582
COLUMN DB-624
HEATED PURGE (Y/N) N

LABORATORY COMPUCHEM
SITE NAME Waukegan Muni LF #1

Instrument# OWA03		Initial Cal.			Contin. Cal.			Contin. Cal			Contin Cal			Contin Cal		
Date/Time		5/18/95 0900			5/24/95 1457											
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
Chloromethane	0.01	0.459			0.746	62.5	J									
Bromomethane	0.10															
Vinyl chloride	0.10															
Chloroethane	0.01															
Methylene chloride	0.01															
Acetone	0.01															
Carbon disulfide	0.01															
1,1-Dichloroethene	0.10															
1,1 Dichloroethane	0.20															
1,2-Dichloroethene (total)																
Chloroform	0.20															
1,2 Dichloroethane	0.10															
2 Butanone	0.01															
1,1,1 Trichloroethane	0.10															
Carbon tetrachloride	0.10															
Bromodichloromethane	0.20															
1,2-Dichloropropane																
cis 1,3 Dichloropropene	0.20															
Trichloroethene	0.30															
Dibromochloromethane	0.10															
1,1,2 Trichloroethane	0.10															
Benzene	0.50															
tran-1,3-Dichloropropene	0.10															
Bromoform	0.10															
4-Methyl 2-pentanone	0.01															
2 Hexanone	0.01															
Tetrachloroethene	0.20															
1,1,2,2 Tetrachloroethane	0.50	0.548			0.364	33.6	J									
Toluene	0.40															
Chlorobenzene	0.50															
Ethylbenzene	0.10															
Styrene	0.30															
Xylene (total)	0.30															
Toluene-d8																
Bromofluorobenzene	0.20															
1,2 Dichloroethane-d4																

Samples affected
VBLKJZ
ETC87-90
ETC87MS
ETC87MSD
VHBLK20

Reviewer's Init/Date ACH / 6 19-95

J/R = All positive results are estimated "J" and non-detected results are unusable R

* = These flags should be applied to the analytes on the sample data sheets
# = Minimum Relative Response Factor

CALIBRATION OUTLIER
SEMIVOLATILE TCL COMPOUNDS
(Page 1 of 2)

CASE\SAS# 23582
COLUMN

LABORATORY COMPUCHEM
SITE NAME Waukegan Muni LF #1

Instrument# 5972HP60	Initial Cal			Contin Cal.			Contin Cal.			Contin Cal			Contin Cal		
Date/Time	5/20/95 0436			5/22/95 0128											
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
Phenol	0 80															
bis(2-chloroethyl) Ether	0 70															
2-Chlorophenol	0 70															
1,3-Dichlorobenzene																
1,4-Dichlorobenzene																
1,2 Dichlorobenzene																
2 Methylphenol	0 70															
2,2 -Oxybis(1-chl-propane)	0 01															
4-Methylphenol	0 60															
N-nitroso-di-n-propylamine	0 50															
Hexachloroethane	0 30															
Nitrobenzene	0 20															
Isophorone	0 40															
2 Nitrophenol	0 10															
2,4-Dimethylphenol	0 20															
bis-(2-chloroethoxyl)methane	0 30															
2,4-Dichlorophenol	0 20															
1,2,4-Trichlorobenzene	0 20															
Naphthalene	0 70															
4-Chloroaniline	0 01															
Hexachlorobutadiene	0 01															
4-Chloro-3 methylphenol	0 20															
2 Methylnaphthalene	0 40															
Hexachlorocyclopentadiene	0 01															
2,4,6-Trichlorophenol	0 20															
2,4,5-Trichlorophenol	0 20															
2-Chloronaphthalene	0 80															
2 Nitroaniline	0 01															
Dimethyl phthlate	0 01															
Acenaphthylene	1 30															
2,6-Dinitrotoluene	0 20															
3 Nitroaniline	0 01															
Acenaphthene	0 30															
2,4-Dinitrophenol	0 01															
4-Nitrophenol	0 01															
Dibenzofuran	0 80															
2,4-Dinitrotoluene	0 20															

Affected samples

SBLK27
ETC87 - 90
ETC87MS
ETC87MSD

Reviewer s Init/Date ACH/6-19 95

J/R = All positive results are estimated "J and non-detected results are unusable "R

* = These flags should be applied to the analytes on the sample data sheets
# = Minimum Relative Response Factor

ESAT 5-023.3 1/95

CALIBRATION OUTLIER
SEMIVOLATILE TCL COMPOUNDS
(Page 2 of 2)

CASE\SAS# 23582
COLUMN _____

LABORATORY COMPUCHEM
SITE NAME Waukegan Muni LF #1

Instrument# 5972 H P6a		Initial Cal			Contin Cal.			Contin Cal			Contin Cal			Contin Cal.		
Date/Time		5/20/95 0436			05/22/95 0128											
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
Diethylphthalate	0.01															
4-Chlorophenyl-phenylether	0.40															
Fluorene	0.90															
4-Nitroaniline	0.01															
4,6-Dinitro-2-methylphenol	0.01															
N nitrosodiphenylamine	0.01															
4-Bromophenyl-phenylether	0.10															
Hexachlorobenzene	0.10															
Pentachlorophenol	0.05															
Phenanthrene	0.70															
Anthracene	0.70															
Carbazole																
Di n-butylphthalate	0.01															
Fluoranthene	0.60															
Pyrene	0.60															
Butylbenzylphthalate	0.01															
3,3 Dichlorobenzidine	0.01	0.317			0.219	30.9	J									
Benzo(a)anthracene	0.80															
Chrysene	0.70															
bis(2 Ethylhexyl)phthalate	0.01															
Di n-octyl phthalate	0.01	2.453			3.340	36.2	J									
Benzo(b)fluoranthene	0.70															
Benzo(k)fluoranthene	0.70															
Benzo(a)pyrene	0.70															
Indeno(1,2,3-cd)pyrene	0.50															
Dibenz(a,h)anthrancene	0.40															
Benzo(g,h,i)perylene	0.50															
Nitrobenzene-d5	0.01															
2 Fluorobiphenyl	0.70															
Terphenyl-d14	0.50															
Phenol-d5	0.80															
2 Fluorophenol	0.60															
2,4,6-Tribromophenol	0.01															
2-Chlorophenol-d4																
1,2 Dichlorobenzene-d4																

Reviewer s Init/Date acf/6-19 95

J/R = All positive results are estimated J and non-detected results are unusable R

* = These flags should be applied to the analytes on the sample data sheets
\# = Minimum Relative Response Factor

CALIBRATION OUTLIER
PESTICIDE/PCB TCL COMPOUNDS
(Page 1 of 1)

CASE\SAS# 23582
COLUMN DB-608

LABORATORY COMPUCHEM
SITE NAME Waukegan Muni LF #1

Instrument# VARIAN 04		Initial Cal			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time		5/22/95			5/25/95 1209											
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
alpha BHC	0.01															
beta BHC	0.40															
delta BHC	0.90															
gamma BHC	0.01															
Heptachlor	0.01															
Aldrin	0.01															
Heptachlor epoxide	0.10															
Endosulfan I	0.10															
Dieldrin	0.05															
4, 4 -DDE	0.70															
Endrin	0.70															
Endosulfan II	0.01															
4, 4 DDD	0.60															
Endosulfan sulfate	0.60															
4, 4 DDT	0.01															
Methoxychlor	0.01															
Endrin ketone	0.80															
Endrin aldehyde	0.70															
alpha chlordane	0.01															
gamma chlordane	0.01															
Arochlor 1016																
Arochlor 1221																
Arochlor 1232																
Arochlor 1242																
Arochlor 1248																
Arochlor 1254																
Arochlor 1260																

Affected samples				
	PBLK24			
	ETC87MS			
	ETC87MSD			
	ETC87-90			

Reviewer s Int/Date ACH / 6-20-95

* These flags should be applied to the analytes on the sample data sheets
\# Minimum Relative Response Factor

CALIBRATION OUTLIER
PESTICIDE/PCB TCL COMPOUNDS
(Page 1 of 1)

CASE\SAS# 23582
COLUMN RTX-1701

LABORATORY COMPUCHEM
SITE NAME Waukegan Muni LF #1

Instrument# VARIAN05		Initial Cal			Contin. Cal.			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time		5/22/95			05/23/95 1209											
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
alpha-BHC	0.01															
beta BHC	0.40															
delta BHC	0.90															
gamma BHC	0.01															
Heptachlor	0.01															
Aldrin	0.01															
Heptachlor epoxide	0.10															
Endosulfan I	0.10															
Dieldrin	0.05															
4, 4 DDE	0.70															
Endrin	0.70															
Endosulfan II	0.01															
4 DDD	0.60															
Endosulfan sulfate	0.60															
4, 4 DDT	0.01															
Methoxychlor	0.01															
Endrin ketone	0.80															
Endrin aldehyde	0.70															
alpha chlordane	0.01															
gamma chlordane	0.01															
Arochlor 1016																
Arochlor 1221																
Arochlor 1232																
Arochlor 1242																
Arochlor 1248																
Arochlor 1254																
Arochlor 1260																

Affected samples				
	PBLK24			
	ETC87MS			
	ETC87MSD			
	ETC87-40			

Reviewer s Init/Date ACH / 6 20-95

* These flags should be applied to the analytes on the sample data sheets
\# Minimum Relative Response Factor

ORGANIC DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature utinized in this document, the following code letters and associated definitions are provide

VALUE-if the results is a value greater than or equal to the Contract Required Quantitation Limit (CRQL)

U Indicates that the compound was analyzed for, but not detected The sample quantitation limit corrected for dilution and percent moisture is reported

J Indicates an estimated value This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of a compound but the result is less than the sample quantitation limit, but greater than zero The flag is also used to indicate a reported result having an associated QC problem

R Indicates the data are unusable (Note The analyte may or may not be present)

N Indicates presumptive evidence of a compound This flag is only used for a tentatively identified compound, where the identification is based on a mass spectral library search

P Indicates a pesticide/Aroclor target analyte when there is greater than 25% difference for the detected concentrations between the two GC columns The lower of the two results is reported

C Indicates pesticide results that have been confirmed by GC/MS

B Indicates the analyte is detected in the associated blank as well as the sample

E Indicates compounds whose concentrations exceed the calibration range of the instrument

D Indicates an identified compound in an analysis has been diluted This flag alerts the data user to any differences between the concentrations reported in the two analysis

A Indicates tentatively identified compounds that are suspected to be aldol condensation products

G Indicates the TCLP Matrix Spike Recovery was greater than the upper limit of the analytical method

L Indicates the TCLP Matrix Spike Recovery was less than the lower limit of the analytical method

T Indicates the analyte is found in the associated TCLP extraction blank as well as in the sample

X, Y, Z are reserved for laboratory defined flags

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ecology and environment

EPA

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557 2490 FTS 557 2490

Organic Traffic Report & Chain of Custody Record

(For Organic CLP Analysis)

SAS No (if applicable): NA

Case No: 2222

10067

1 Sample Description (Enter in Column A)
1 Surface Water
2. Ground Water
3 Leachate
4 Rinsate
5 Soil/Sediment
6 Oil (High only)
7 Waste (High only)
8 Other (Specify)

2 Preservative (Enter in Column D)
1 HCl
2 HNO3
3 NaHSO4
4 H_2SO_4
5 Other (Specify)
6 Ice only
N Not preserved

3 Region No: V

Sampling Co: EIETAT

5 Date Shipped: 5/16/95

Carrier: FEX

7 Date Received: 5/17/95 Received by: M Stevens

Sampler (Name): Kelly Maley

Airbill Number: 4805017415

Laboratory Contract Number: 68D50009

Unit Price: 54.00

Sampler Signature: Kelly Maley

6 Ship To: Compuchem
3306 Chapel Hill/Nelson Hwy
Research Triangle Park, NC 27709 4318
ATTN Richard Blom

8 Transfer to

Date Received

Received by

Contract Number

Price

4 Type of Activity

	Lead	Pre-Remedial	Remedial	Removal
SF	X		RIFS	CLEM
PRP		PA	RD	REMA
ST		SSI	RA	REM
FED		LSI	O&M	OIL
			NPLD	UST

CLP Sample Numbers (from labels)	A Enter # From Box 1	B Conc. Low Med High	C Sample Type Comp / Grab	D Preservative from Box 6	E RAS Analysis VOA	BNA	Pest/PCB	High ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp CLP Inorg Samp No	K Sample Condition on Rec'd	L High Conc. Phases (Check below) Solids	Water - Mis Liq	Non Water - Mis Liq
ETC88	1	L	G	1	X				172413-14	W2	5/14/95 1055	KM	MEH581				
ETC88	1	L	G	6		X	X		172415-16	W2	5/14/95 1055	KM	MEH581				
ETC89	1	L	G	1	X				172419-20	W3	5/14/95 1055	KM	MEH582				
ETC89	1	L	G	6		X	X		172421-22	W3	5/14/95 1055	KM	MEH582				
									7182066 ↓ 067								

ORIGINAL

Shipment for Case complete? (Y/N): Y

Page 1 of 1

Sample used for a spike and/or duplicate

Additional Sampler Signatures

Chain of Custody Seal Number: 456841-85

CHAIN OF CUSTODY RECORD

Relinquished by (Signature)	Date / Time	Received by (Signature)	Relinquished by (Signature)	Date / Time	Received by (Signature)
Kelly Maley	5/16/95 1500				
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 Is custody seal intact? Y/N/none	
		Melissa Stevens	5/17/95 0835	mg 5/17/95 SAMPLES REC'D IN GOOD CONDITION	

Split Samples ☐ Accepted (Signature)
☐ Declined

EPA Form 9110-2 (Rev 5-91) Replaces EPA Form (2075-7) previous edition which may be used

DISTRIBUTION
Blue Region Copy for Return Pink SMO Copy White Lab Copy for Return to Region Yellow Lab

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

024524

Org-2

EPA

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria VA 22313
703 557 2490 FTS 557 2490

Organic Traffic Report & Chain of Custody Record

(For Organic CLP Analysis)

SAS No (if applicable): NA

Case No: 20,554

1 Sample Description (Enter in Column A)
1 Surface Water
2. Ground Water
3 Leachate
4 Rinsate
5 Soil/Sediment
6 Oil (High only)
7 Waste (High only)
8 Other (Specify)

2 Preservative (Enter in Column D)
1 HCl
2 HNO3
3 NaHSO4
4 H_2SO_4
5 Other (Specify)
6 Ice only
N Not preserved

3 Region No: V
Sampling Co: ELI TAT
5 Date Shipped: 5/16/95
Carrier: Fed Ex
7 Date Received: 5/17/95
Received by: M. Stevens
Sampler (Name): Kelly Maley
Airbill Number: 4805077415
Laboratory Contract Number: 68D50009
Unit Price: 547.00
Sampler Signature: Kelly Maley
6 Ship To: Compuchem 5306 Chapel Hill/Nelson Hwy Research Triangle Park, NC 27709-4778 ATTN Robert Bloom
8 Transfer to:
Date Received:
Received by:
Contract Number:
Price:

4 Type of Activity

	Lead	Pre-Remedial	Remedial	Removal
SF	X		RIFS	CLEM
PRP		PA	RD	REMA
ST		SSI X	RA	REM
FED		LSI	O&M	OIL
			NPLD	UST

CLP Sample Numbers (from labels)	A Enter # From Box 1	B Conc Low Med High	C Sample Type Comp / Grab	D Preservative from Box 6	E RAS Analysis VOA	BNA	Pest/PCB	High ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp CLP Inorg Samp No	K Sample Condition on Rec't	L High Conc Phases (Check below) Solids	Water – Mis Liq	Non Water – Mis Liq
ETC87	1	L	G	1	X				192401-6	W1	5/16/95 1310	KM	MEHJ80				
ETC87	1	L	G	6		X	X		192407-10	W1	5/16/95 1310	KM	MEHJ80				
ETC90	4	L	G	1	X				192425-26	W4	5/16/95 1115	KM	MEHJ83				
ETC90	4	L	G	6		X	X		192427-28	W4	5/16/95 1115	KM	MEHJ83				
									718056								
									↓ 068								

ORIGINAL

Shipment for Case complete? (Y/N): Y
Page 1 of 1
Sample used for a spike and/or duplicate: ETC87
Additional Sampler Signatures:
Chain of Custody Seal Number: 415682-83

CHAIN OF CUSTODY RECORD

Relinquished by (Signature)	Date / Time	Received by (Signature)	Relinquished by (Signature)	Date / Time	Received by (Signature)
Kelly Maley	5/16/95 1500				
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 Is custody seal intact? Y/N/none	
		Melissa Stevens	5/17/95 0835	MS 5/17/95 SAMPLES REC'D IN GOOD CONDITION	

Split Samples ☐ Accepted (Signature)
☐ Declined

EPA Form 8110-2 (Rev 5-91) Replaces EPA Form (2075-7) previous edition which may be used

DISTRIBUTION
Blue Region Copy Pink SMO Copy White Lab Copy for Return to Region Yellow Lab Copy for Return to SMO

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

Org-2

recycled paper

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COMPUCHEM
ENVIRONMENTAL
CORPORATION

3306 Chapel Hill/Nelson Highway P O Box 14998
Research Triangle Park, NC 27709-4998
(919) 406 1600

RECEIVED
JUN 06 1995
US EPA CENTRAL REGIONAL LAB
536 S CLARK ST
CHICAGO ILLINOIS 60605

SDG NARRATIVE

Case # 23582
SDG # ETC87
Contract # (OLM03 0) - REVS

Sample Identifications ETC87, ETC88, ECT89, ECT90

The four liquid samples listed above were received intact, properly refrigerated, with proper documentation, in a sealed shipping container, on May 17, 1995 The samples were scheduled for the requested analyses of the volatile, semivolatile, and pesticide/PCB fractions These samples were analyzed following document OLM03 0 (REVS) protocol

All pertinent Quality Assurance notices are included in the narrative section or the sample data sections, and all pertinent Laboratory notices for Case # 23582, SDG # ETC87 are included in the sample data sections

VOLATILES
Analysis holding time requirements were met for all of these samples The pH values of these samples are tabulated on the attached batch sheet The samples were not properly preserved, as their pH values exceeded 2

There were no volatile Target Compound List (TCL) analytes identified above the Contract Required Quantitation Limit (CRQL) in any of these samples A Tentatively Identified Compound (TIC) found in all of these samples could be characterized as carbon dioxide

Manual quantitations were performed on one or more of the process files associated with this SDG The reasons have been coded with explanations provided in the notice of Robert Meierer included in the narrative section of the SDG

All of the system monitoring compounds met recovery criteria in the analyses of these samples All of the internal standards met response and retention time criteria in the analyses of these samples

The associated method blank met all quality control criteria

ETC87 was used as the original to prepare the duplicate matrix spikes as requested The associated duplicate matrix spikes met all advisory accuracy and precision criteria

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

COMPUCHEM
ENVIRONMENTAL
CORPORATION

3306 Chapel Hill/Nelson Highway P O Box 14998
Research Triangle Park, NC 27709 4998
(919) 406 1600

There were no semivolatile TCL analytes identified above the CRQL in any of these samples TIC's found in most of these samples could be characterized as acids and unknowns

Manual quantitations were performed on one or more of the process files associated with this SDG The reasons have been coded with explanations provided in the notice of Robert Meierer included in the narrative section of the SDG

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

The associated method blank met all quality control criteria

ETC87 was used as the original to prepare the duplicate matrix spikes as requested With two exceptions, the associated duplicate matrix spikes met all advisory accuracy and precision criteria The recovery of the spike compound 4-nitrophenol was flagged as an outlier in the matrix spike and matrix spike duplicate

PESTICIDES/PCB'S
Extraction and analysis holding time requirements were met for all of these samples

There were no pesticide/PCB TCL analytes confirmed by dual column above the CRQL in any of these samples

Manual quantitations were performed on one or more of the process files associated with this SDG The reasons have been coded with explanations provided in the notice of Robert Meierer included in the narrative section of the SDG

All advisory surrogate recovery criteria were met for these samples

The associated method blank met all quality control criteria

ETC87 was used as the original to prepare the duplicate matrix spikes as requested The associated duplicate matrix spikes met all advisory accuracy and precision criteria

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

COMPUCHEM
ENVIRONMENTAL
CORPORATION

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Research Triangle Park NC 27709-4998
(919) 406 1600

Sarah A. Hubbard
Technical Reviewer
June 3, 1995

Note This report is paginated for reference and accountability

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

	EPA SAMPLE NO	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLKJZ	95	88	83		0
02	ETC87	98	90	90		0
03	ETC88	96	91	85		0
04	ETC89	98	89	85		0
05	ETC90	100	94	89		0
06	ETC87MS	96	91	87		0
07	ETC87MSD	96	90	89		0
08	VHBLK20	95	93	88		0
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		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(88-110)
SMC2 (BFB)	= Bromofluorobenzene	(86-115)
SMC3 (DCE)	= 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

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3A
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix Spike - EPA Sample No ETC87

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC
1,1-Dichloroethene	50 00	0 000	41 25	82	61-145
Trichloroethene	50 00	0 000	42 64	85	71-120
Benzene	50 00	0 000	44 91	90	76-127
Toluene	50 00	0 000	45 22	90	76-125
Chlorobenzene	50 00	0 000	44 35	89	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC
1,1-Dichloroethene	50 00	40 10	80	2	14	61-145
Trichloroethene	50 00	43 75	88	3	14	71-120
Benzene	50 00	43 51	87	3	11	76-127
Toluene	50 00	43 90	88	2	13	76-125
Chlorobenzene	50 00	43 80	88	1	13	75-130

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

* Values outside of QC limits

RPD 0 out of 5 outside limits
Spike Recovery 0 out of 10 outside limits

COMMENTS

FORM III VOA-1 OLM03 0

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO

VBLKJZ

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Lab File ID CB950524A03 Lab Sample ID VBLKJZ

Date Analyzed 05/24/95 Time Analyzed 1536

GC Column DB624 ID 0 53 (mm) Heated Purge (Y/N) N

Instrument ID OWA03

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	ETC87	718056	CN018056A03	1719
02	ETC88	718066	CN018066A03	1743
03	ETC89	718067	CN018067B03	1834
04	ETC90	718068	CN018068B03	1907
05	ETC87MS	718057	CN018057B03	1943
06	ETC87MSD	718058	CN018058B03	2017
07	VHBLK20	718075	CN018075B03	2053
08				
09				
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COMMENTS

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

VBLKJZ

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID VBLKJZ

Sample wt/vol 5 0 (g/mL) mL Lab File ID CB950524A03

Level (low/med) LOW Date Received _____

% Moisture not dec _____ Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	1	J
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	2	J

FORM I VOA OLM03 0

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

VBLKJZ

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID VBLKJZ

Sample wt/vol 5 0 (g/mL) mL Lab File ID CB950524A03

Level (low/med) LOW Date Received _____

% Moisture not dec _____ Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

Number TICs found 0

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1					
2					
3					
4					
5					
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9					
10					
11					
12					
13					
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FORM I VOA-TIC OLM03 0

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC87
W1

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718056

Sample wt/vol 5 0 (g/mL) mL Lab File ID CN018056A03

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec _____ Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

FORM I VOA OLM03 0

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC87

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718056

Sample wt/vol 5 0 (g/mL) mL Lab File ID CN018056A03

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec _____ Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

Number TICs found 1

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1		CO2 (NOT IN TIC TOTAL)	1 22	182	J
2					
3					
4					
5					
6					
7					
8					
9					
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11					
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FORM I VOA-TIC OLM03 0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC88
W2

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718066

Sample wt/vol 5 0 (g/mL) mL Lab File ID CN018066A03

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec _____ Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC88

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718066

Sample wt/vol 5 0 (g/mL) mL Lab File ID CN018066A03

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec _____ Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

Number TICs found 1

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1		CO2 (NOT IN TIC TOTAL)	1 44	208	J
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
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FORM I VOA-TIC OLM03 0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC89
W3

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718067

Sample wt/vol 5 0 (g/mL) mL Lab File ID CN018067B03

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec _____ Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC89

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718067

Sample wt/vol 5 0 (g/mL) mL Lab File ID CN018067B03

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec _____ Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

Number TICs found 1

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1		CO2 (NOT IN TIC TOTAL)	1 24	115	J
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
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FORM I VOA-TIC OLM03 0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC90
W4

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718068

Sample wt/vol 5 0 (g/mL) mL Lab File ID CN018068B03

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec _____ Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	2	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC90

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718068

Sample wt/vol 5 0 (g/mL) mL Lab File ID CN018068B03

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec _____ Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

Number TICs found 1

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1		CO2 (NOT IN TIC TOTAL)	1 51	10	J
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
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FORM I VOA-TIC OLM03 0

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

	EPA SAMPLE NO	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 (2CP) #	S8 (DCB) #	TOT OUT
01	SBLK27	78	76	92	65	66	58	69	68	0
02	ETC87	74	72	87	65	65	67	64	64	0
03	ETC87MS	75	69	77	63	66	66	66	66	0
04	ETC87MSD	72	66	81	63	64	67	64	64	0
05	ETC89	86	77	86	74	76	72	77	74	0
06	ETC90	82	76	95	70	70	62	72	72	0
07	ETC88	80	71	79	69	69	66	71	70	0
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		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(35-114)	
S2 (FBP)	= 2-Fluorobiphenyl	(43-116)	
S3 (TPH)	= Terphenyl-d14	(33-141)	
S4 (PHL)	= Phenol-d5	(10-110)	
S5 (2FP)	= 2-Fluorophenol	(21-110)	
S6 (TBP)	= 2,4,6-Tribromophenol	(10-123)	
S7 (2CP)	= 2-Chlorophenol-d4	(33-110)	(advisory)
S8 (DCB)	= 1,2-Dichlorobenzene-d4	(16-110)	(advisory)

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

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix Spike - EPA Sample No ETC87

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC
Phenol	75 00	0 000	48 79	65	12-110
2-Chlorophenol	75 00	0 000	52 95	71	27-123
1,4-Dichlorobenzene	50 00	0 000	36 59	73	36- 97
N-Nitroso-di-n-prop (1)	50 00	0 000	45 12	90	41-116
1,2,4-Trichlorobenzene	50 00	0 000	39 65	79	39- 98
4-Chloro-3-methylphenol	75 00	0 000	60 43	80	23- 97
Acenaphthene	50 00	0 000	39 48	79	46-118
4-Nitrophenol	75 00	0 000	71 83	96*	10- 80
2,4-Dinitrotoluene	50 00	0 000	41 53	83	24- 96
Pentachlorophenol	75 00	0 000	60 22	80	9-103
Pyrene	50 00	0 000	39 17	78	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC
Phenol	75 00	47 52	63	3	42	12-110
2-Chlorophenol	75 00	50 79	68	4	40	27-123
1,4-Dichlorobenzene	50 00	34 59	69	6	28	36- 97
N-Nitroso-di-n-prop (1)	50 00	41 14	82	9	38	41-116
1,2,4-Trichlorobenzene	50 00	37 75	76	4	28	39- 98
4-Chloro-3-methylphenol	75 00	58 88	78	2	42	23- 97
Acenaphthene	50 00	37 16	74	6	31	46-118
4-Nitrophenol	75 00	72 16	96*	0	50	10- 80
2,4-Dinitrotoluene	50 00	40 76	82	1	38	24- 96
Pentachlorophenol	75 00	61 42	82	2	50	9-103
Pyrene	50 00	39 91	80	2	31	26-127

(1) N-Nitroso-di-n-propylamine
Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD 0 out of 11 outside limits
Spike Recovery 2 out of 22 outside limits

COMMENTS _____

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4B
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO

SBLK27

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Lab File ID GH019423C60 Lab Sample ID 719423

Instrument ID 5972HP60 Date Extracted 05/20/95

Matrix (soil/water) WATER Date Analyzed 05/22/95

Level (low/med) LOW Time Analyzed 0753

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	ETC87	718056	GH018056C60	05/22/95
02	ETC87MS	718060	GH018060C60	05/22/95
03	ETC87MSD	718061	GH018061C60	05/22/95
04	ETC89	718067	GH018067C60	05/22/95
05	ETC90	718068	GH018068C60	05/22/95
06	ETC88	718066	GH018066C60	05/22/95
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COMMENTS

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

SBLK27

Lab Name COMPUCHEM ENV. CORP Contract 68D50009

Lab C[redacted] COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 719423

Sample wt/vol 1000 (g/mL) mL Lab File ID GH019423C60

Level (low/med) LOW Date Received _____

% Moisture _____ decanted (Y/N)___ Date Extracted 05/20/95

Concentrated Extract Volume 1000(uL) Date Analyzed 05/22/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ____

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

SBLK27

Lab Name COMPUCHEM ENV. CORP Contract 68D50009

Lab Code: COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 719423

Sample wt/vol 1000 (g/mL) mL Lab File ID GH019423C60

Level (low/med) LOW Date Received _____

% Moisture _____ decanted (Y/N) ___ Date Extracted 05/20/95

Concentrated Extract Volume 1000(uL) Date Analyzed 05/22/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ____

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

SBLK27

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 719423

Sample wt/vol 1000 (g/mL) mL Lab File ID GH019423C60

Level (low/med) LOW Date Received _____

% Moisture _____ decanted (Y/N)___ Date Extracted 05/20/95

Concentrated Extract Volume 1000(uL) Date Analyzed 05/22/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ____

Number TICs found 0

CONCENTRATION UNITS (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1					
2					
3					
4					
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC87
W1

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718056

Sample wt/vol 1000 (g/mL) mL Lab File ID GH018056C60

Level (low/med) LOW Date Received 05/17/95

% Moisture _____ decanted (Y/N)___ Date Extracted 05/20/95

Concentrated Extract Volume 1000(uL) Date Analyzed 05/22/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ____

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC87 W1

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718056

Sample wt/vol 1000 (g/mL) mL Lab File ID GH018056C60

Level (low/med) LOW Date Received 05/17/95

% Moisture _____ decanted (Y/N)___ Date Extracted 05/20/95

Concentrated Extract Volume 1000(uL) Date Analyzed 05/22/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ____

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

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1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC87

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718056

Sample wt/vol 1000 (g/mL) mL Lab File ID GH018056C60

Level (low/med) LOW Date Received 05/17/95

% Moisture _____ decanted (Y/N)___ Date Extracted 05/20/95

Concentrated Extract Volume 1000(uL) Date Analyzed 05/22/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ____

Number TICs found 1

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1		DICHLOROBENZOIC ACID	12 18	8	J
2					
3					
4					
5					
6					
7					
8					
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC88
W2

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718066

Sample wt/vol 1000 (g/mL) mL Lab File ID GH018066C60

Level (low/med) LOW Date Received 05/17/95

% Moisture _____ decanted (Y/N)___ Date Extracted 05/20/95

Concentrated Extract Volume 1000(uL) Date Analyzed 05/22/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ____

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC88 W2

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718066

Sample wt/vol 1000 (g/mL) mL Lab File ID GH018066C60

Level (low/med) LOW Date Received 05/17/95

% Moisture _____ decanted (Y/N)___ Date Extracted 05/20/95

Concentrated Extract Volume 1000(uL) Date Analyzed 05/22/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ____

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	2	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	1	J
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC88

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718066

Sample wt/vol 1000 (g/mL) mL Lab File ID GH018066C60

Level (low/med) LOW Date Received 05/17/95

% Moisture _____ decanted (Y/N)___ Date Extracted 05/20/95

Concentrated Extract Volume 1000(uL) Date Analyzed 05/22/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ____

Number TICs found 5

CONCENTRATION UNITS (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1		UNKNOWN	7 42	2	J
2		DICHLOROBENZOIC ACID	12 20	16	J
3		UNKNOWN	13 54	4	J
4		UNKNOWN	13 61	2	J
5		UNKNOWN	14 19	3	J
6					
7					
8					
9					
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC89
W3

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718067

Sample wt/vol 1000 (g/mL) mL Lab File ID GH018067C60

Level (low/med) LOW Date Received 05/17/95

% Moisture _____ decanted (Y/N)___ Date Extracted 05/20/95

Concentrated Extract Volume 1000(uL) Date Analyzed 05/22/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ____

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

FORM I SV-1 OLM03 0

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC89 W3

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718067

Sample wt/vol 1000 (g/mL) mL Lab File ID GH018067C60

Level (low/med) LOW Date Received 05/17/95

% Moisture _____ decanted (Y/N)___ Date Extracted 05/20/95

Concentrated Extract Volume 1000(uL) Date Analyzed 05/22/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ____

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	1	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	2	J
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

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1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC89

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718067

Sample wt/vol 1000 (g/mL) mL Lab File ID GH018067C60

Level (low/med) LOW Date Received 05/17/95

% Moisture _____ decanted (Y/N)___ Date Extracted 05/20/95

Concentrated Extract Volume 1000(uL) Date Analyzed 05/22/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ____

Number TICs found 5

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1		UNKNOWN	7 42	3	J
2		UNKNOWN	10 22	2	J
3		DICHLOROBENZOIC ACID	12 20	16	J
4		UNKNOWN	13 61	3	J
5		UNKNOWN	14 19	4	J
6					
7					
8					
9					
10					
11					
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30					

FORM I SV-TIC OLM03 0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC90
W4

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Co[redacted] COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718068

Sample wt/vol 1000 (g/mL) mL Lab File ID GH018068C60

Level (low/med) LOW Date Received 05/17/95

% Moisture _____ decanted (Y/N)___ Date Extracted 05/20/95

Concentrated Extract Volume 1000(uL) Date Analyzed 05/22/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ____

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC90 W4

Lab Name COMPUCHEM ENV. CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718068

Sample wt/vol 1000 (g/mL) mL Lab File ID GH018068C60

Level (low/med) LOW Date Received 05/17/95

% Moisture _____ decanted (Y/N)___ Date Extracted 05/20/95

Concentrated Extract Volume 1000(uL) Date Analyzed 05/22/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ____

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC90

Lab Name COMPUCHEM ENV. CORP Contract 68D50009

Lab Co[redacted] COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718068

Sample wt/vol 1000 (g/mL) mL Lab File ID GH018068C60

Level (low/med) LOW Date Received 05/17/95

% Moisture _____ decanted (Y/N)___ Date Extracted 05/20/95

Concentrated Extract Volume 1000(uL) Date Analyzed 05/22/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) N pH ____

Number TICs found 0

CONCENTRATION UNITS (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1					
2					
3					
4					
5					
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30					

FORM I SV-TIC OLM03 0

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name C[redacted]CHEM ENV CORP Contract 68D50004

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

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

	EPA SAMPLE NO	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	ETC87MS	80	80	100	99			0
02	ETC87MSD	78	82	100	96			0
03	ETC87	86	88	110	100			0
04	ETC88	82	77	110	100			0
05	ETC89	79	72	100	98			0
06	ETC90	85	77	110	100			0
07	PBLK24	84	77	110	100			0
08								
09								
10								
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28								
29								
30								

	QC LIMITS
TCX = Tetrachloro-m-xylene	(30-150)
DCB = Decachlorobiphenyl	(30-150)

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

page 1 of 1

FORM II PEST-1 OLM03 0

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name [redacted] Contract 68D50004

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix Spike - EPA Sample No ETC87

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC
gamma-BHC (Lindane)	0.500	0 00	0 33	66	56-123
Heptachlor	0 500	0 00	0 35	70	40-131
Aldrin	0 500	0 00	0 36	72	40-120
Dieldrin	1 000	0 0018	0 71	71	52-126
Endrin	1 000	0 00	0 78	78	56-121
4,4'-DDT	1.000	0 00	0 79	79	38-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC
gamma-BHC (Lindane)	0 500	0 33	66	0	15	56-123
Heptachlor	0 500	0 34	68	3	20	40-131
Aldrin	0 500	0 36	72	0	22	40-120
Dieldrin	1 000	0 70	70	1	18	52-126
Endrin	1.000	0 75	75	4	21	56-121
4,4'-DDT	1 000	0 76	76	4	27	38-127

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

* Values outside of QC limits

RPD 0 out of 6 outside limits
Spike Recovery 0 out of 12 outside limits

COMMENTS

FORM III PEST-1 OLM03 0

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO

PBLK24

Lab Name COMPUCHEM ENV CORP Contract 68D50004

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Lab Sample ID 719528 Lab File ID

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

fur Cleanup (Y/N) N Date Extracted 05/22/95

Analyzed (1) 05/23/95 Date Analyzed (2) 05/23/95

Time Analyzed (1) 1400 Time Analyzed (2) 1400

Instrument ID (1) VARIAN05 Instrument ID (2) VARIAN04

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

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

	EPA SAMPLE NO	LAB SAMPLE D	DATE ANALYZED 1	DATE ANALYZED 2
01	ETC87MS	718063	05/23/95	05/23/95
02	ETC87MSD	718064	05/23/95	05/23/95
03	ETC87	718056	05/23/95	05/23/95
04	ETC88	718066	05/23/95	05/23/95
05	ETC89	718067	05/23/95	05/23/95
06	ETC90	718068	05/23/95	05/23/95
07				
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Comments

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

PBLK24

Lab Name COMPUCHEM ENV CORP Contract 68D50004

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 719528

Sample wt/vol 1000 (g/ml) ML Lab File ID

% Moisture decanted (Y/N) Date Received

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/22/95

Concentrated Extract Volume 10000 (uL) Date Analyzed 05/23/95

Injection Volume 2 0 (uL) Dilution Factor 1

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0 050	U
319-85-7	beta-BHC	0 050	U
319-86-8	delta-BHC	0 050	U
58-89-9	gamma-BHC (Lindane)	0 050	U
76-44-8	Heptachlor	0 050	U
309-00-2	Aldrin	0 050	U
1024-57-3	Heptachlor epoxide	0 050	U
959-98-8	Endosulfan I	0 050	U
60-57-1	Dieldrin	0 10	U
72-55-9	4,4'-DDE	0 10	U
72-20-8	Endrin	0 10	U
33213-65-9	Endosulfan II	0 10	U
72-54-8	4,4'-DDD	0 10	U
1031-07-8	Endosulfan sulfate	0 10	U
50-29-3	4,4'-DDT	0 10	U
72-43-5	Methoxychlor	0 50	U
53494-70-5	Endrin ketone	0 10	U
7421-93-4	Endrin aldehyde	0 10	U
5103-71-9	alpha-Chlordane	0 050	U
5103-74-2	gamma-Chlordane	0 050	U
8001-35-2	Toxaphene	5 0	U
12674-11-2	Aroclor-1016	1 0	U
11104-28-2	Aroclor-1221	2 0	U
11141-16-5	Aroclor-1232	1 0	U
53469-21-9	Aroclor-1242	1 0	U
12672-29-6	Aroclor-1248	1 0	U
11097-69-1	Aroclor-1254	1 0	U
11096-82-5	Aroclor-1260	1 0	U

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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC87
WI

Lab Name COMPUCHEM ENV CORP Contract 68D50004

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718056

Sample wt/vol 1000 (g/ml) ML Lab File ID

% Moisture decanted (Y/N) Date Received 05/17/95

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/22/95

Concentrated Extract Volume 10000 (uL) Date Analyzed 05/23/95

Injection Volume 2 0 (uL) Dilution Factor 1

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0 050	U
319-85-7	beta-BHC	0 050	U
319-86-8	delta-BHC	0 050	U
58-89-9	gamma-BHC (Lindane)	0 050	U
76-44-8	Heptachlor	0 050	U
309-00-2	Aldrin	0 050	U
1024-57-3	Heptachlor epoxide	0 050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0 0018	JP
72-55-9	4,4'-DDE	0 10	U
72-20-8	Endrin	0 10	U
33213-65-9	Endosulfan II	0 10	U
72-54-8	4,4'-DDD	0 10	U
1031-07-8	Endosulfan sulfate	0 10	U
50-29-3	4,4'-DDT	0 10	U
72-43-5	Methoxychlor	0 50	U
53494-70-5	Endrin ketone	0 10	U
7421-93-4	Endrin aldehyde	0 10	U
5103-71-9	alpha-Chlordane	0 050	U
5103-74-2	gamma-Chlordane	0 050	U
8001-35-2	Toxaphene	5 0	U
12674-11-2	Aroclor-1016	1 0	U
11104-28-2	Aroclor-1221	2 0	U
11141-16-5	Aroclor-1232	1 0	U
53469-21-9	Aroclor-1242	1 0	U
12672-29-6	Aroclor-1248	1 0	U
11097-69-1	Aroclor-1254	1 0	U
11096-82-5	Aroclor-1260	1 0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC88
WZ

Lab Name COMPUCHEM ENV CORP Contract 68D50004

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718066

Sample wt/vol 1000 (g/ml) ML Lab File ID

% Moisture decanted (Y/N) Date Received 05/17/95

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/22/95

Concentrated Extract Volume 10000 (uL) Date Analyzed 05/23/95

Injection Volume 2 0 (uL) Dilution Factor 1

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0 050	U
319-85-7	beta-BHC	0 050	U
319-86-8	delta-BHC	0 050	U
58-89-9	gamma-BHC (Lindane)	0 0021	JP
76-44-8	Heptachlor	0 050	U
309-00-2	Aldrin	0 050	U
1024-57-3	Heptachlor epoxide	0 050	U
959-98-8	Endosulfan I	0 050	U
60-57-1	Dieldrin	0 0014	JP
72-55-9	4,4'-DDE	0 10	U
72-20-8	Endrin	0 10	U
33213-65-9	Endosulfan II	0 10	U
72-54-8	4,4'-DDD	0 10	U
1031-07-8	Endosulfan sulfate	0 10	U
50-29-3	4,4'-DDT	0 10	U
72-43-5	Methoxychlor	0 50	U
53494-70-5	Endrin ketone	0 10	U
7421-93-4	Endrin aldehyde	0 10	U
5103-71-9	alpha-Chlordane	0 050	U
5103-74-2	gamma-Chlordane	0 050	U
8001-35-2	Toxaphene	5 0	U
12674-11-2	Aroclor-1016	1 0	U
11104-28-2	Aroclor-1221	2 0	U
11141-16-5	Aroclor-1232	1 0	U
53469-21-9	Aroclor-1242	1 0	U
12672-29-6	Aroclor-1248	1 0	U
11097-69-1	Aroclor-1254	1 0	U
11096-82-5	Aroclor-1260	1 0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC89
W3

Lab Name COMPUCHEM ENV CORP Contract 68D50004

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718067

Sample wt/vol 1000 (g/ml) ML Lab File ID

% Moisture decanted (Y/N) Date Received 05/17/95

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/22/95

Concentrated Extract Volume 10000 (uL) Date Analyzed 05/23/95

Injection Volume 2 0 (uL) Dilution Factor 1

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0 050	U
319-85-7	beta-BHC	0 050	U
319-86-8	delta-BHC	0 050	U
58-89-9	gamma-BHC (Lindane)	0 0012	J
76-44-8	Heptachlor	0 050	U
309-00-2	Aldrin	0 050	U
1024-57-3	Heptachlor epoxide	0 050	U
959-98-8	Endosulfan I	0 050	U
60-57-1	Dieldrin	0 10	U
72-55-9	4,4'-DDE	0 10	U
72-20-8	Endrin	0 10	U
33213-65-9	Endosulfan II	0 10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0 0039	JP
50-29-3	4,4'-DDT	0 10	U
72-43-5	Methoxychlor	0 50	U
53494-70-5	Endrin ketone	0 10	U
7421-93-4	Endrin aldehyde	0 10	U
5103-71-9	alpha-Chlordane	0 050	U
5103-74-2	gamma-Chlordane	0 050	U
8001-35-2	Toxaphene	5 0	U
12674-11-2	Aroclor-1016	1 0	U
11104-28-2	Aroclor-1221	2 0	U
11141-16-5	Aroclor-1232	1 0	U
53469-21-9	Aroclor-1242	1 0	U
12672-29-6	Aroclor-1248	1 0	U
11097-69-1	Aroclor-1254	1 0	U
11096-82-5	Aroclor-1260	1 0	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC90
W4

Lab Name COMPUCHEM ENV CORP Contract 68D50004

Lab Code COMPU Case No 23582 SAS No SDG No ETC87

Matrix (soil/water) WATER Lab Sample ID 718068

Sample wt/vol 1000 (g/ml) ML Lab File ID

% Moisture decanted (Y/N) Date Received 05/17/95

Extraction (SepF/Cont/Sonc) SEPF Date Extracted 05/22/95

Concentrated Extract Volume 10000 (uL) Date Analyzed 05/23/95

Injection Volume 2 0 (uL) Dilution Factor 1

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0 050	U
319-85-7	beta-BHC	0 050	U
319-86-8	delta-BHC	0 050	U
58-89-9	gamma-BHC (Lindane)	0 050	U
76-44-8	Heptachlor	0 050	U
309-00-2	Aldrin	0 050	U
1024-57-3	Heptachlor epoxide	0 050	U
959-98-8	Endosulfan I	0 050	U
60-57-1	Dieldrin	0 10	U
72-55-9	4,4'-DDE	0 10	U
72-20-8	Endrin	0 10	U
33213-65-9	Endosulfan II	0 10	U
72-54-8	4,4'-DDD	0 10	U
1031-07-8	Endosulfan sulfate	0 10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0 50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0 10	U
5103-71-9	alpha-Chlordane	0 050	U
5103-74-2	gamma-Chlordane	0 050	U
8001-35-2	Toxaphene	5 0	U
12674-11-2	Aroclor-1016	1 0	U
11104-28-2	Aroclor-1221	2 0	U
11141-16-5	Aroclor-1232	1 0	U
53469-21-9	Aroclor-1242	1 0	U
12672-29-6	Aroclor-1248	1 0	U
11097-69-1	Aroclor-1254	1 0	U
11096-82-5	Aroclor-1260	1 0	U

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No· _____ CERCLIS No ILD980902175

Case No 23582 Site Name Location Waukegan Muni LF#

Contractor or EPA Lab Compuchem Data User E&E

No of Samples 4 Date Sampled or Data Received 6-6-95

Have Chain-of-Custody records been received? Yes ✓ No ✓
Have traffic reports or packing lists been received? Yes ✓ No ____
If no, are traffic report or packing list numbers written on the chain-of-custody record? Yes ✓ No ____
If no, which traffic report or packing list numbers are missing?

_____ _____ _____ _____

_____ _____ _____ _____

Are basic data forms in? Yes ✓ No ____
No of samples claimed 4 No of samples received 4

Received by Lynette Burnett Date 6-6-95

Received by LSSS: Lynette Burnett Date 6-13-95

Review started 6-19-95 Reviewer Signature Allison C Harvey

Total time spent on review 4 hrs Date review completed 6-20-95

Copied by Patricia J Scott Date 06/27/95

Mailed to User by _____ Date _____

DATA USERS:
Please fill in the blanks below and return this form to
Sylvia Griffin, Data Mgmt Coordinator, Region V, 5SCRL

Data received by _____ Date _____

Data review received by _____ Date _____

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Dioxin Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK

PROBLEMS Please indicate reasons why data are not suitable for your uses

_____

_____

Received by Data Mgmt Coordinator for Files Data _____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE.

SUBJECT: Review of Region V CLP Data
Received for Review on June 13, 1995

FROM Dennis Wesolowski, Chief (SQC-1J)
Contract Analytical Services Section

TO. Data User: E & E Patricia J Scott for D Wesolowski 06/29/95

We have reviewed the data for the following case:

SITE NAME: WAUKEGAN MUNI LF #1 (IL)

CASE NUMBER. 23582 SDG NUMBER: ETC91

Number and Type of Samples: 5 (Soil)

Sample Numbers: ETC 91-95

Laboratory: Compuchem Hrs. for Review: 5.5

Following are our findings.

The data are acceptable and usable with the qualifications described in the attached narrative

Patricia J Scott

cc: Regional TPO

NARRATIVE

LABORATORY	Compuchem	CASE	23582
SITE	Waukegan Municipal LF #1	SDG	ETC91

Five (5) soil samples numbered ETC91-95 were collected May 16, 1995 Compuchem of Research Triangle Park, NC received the samples on May 17, 1995 in good condition All samples were analyzed for the full list of organic analytes per CLP SOW OLM03 1

Sample ETC91 was used as the low level spike for all fractions of the samples There no samples identified as a field duplicate or field blank

VOA samples were analyzed within the fourteen (14) days holding time, therefore, the results are acceptable

All SVOA extractions were completed within the fourteen (14) days holding time, the extracts were analyzed within 40 days, therefore, the results are acceptable

All pesticide extractions were completed outside the fourteen (14) days holding time, the extracts were analyzed within 40 days, therefore, positive results should be qualified as estimated (J) and estimated (UJ) for non-detects

The reviewer's narrative and data qualifiers are noted in the following pages

Reviewed by Jeffrey A Clark Lockheed/ESAT
Date June 21, 1995

NARRATIVE

LABORATORY	Compuchem	CASE	23582
SITE	Waukegan Municipal LF #1	SDG	ETC91

Below is a summary of the out-of-control audits and the possible effect on the data for this case

1. HOLDING TIME.

Five (5) soil samples numbered ETC91-95 were collected May 16, 1995 Compuchem of Research Triangle Park, NC received the samples on May 17, 1995 in good condition All samples were analyzed for the full list of organic analytes per CLP SOW OLM03 1

VOA samples were analyzed within the fourteen (14) days holding time, therefore, the results are acceptable

All SVOA extractions were completed within the fourteen (14) days holding time, the extracts were analyzed within 40 days, therefore, the results are acceptable

All pesticide extractions were completed 7 days outside the fourteen (14) days holding time, the extracts were analyzed within 40 days, therefore, positive results should be qualified as estimated (J) and estimated (UJ) for non-detects

2. GC/MS TUNING AND GC PERFORMANCE

GC/MS tuning complied with the mass list and ion abundance criteria for BFB and DFTPP All samples were analyzed within the twelve (12) hour periods for BFB and DFTPP instrument performance checks as well, therefore, the results are acceptable
GC Resolution Check Mixtures met the 60% resoultion criteria
Endrin and DDT degradation checks using PEM Mix on the DB-608 and RTX-1701 columns were <20%, therefore, the results are acceptable The Florisil Cartridge Check and GPC calibration check met the QC criteria, therefore, the results are acceptable

3. CALIBRATION

Initial and continuing calibration of VOA, SVOA and pest/PCB standards were evaluated for the Target Compounds List (TCLs) and outliers were recorded on the outlier forms included as a part of this narrative

Reviewed by Jeffrey A Clark Lockheed/ESAT
Date June 21, 1995

NARRATIVE

LABORATORY	Compuchem	CASE	23582
SITE	Waukegan Municipal LF #1	SDG	ETC91

4. METHOD BLANK

VBLKI3 and Q8 are the low level VOA method blanks VBLKI3 and Q8 reported Methylene Chloride a common laboratory contaminant below the CRQL, therefore, the presence of Methylene Chloride in any of the samples associated with VBLKI3 and Q8 should be qualified as non-detected (U) when the concentration is less than (<) ten (10) times the blank results VBLKQ8 also reported CO2 which is unnecessary per the contract Please refer to the VOA method blank summary (FORM IV VOA) for a list of samples associated with each blank

SBLK55 is the low level SVOA method blank SBLK55 reported 2 TICs The presence of any TICs in any of the samples associated with SBLK55 should be qualified as non-detected (U) when the concentration is less than (<) five (5) times the blank results Please refer to the SVOA method blank summary (FORM IV SV) for a list of samples associated with each blank

PBLK45 is the low level pesticide blank PBLK45 reported Methoxychlor below the CRQL, therefore, the presence of Methoxychlor in any of the samples associated with PBLK45 should be qualified as non-detected (U) when the concentration is less than (<) five (5) times the blank results The pesticide method blank summary (FORM IV PEST) lists the samples associated with each blank

5 SYSTEM MONITORING COMPOUND (SMC) AND SURROGATE RECOVERY.

The surrogate recoveries (System Monitoring Compounds) for the VOA fraction were all within the required QC limits, therefore, the results are acceptable

The surrogate recoveries for the SVOA fraction were all within the required QC limits, therefore, the results are acceptable

The surrogate recoveries for the pest/PCB fraction for the soil samples were within the requiured QC limits, therefore, the results are acceptable

Reviewed by Jeffrey A Clark Lockheed/ESAT
Date June 21, 1995

NARRATIVE

LABORATORY	Compuchem	CASE	23582
SITE	Waukegan Municipal LF #1	SDG	ETC91

6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Sample ETC91 was used as the low level spike for all fractions of the samples

For the VOA fractions sample ETC91 reported MSD % recovery above the QC limits for Chlorobenzene and % RPDs outside the QC limits for Trichloroethene, Benzene and Chlorobenzene Therefore, positive results in the unspiked samples for these compounds should be qualified as estimated (J) and estimated (UJ) for non-detects

For the SVOA fractions the MS % recoveries, MSD % recoveries and RPDs were all within the QC limits, therefore, the results are acceptable

For the pesticide fraction the MS % recoveries, MSD % recoveries and RPDs were all within the QC limits, therefore, the results are acceptable

7 FIELD BLANK AND FIELD DUPLICATE.

There no samples identified as a field duplicate or field blank

8 INTERNAL STANDARDS

In the VOA fractions area counts and retention times for the Internal Standards were within the required QC limits, therefore, the results are acceptable

In the SVOA fraction area counts and retention times for the Internal Standards were within the required QC limits, therefore, the results are acceptable

9. COMPOUND IDENTIFICATION.

Target compounds and TICs were correctly identified by "best fit" library search method

Reviewed by Jeffrey A Clark Lockheed/ESAT
Date June 21, 1995

NARRATIVE

LABORATORY	Compuchem	CASE	23582
SITE	Waukegan Municipal LF #1	SDG	ETC91

10 COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS.

VOA, SVOA and pest/PCB Target Compounds (TCLs) and Tentatively Identified Compounds (TICs) were properly quantitated, therefore, the results are acceptable

11. SYSTEM PERFORMANCE.

GC/MS baseline indicated acceptable performance The GC baseline for the pesticide analysis was acceptable

12. ADDITIONAL INFORMATION

NONE

Reviewed by Jeffrey A Clark Lockheed/ESAT
Date June 21, 1995

CALIBRATION OUTLIERS
VOLATILE TCL COMPOUNDS
(Page 1 of 1)

CASE\SAS# 23582
COLUMN DB624
HEATED PURGE (Y/N) Y

LABORATORY Compuchem
SITE NAME Muskegon Municipal LF #1

Instrument# OLIA 13		Initial Cal			Contin Cal			Contin Cal			Contin Cal.			Contin. Cal		
Date/Time		5/21/95 2106			5/24/95 1035			5/26/95 0103								
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
Chloromethane	0.01															
Bromomethane	0.10															
Vinyl chloride	0.10															
Chloroethane	0.01															
Methylene chloride	0.01	0.184	39.7	J	1.196	45.2	J	1.322	29.5	J						
Acetone	0.01	0.185	44.2	J	0.121	34.6	J	0.226								
Carbon disulfide	0.01															
1,1 Dichloroethene	0.10															
1,1 Dichloroethane	0.20															
1,2 Dichloroethene (total)																
Chloroform	0.20															
1,2 Dichloroethane	0.10															
2 Butanone	0.01															
1,1,1 Trichloroethane	0.10															
Carbon tetrachloride	0.10															
Bromodichloromethane	0.20															
1,2 Dichloropropane																
cis-1,3 Dichloropropene	0.20															
Trichloroethene	0.30															
Dibromochloromethane	0.10															
1,1,2 Trichloroethane	0.10															
Benzene	0.50															
tran 1,3 Dichloropropene	0.10															
Bromoform	0.10															
4-Methyl 2-pentanone	0.01															
2 Hexanone	0.01															
Tetrachloroethene	0.20															
1,1,2,2 Tetrachloroethane	0.50															
Toluene	0.40															
Chlorobenzene	0.50															
Ethylbenzene	0.10															
Styrene	0.30															
Xylene (total)	0.30															
Toluene-d8																
Bromofluorobenzene	0.20															
1,2-Dichloroethane-d4																

Samples affected

		VBLKI3	VBLKQ8			
		ETC 91 95	ETC 91 MSD			
		ETC 91MSD	6-21-95			

Reviewer's Init/Date JCC 6 21 95

J/R = All positive results are estimated J and non-detected results are unusable R

* = These flags should be applied to the analytes on the sample data sheets

= Minimum Relative Response Factor

CALIBRATION OUTLIER
SEMIVOLATILE TCL COMPOUNDS
(Page 1 of 2)

CASE\SAS# 23582
COLUMN

LABORATORY Compuchem
SITE NAME Wauregan Municipal LF #1

0303

Instrument#	CWA05	Initial Cal.			Contin Cal.			Contin Cal			Contin. Cal			Contin Cal		
Date/Time		5/04/95 1316			5/24/95 1346			10/06/21/95								
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
Phenol	0.80															
bis(2-chloroethyl) Ether	0.70															
2-Chlorophenol	0.70															
1,3 Dichlorobenzene																
1,4-Dichlorobenzene																
1,2 Dichlorobenzene																
2 Methylphenol	0.70															
2,2 -Oxybis(1-chl-propane)	0.01															
4-Methylphenol	0.60															
N nitroso-di-n propylamine	0.50															
Hexachloroethane	0.30															
Nitrobenzene	0.20															
Isophorone	0.40															
2 Nitrophenol	0.10															
2,4-Dimethylphenol	0.20															
bis-(2-chloroethoxyl)methane	0.30															
2,4-Dichlorophenol	0.20															
1,2,4-Trichlorobenzene	0.20															
Naphthalene	0.70															
4-Chloroaniline	0.01															
Hexachlorobutadiene	0.01															
4-Chloro-3 methylphenol	0.20															
2 Methylnaphthalene	0.40															
Hexachlorocyclopentadiene	0.01															
2,4,6-Trichlorophenol	0.20															
2,4,5-Trichlorophenol	0.20															
2 Chloronaphthalene	0.80															
Nitroaniline	0.01															
Dimethyl phthlate	0.01															
Acenaphthylene	1.30															
2,6-Dinitrotoluene	0.20															
3-Nitroaniline	0.01															
Acenaphthene	0.30															
2,4-Dinitrophenol	0.01															
4-Nitrophenol	0.01															
Dibenzofuran	0.80															
2,4-Dinitrotoluene	0.20															

Affected samples

SBLK55
ETC 91-95
ETC 91 MS+MSD

Reviewer s Init/Date JOC 6-21-95

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

* = These flags should be applied to the analytes on the sample data sheets
# = Minimum Relative Response Factor

CALIBRATION OUTLIER
SEMIVOLATILE TCL COMPOUNDS
(Page 2 of 2)

CASE\SAS# 23582
COLUMN

LABORATORY Compuchem
SITE NAME Ma. Bryan Municipal LF#1

Instrument# OWA 05		Initial Cal			Contin Cal			Contin Cal			Contin Cal.			Contin Cal.		
Date/Time		5/24/95 1316			5/29/95 0303											
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
Diethylphthalate	0.01															
4-Chlorophenyl phenylether	0.40															
Fluorene	0.90															
4-Nitroaniline	0.01															
4,6-Dinitro-2 methylphenol	0.01															
N-nitrosodiphenylamine	0.01															
4-Bromophenyl phenylether	0.10															
Hexachlorobenzene	0.10															
Pentachlorophenol	0.05															
Phenanthrene	0.70															
Anthracene	0.70															
Carbazole																
Di n-butylphthalate	0.01															
Fluoranthene	0.60															
Pyrene	0.60															
Butylbenzylphthalate	0.01															
3,3 Dichlorobenzidine	0.01															
Benzo(a)anthracene	0.80															
Chrysene	0.70															
bis(2 Ethylhexyl)phthalate	0.01															
Di-n-octyl phthalate	0.01															
Benzo(b)fluoranthene	0.70															
Benzo(k)fluoranthene	0.70															
Benzo(a)pyrene	0.70															
Indeno(1,2,3-cd)pyrene	0.50															
Dibenz(a,h)anthrancene	0.40															
Benzo(g,h,i)perylene	0.50															
Nitrobenzene-d5	0.01															
2 Fluorobiphenyl	0.70															
Terphenyl-d14	0.50															
Phenol-d5	0.80															
2 Fluorophenol	0.60															
2,4,6-Tribromophenol	0.01															
2-Chlorophenol-d4																
1,2 Dichlorobenzene-d4																

Reviewer s Init/Date JAC 6-21-95

J/R = All positive results are estimated "J" and non-detected results are unusable "R"

* = These flags should be applied to the analytes on the sample data sheets
# = Minimum Relative Response Factor

ESAT 5-023.3 1/95

CALIBRATION OUTLIER
PESTICIDE/PCB TCL COMPOUNDS
(Page 1 of 1)

ASE\SAS# 23582
OLUMN DB 608

LABORATORY Compuchem
SITE NAME Manhattan Municipal LF #1

strument# 1/2uon112		Initial Cal			Contin Cal			Contin Cal			Contin Cal			Contin Cal		
ate/Time.		6/8/95 0334			6/8/95 2314											
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
pha BHC	0 01															
ta BHC	0 40															
lta BHC	0 90															
mma BHC	0 01															
eptachlor	0 01															
ldrin	0 01															
eptachlor epoxide	0 10															
ndosulfan I	0 10															
)ieldrin	0 05															
, 4 DDE	0 70															
ndrin	0 70															
ndosulfan II	0 01															
, 4 DDD	0 60															
ndosulfan sulfate	0 60															
, 4 -DDT	0 01															
Methoxychlor	0 01															
Endrin ketone	0 80															
Endrin aldehyde	0 70															
alpha chlordane	0 01															
gamma chlordane	0 01															
Arochlor 1016																
Arochlor 1221																
Arochlor 1232																
Arochlor 1242																
Arochlor 1248																
Arochlor 1254																
Arochlor 1260																

Affected samples				
	PBLK 4/5			
	ETC 9 (MS & MSD)			
	ETC 9/-95			

Reviewer s Int/Date JPC 6 21-95

* These flags should be applied to the analytes on the sample data sheets
\# Minimum Relative Response Factor

CALIBRATION OUTLIER
PESTICIDE/PCB TCL COMPOUNDS
(Page 1 of 1)

E\SAS# 23582
COLUMN RTX 1701

LABORATORY Compuchem
SITE NAME. Newby for Municipal LF #1

nstrument#		Initial Cal			Contin. Cal			Contin. Cal.			Contin. Cal.			Contin. Cal.		
Date/Time		6/8/95 0334			6/8/95 2214											
	#	rf	%rsd	*	rf	%d	*	rf	%d	*	rf	%d	*	rf	%d	*
alpha BHC	0 01															
beta BHC	0 40															
delta BHC	0 90															
gamma BHC	0 01															
Heptachlor	0 01															
Aldrin	0 01															
Heptachlor epoxide	0 10															
Endosulfan I	0 10															
Dieldrin	0 05															
4, 4 DDE	0 70															
Endrin	0 70															
Endosulfan II	0 01															
4, 4 DDD	0 60															
Endosulfan sulfate	0 60															
4, 4 DDT	0 01															
Methoxychlor	0 01															
Endrin ketone	0 80															
Endrin aldehyde	0 70															
alpha chlordane	0 01															
gamma chlordane	0 01															
Arochlor 1016																
Arochlor 1221																
Arochlor 1232																
Arochlor 1242																
Arochlor 1248																
Arochlor 1254																
Arochlor 1260																

Affected samples

PBLK45
ETC 91 (MS + MSD)
ETC91 45

Reviewer s Init/Date JGC 6/21/95

* These flags should be applied to the analytes on the sample data sheets
\# Minimum Relative Response Factor

ORGANIC DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature utinized in this document, the following code letters and associated definitions are provide

VALUE-if the results is a value greater than or equal to the Contract Required Quantitation Limit (CRQL)

U Indicates that the compound was analyzed for, but not detected The sample quantitation limit corrected for dilution and percent moisture is reported

J Indicates an estimated value This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of a compound but the result is less than the sample quantitation limit, but greater than zero The flag is also used to indicate a reported result having an associated QC problem

R Indicates the data are unusable (Note The analyte may or may not be present)

N Indicates presumptive evidence of a compound This flag is only used for a tentatively identified compound, where the identification is based on a mass spectral library search

P Indicates a pesticide/Aroclor target analyte when there is greater than 25% difference for the detected concentrations between the two GC columns The lower of the two results is reported

C Indicates pesticide results that have been confirmed by GC/MS

B Indicates the analyte is detected in the associated blank as well as the sample

E Indicates compounds whose concentrations exceed the calibration range of the instrument

D Indicates an identified compound in an analysis has been diluted This flag alerts the data user to any differences between the concentrations reported in the two analysis

A Indicates tentatively identified compounds that are suspected to be aldol condensation products

G Indicates the TCLP Matrix Spike Recovery was greater than the upper limit of the analytical method

L Indicates the TCLP Matrix Spike Recovery was less than the lower limit of the analytical method

T Indicates the analyte is found in the associated TCLP extraction blank as well as in the sample

X, Y, Z are reserved for laboratory defined flags

EPA

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria VA 22313
703 557 2490 FTS 557 2490

Organic Traffic Report & Chain of Custody Record

(For Organic CLP Analysis)

SAS No (if applicable): N/A

Case No:

1 Sample Description (Enter in Column A)
1 Surface Water
2 Ground Water
3 Leachate
4 Rinsate
5 Soil/Sediment
6 Oil (High only)
7 Waste (High only)
8 Other (Specify)

2 Preservative (Enter in Column D)
1 HCl
2 HNO3
3 NaHSO4
4 H_2SO_4
5 Other (Specify)
6 Ice only
N Not preserved

3 Region No: V

Sampling Co:

5 Date Shipped:

Carrier:

7 Date Received: 5/17/95 Received by: M. Stevens

Sampler (Name):

Airbill Number:

Laboratory Contract Number: 68D50009

Unit Price: 54.00

Sampler Signature:

6 Ship To:

8 Transfer to:

Date Received:

4 Type of Activity

	Lead	Pre-Remedial	Remedial	Removal
SF	X		RIFS	CLEM
PRP		PA	RD	REMA
ST		SSI	RA	REM
FED		LSI	O&M	OIL
			NPLD	UST

ATTN:

Received by:

Contract Number:

Price:

CLP Sample Numbers (from labels)	A Enter # From Box 1	B Conc Low Med High	C Sample Type Comp./Grab	D Preservative from Box 6	E RAS Analysis VOA	BNA	Pest/PCB	High ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Number	H Mo/Day/Year/Time Sample Collection	I Sampler Initials	J Corresp CLP Inorg Samp No	K Sample Condition on Rec't	L High Conc. Phases (Check below) Solids	Water - Mis Liq	Non Water - Mis Liq
ETC11	5	L	G	6	Y	X	Y		112421-35	1	[illegible]	[illegible]	[illegible]				
ETC12	5	L	G	6	X	X	X		112421-37	2	[illegible]	[illegible]	[illegible]				
ETC13	5	L	G	6	X	X	X		112421-41	3	[illegible]	[illegible]	[illegible]				
ETC14	5	L	G	6	X	X	X		112421-45	4	[illegible]	[illegible]	[illegible]				
ETC15	5	L	G	6	X	X	X		112421-49	5	[illegible]	[illegible]	[illegible]				
									718042								
									052								
									053								
									054								
									055								

Shipment for Case complete? (Y/N)

Page 1 of 1

Sample used for a spike and/or duplicate: ETC11

Additional Sampler Signatures:

Chain of Custody Seal Number: 45676-77

CHAIN OF CUSTODY RECORD

Relinquished by (Signature)	Date / Time	Received by (Signature)	Relinquished by (Signature)	Date / Time	Received by (Signature)
[illegible]	[illegible]				
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 Is custody seal intact? Y/N/none	
		Melissa Stevens	5/17/95 0835	M.S. 5/17/95 SAMPLES REC'D IN GOOD CONDITION	

Split Samples: ☐ Accepted (Signature) ☐ Declined

EPA Form 8110-2 (Rev 5-91) Replaces EPA Form (2075-7) previous edition which may be used

DISTRIBUTION
Pink SMO Copy White Lab Copy for Return to Region Yellow Lab

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS

0245262

23552 ETC91 SAMPLE DATA PACKAGE

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RECEIVED
1995
US EPA CENTRAL REGIONAL LAB.
536 S CLARK ST
CHICAGO ILLINOIS 60605

SDG NARRATIVE

Case # 23582
SDG # ETC91
Contract # OLM03 0 - (REVS)

Sample Identifications ETC91, ETC92, ETC93, ETC94, ETC95

The five solid samples listed above were received intact, properly refrigerated, with proper documentation, in a sealed shipping container, on May 17, 1995 The samples were scheduled for the requested analyses of the volatile, semivolatile, and pesticide/PCB fractions These samples were analyzed following OLM03 0 (REVS) protocol The pH values of these soil samples ranged from 6 8 to 6 9, the percent moistures ranged from 33 to 46%

All pertinent Quality Assurance notices are included in the narrative section or the sample data sections, and all pertinent Laboratory notices for Case # 23582, SDG # ETC91 are included in the sample data sections

VOLATILES
Analysis holding time requirements were met for all of these samples

The common laboratory solvent methylene chloride was identified above the Contract Required Quantitation Limit (CRQL) in all of the samples except ETC91 This solvent was also found in the associated method blanks A Tentatively Identified Compound (TIC) found in all of these samples could be characterized as carbon dioxide

Manual quantitations were performed on one or more of the process files associated with this SDG The reasons have been coded with explanations provided in the notice of Robert Meierer included in the narrative section of the SDG

All of the system monitoring compounds met recovery criteria in the analyses of these samples All of the internal standards met response and retention time criteria in the analyses of these samples

The associated method blanks met all quality control criteria The method blanks contained levels of the common laboratory solvents methylene chloride and acetone which were within allowable limits Carbon dioxide was present as a TIC in two of the method blanks

ETC91 was used as the original to prepare the duplicate matrix spikes as requested With four exceptions, the associated duplicate matrix spikes met all accuracy and precision criteria The recovery of the spike compound chlorobenzene was flagged as an outlier in the matrix spike duplicate The Relative Percent Differences (RPD's) of trichloroethene,

benzene, and chlorobenzene were flagged as outliers in the comparison of the duplicate matrix spikes

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

There was a phenolic Target Compound List (TCL) analytes identified above the CRQL in many of these samples TIC's found in all the samples could be characterized as alkanes, ketones, volatile TCL compounds, acids, alcohols, substituted phenols, aldehydes, polynuclear aromatic hydrocarbons,unknowns, blank contaminants, and laboratory artifacts

The 'X' flag is used to denote indistinguishable coeluting isomers An Extracted Ion Current Profile (EICP) has been provided for each pair of isomers flagged with an 'X' on the Form I

Manual quantitations were performed on one or more of the process files associated with this SDG The reasons have been coded with explanations provided in the notice of Robert Meierer included in the narrative section of the SDG

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

The associated method blank met all quality control criteria TIC's were found in it

ETC91 was used as the original to prepare the duplicate matrix spikes as requested The associated duplicate matrix spikes met all advisory accuracy and precision criteria

PESTICIDES/PCB'S
Due to a scheduling error, holding time requirements were not met for the extraction of these samples

There were a few TCL analytes such as BHC and/or Aroclors confirmed by dual column analysis above the CRQL in many of these samples

Manual quantitations were performed on one or more of the process files associated with this SDG The reasons have been coded with explanations provided in the notice of Robert Meierer included in the narrative section of the SDG

Severe matrix interference on the DB-608 column in the analysis of ETC91 precluded the accurate identification and quantitation of the advisory surrogate DCB Due to software rounding, it was not flagged as an

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outlier on the Form 2 The remaining samples met all advisory surrogate recovery criteria

The associated method blank met all quality control criteria It contained a level of methoxychlor within acceptance criteria limits

ETC91 was used as the original to prepare the duplicate matrix spikes as requested The associated duplicate matrix spikes met all advisory accuracy and precision criteria.

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

Sarah A Hubbard
Sarah A Hubbard
Technical Reviewer
June 10, 1995

Note This report is paginated for reference and accountability

2B
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Level (low/med) LOW

	EPA SAMPLE NO	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLKI3	102	93	94		0
02	ETC91	122	102	98		0
03	ETC92	102	91	89		0
04	ETC93	105	97	95		0
05	ETC94	93	87	87		0
06	ETC95	111	101	94		0
07	ETC91MSD	113	109	97		0
08	VBLKQ8	96	92	91		0
09	ETC91MS	101	85	92		0
10	VHBLK18	101	92	94		0
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		QC LIMITS
SMC1 (TOL)	= Toluene-d8	(84-138)
SMC2 (BFB)	= Bromofluorobenzene	(59-113)
SMC3 (DCE)	= 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

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3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix Spike - EPA Sample No ETC91 Level (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC
1,1-Dichloroethene	83 33	0 000	78 29	94	59-172
Trichloroethene	83 33	0 000	85 76	103	62-137
Benzene	83 33	0 000	85 27	102	66-142
Toluene	83 33	0 000	89 88	108	59-139
Chlorobenzene	83 33	0 000	87 79	105	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC
1,1-Dichloroethene	83 33	83 84	101	7	22	59-172
Trichloroethene	83 33	114 2	137	28*	24	62-137
Benzene	83 33	109 4	131	25*	21	66-142
Toluene	83 33	107 5	129	18	21	59-139
Chlorobenzene	83 33	112 7	135*	25*	21	60-133

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

* Values outside of QC limits

RPD 3 out of 5 outside limits
Spike Recovery 1 out of 10 outside limits

COMMENTS _____

4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO

VBLKI3

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Lab File ID GH020959A13 Lab Sample ID 720959

Date Analyzed 05/24/95 Time Analyzed 1748

GC Column DB624 ID 0 53 (mm) Heated Purge (Y/N) Y

Instrument ID OWA13

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	ETC91	718042	GH018042B13	1832
02	ETC92	718052	GH018052B13	1907
03	ETC93	718053	GH018053B13	1943
04	ETC94	718054	GH018054B13	2021
05	ETC95	718055	GH018055B13	2051
06	ETC91MSD	718044	GH018044B13	2211
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COMMENTS

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4A

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO

VBLKQ8

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Lab File ID GH022749C13 Lab Sample ID 722749

Date Analyzed 05/26/95 Time Analyzed 0820

GC Column DB624 ID 0 53 (mm) Heated Purge (Y/N) Y

Instrument ID OWA13

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	ETC91MS	718043	G2R18043A13	0954
02	VHBLK18	718074	GH018074A13	1049
03				
04				
05				
06				
07				
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COMMENTS

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

VBLKI3

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 720959

Sample wt/vol 5 0 (g/mL) g Lab File ID GH020959A13

Level (low/med) LOW Date Received _____

% Moisture not dec _____ Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	9	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

VBLKI3

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 720959

Sample wt/vol 5 0 (g/mL) g Lab File ID GH020959A13

Level (low/med) LOW Date Received _____

% Moisture not dec _____ Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

Number TICs found 0

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
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30					

FORM I VOA-TIC OLM03 0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

VBLKQ8

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 722749

Sample wt/vol 5 0 (g/mL) g Lab File ID GH022749C13

Level (low/med) LOW Date Received _____

% Moisture not dec _____ Date Analyzed 05/26/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	8	J
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (Total)	10	U

FORM I VOA OLM03 0

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

VBLKQ8

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 722749

Sample wt/vol 5 0 (g/mL) g Lab File ID GH022749C13

Level (low/med) LOW Date Received _____

% Moisture not dec _____ Date Analyzed 05/26/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

Number TICs found 1

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1	CO2 (NOT IN TIC TOTAL)	0 68	14	J
2				
3				
4				
5				
6				
7				
8				
9				
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11				
12				
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FORM I VOA-TIC OLM03 0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC91
51

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91-23582

Matrix (soil/water) SOIL Lab Sample ID 718042

Sample wt/vol 5 0 (g/mL) g Lab File ID GH018042B13

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec 40 Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
74-87-3	Chloromethane	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	17	JBU
67-64-1	Acetone	17	U
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene (total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	UJ
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	UJ
10061-02-6	trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-88-3	Toluene	17	U
108-90-7	Chlorobenzene	17	UJ
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Xylene (Total)	17	U

jac 6 21 95

FORM I VOA OLM03 0

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC91

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718042

Sample wt/vol 5 0 (g/mL) g Lab File ID GH018042B13

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec 40 Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

Number TICs found 1

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1		CO2 (NOT IN TIC TOTAL)	0 73	47	J
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
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FORM I VOA-TIC OLM03 0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC92
S2

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91-23582

Matrix (soil/water) SOIL Lab Sample ID 718052

Sample wt/vol 5 0 (g/mL) g Lab File ID GH018052B13

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec 42 Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
74-87-3	Chloromethane	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	62	B U
67-64-1	Acetone	17	U
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene (total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-88-3	Toluene	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Xylene (Total)	17	U

JAC 6/21/95

FORM I VOA OLM03 0

recycled paper ecology and environment

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC92

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718052

Sample wt/vol 5 0 (g/mL) g Lab File ID GH018052B13

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec 42 Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

Number TICs found 1

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1		CO2 (NOT IN TIC TOTAL)	0 72	68	J
2					
3					
4					
5					
6					
7					
8					
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FORM I VOA-TIC OLM03 0

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC93
53

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91-23582

Matrix (soil/water) SOIL Lab Sample ID 718053

Sample wt/vol 5 0 (g/mL) g Lab File ID GH018053B13

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec 42 Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
74-87-3	Chloromethane	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	48	B U
67-64-1	Acetone	17	U
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene (total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-88-3	Toluene	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Xylene (Total)	17	U

gac 6-21-95

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC93

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91-23582

Matrix (soil/water) SOIL Lab Sample ID 718053

Sample wt/vol 5 0 (g/mL) g Lab File ID GH018053B13

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec 42 Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

Number TICs found 1

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1		CO2 (NOT IN TIC TOTAL)	0 72	39	J
2					
3					
4					
5					
6					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC94
54

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91-23582

Matrix (soil/water) SOIL Lab Sample ID 718054

Sample wt/vol 5 0 (g/mL) g Lab File ID GH018054B13

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec 41 Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
74-87-3	Chloromethane	17	U
74-83-9	Bromomethane	17	U
75-01-4	Vinyl Chloride	17	U
75-00-3	Chloroethane	17	U
75-09-2	Methylene Chloride	36	BU
67-64-1	Acetone	17	U
75-15-0	Carbon Disulfide	17	U
75-35-4	1,1-Dichloroethene	17	U
75-34-3	1,1-Dichloroethane	17	U
540-59-0	1,2-Dichloroethene (total)	17	U
67-66-3	Chloroform	17	U
107-06-2	1,2-Dichloroethane	17	U
78-93-3	2-Butanone	17	U
71-55-6	1,1,1-Trichloroethane	17	U
56-23-5	Carbon Tetrachloride	17	U
75-27-4	Bromodichloromethane	17	U
78-87-5	1,2-Dichloropropane	17	U
10061-01-5	cis-1,3-Dichloropropene	17	U
79-01-6	Trichloroethene	17	U
124-48-1	Dibromochloromethane	17	U
79-00-5	1,1,2-Trichloroethane	17	U
71-43-2	Benzene	17	U
10061-02-6	trans-1,3-Dichloropropene	17	U
75-25-2	Bromoform	17	U
108-10-1	4-Methyl-2-Pentanone	17	U
591-78-6	2-Hexanone	17	U
127-18-4	Tetrachloroethene	17	U
79-34-5	1,1,2,2-Tetrachloroethane	17	U
108-88-3	Toluene	17	U
108-90-7	Chlorobenzene	17	U
100-41-4	Ethylbenzene	17	U
100-42-5	Styrene	17	U
1330-20-7	Xylene (Total)	17	U

gacc 5/95

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC94

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718054

Sample wt/vol 5 0 (g/mL) g Lab File ID GH018054B13

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec 41 Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

Number TICs found 1

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1		CO2 (NOT IN TIC TOTAL)	0 72	44	J
2					
3					
4					
5					
6					
7					
8					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC95
S5

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91-23582

Matrix (soil/water) SOIL Lab Sample ID 718055

Sample wt/vol 5 0 (g/mL) g Lab File ID GH018055B13

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec 46 Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
74-87-3	Chloromethane	18	U
74-83-9	Bromomethane	18	U
75-01-4	Vinyl Chloride	18	U
75-00-3	Chloroethane	18	U
75-09-2	Methylene Chloride	280	B
67-64-1	Acetone	18	U
75-15-0	Carbon Disulfide	18	U
75-35-4	1,1-Dichloroethene	18	U
75-34-3	1,1-Dichloroethane	18	U
540-59-0	1,2-Dichloroethene (total)	18	U
67-66-3	Chloroform	18	U
107-06-2	1,2-Dichloroethane	18	U
78-93-3	2-Butanone	18	U
71-55-6	1,1,1-Trichloroethane	18	U
56-23-5	Carbon Tetrachloride	18	U
75-27-4	Bromodichloromethane	18	U
78-87-5	1,2-Dichloropropane	18	U
10061-01-5	cis-1,3-Dichloropropene	18	U
79-01-6	Trichloroethene	18	U
124-48-1	Dibromochloromethane	18	U
79-00-5	1,1,2-Trichloroethane	18	U
71-43-2	Benzene	18	U
10061-02-6	trans-1,3-Dichloropropene	18	U
75-25-2	Bromoform	18	U
108-10-1	4-Methyl-2-Pentanone	18	U
591-78-6	2-Hexanone	18	U
127-18-4	Tetrachloroethene	18	U
79-34-5	1,1,2,2-Tetrachloroethane	18	U
108-88-3	Toluene	4	J
108-90-7	Chlorobenzene	18	U
100-41-4	Ethylbenzene	18	U
100-42-5	Styrene	18	U
1330-20-7	Xylene (Total)	18	U

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC95

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718055

Sample wt/vol 5 0 (g/mL) g Lab File ID GH018055B13

Level (low/med) LOW Date Received 05/17/95

% Moisture not dec 46 Date Analyzed 05/24/95

GC Column DB624 ID 0 53 (mm) Dilution Factor 1 0

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

Number TICs found 1

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1		CO2 (NOT IN TIC TOTAL)	0 72	73	J
2					
3					
4					
5					
6					
7					
8					
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2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Level (low/med) LOW

	EPA SAMPLE NO	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 (2CP) #	S8 (DCB) #	TOT OUT
01	SBLK55	78	60	62	54	56	54	56	53	0
02	ETC91	74	74	63	69	73	64	71	64	0
03	ETC91MSD	74	76	69	69	71	73	69	60	0
04	ETC91MS	78	77	68	72	74	70	71	66	0
05	ETC92	63	65	63	60	59	66	59	52	0
06	ETC93	75	79	75	73	65	81	72	65	0
07	ETC94	59	70	69	62	58	76	61	51	0
08	ETC95	67	71	65	65	58	73	65	57	0
09										
10										
11										
12										
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30										

		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(23-120)	
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)	
S3 (TPH)	= Terphenyl-d14	(18-137)	
S4 (PHL)	= Phenol-d5	(24-113)	
S5 (2FP)	= 2-Fluorophenol	(25-121)	
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)	
S7 (2CP)	= 2-Chlorophenol-d4	(20-130)	(advisory)
S8 (DCB)	= 1,2-Dichlorobenzene-d4	(20-130)	(advisory)

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

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3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix Spike - EPA Sample No ETC91 Level (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC
Phenol	4167	0 000	3022	72	26- 90
2-Chlorophenol	4167	0 000	2893	69	25-102
1,4-Dichlorobenzene	2778	0 000	2012	72	28-104
N-Nitroso-di-n-prop (1)	2778	0 000	2497	90	41-126
1,2,4-Trichlorobenzene	2778	0 000	2384	86	38-107
4-Chloro-3-methylphenol	4167	0 000	3363	81	26-103
Acenaphthene	2778	0 000	2151	77	31-137
4-Nitrophenol	4167	0 000	3048	73	11-114
2,4-Dinitrotoluene	2778	0 000	2222	80	28- 89
Pentachlorophenol	4167	0 000	2736	66	17-109
Pyrene	2778	240 8	2256	72	35-142

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC
Phenol	4167	2852	68	6	35	26- 90
2-Chlorophenol	4167	2700	65	6	50	25-102
1,4-Dichlorobenzene	2778	1782	64	12	27	28-104
N-Nitroso-di-n-prop (1)	2778	2291	82	9	38	41-126
1,2,4-Trichlorobenzene	2778	2222	80	7	23	38-107
4-Chloro-3-methylphenol	4167	3076	74	9	33	26-103
Acenaphthene	2778	2008	72	7	19	31-137
4-Nitrophenol	4167	2501	60	20	50	11-114
2,4-Dinitrotoluene	2778	1851	67	18	47	28- 89
Pentachlorophenol	4167	2329	56	16	47	17-109
Pyrene	2778	2136	68	6	36	35-142

(1) N-Nitroso-di-n-propylamine
Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD 0 out of 11 outside limits
Spike Recovery 0 out of 22 outside limits

COMMENTS

4B
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO

SBLK55

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Lab File ID GH021042C05 Lab Sample ID 721042

Instrument ID OWA05 Date Extracted 05/26/95

Matrix (soil/water) SOIL Date Analyzed 05/29/95

Level (low/med) LOW Time Analyzed 0516

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	ETC91	718042	GH018042C05	05/29/95
02	ETC91MSD	718047	GH018047C05	05/29/95
03	ETC91MS	718046	GH018046C05	05/29/95
04	ETC92	718052	GH018052C05	05/29/95
05	ETC93	718053	GH018053C05	05/29/95
06	ETC94	718054	GH018054C05	05/29/95
07	ETC95	718055	GH018055C05	05/29/95
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COMMENTS

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

SBLK55

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 721042

Sample wt/vol 30 0 (g/mL) g Lab File ID GH021042C05

Level (low/med) LOW Date Received _____

% Moisture _____ decanted (Y/N)___ Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH ____

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	330	U
111-44-4	bis(2-Chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
541-73-1	1,3-Dichlorobenzene	330	U
106-46-7	1,4-Dichlorobenzene	330	U
95-50-1	1,2-Dichlorobenzene	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	bis(2-Chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
120-82-1	1,2,4-Trichlorobenzene	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	830	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	830	U
131-11-3	Dimethylphthalate	330	U
208-96-8	Acenaphthylene	330	U
606-20-2	2,6-Dinitrotoluene	330	U
99-09-2	3-Nitroaniline	830	U
83-32-9	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

SBLK55

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 721042

Sample wt/vol 30 0 (g/mL) g Lab File ID GH021042C05

Level (low/med) LOW Date Received _____

% Moisture _____ decanted (Y/N)___ Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH ____

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
51-28-5	2,4-Dinitrophenol	830	U
100-02-7	4-Nitrophenol	830	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
86-73-7	Fluorene	330	U
100-01-6	4-Nitroaniline	830	U
534-52-1	4,6-Dinitro-2-methylphenol	830	U
86-30-6	N-nitrosodiphenylamine (1)	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
87-86-5	Pentachlorophenol	830	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	bis(2-Ethylhexyl)phthalate	330	U
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenzo(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

(1) - Cannot be separated from Diphenylamine

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1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

SBLK55

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 721042

Sample wt/vol 30 0 (g/mL) g Lab File ID GH021042C05

Level (low/med) LOW Date Received _____

% Moisture _____ decanted (Y/N)___ Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH ____

Number TICs found 2

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1		ALDOL (BC)	5 14	4193	AJ
2		UNKNOWN (BC)	5 37	108	J
3					
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC91
51

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718042

Sample wt/vol 30 0 (g/mL) g Lab File ID GH018042C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 40 decanted (Y/N) N Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 9

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	550	U
111-44-4	bis(2-Chloroethyl)ether	550	U
95-57-8	2-Chlorophenol	550	U
541-73-1	1,3-Dichlorobenzene	550	U
106-46-7	1,4-Dichlorobenzene	550	U
95-50-1	1,2-Dichlorobenzene	550	U
95-48-7	2-Methylphenol	550	U
108-60-1	2,2'-oxybis(1-Chloropropane)	550	U
106-44-5	4-Methylphenol	550	U
621-64-7	N-Nitroso-di-n-propylamine	550	U
67-72-1	Hexachloroethane	550	U
98-95-3	Nitrobenzene	550	U
78-59-1	Isophorone	550	U
88-75-5	2-Nitrophenol	550	U
105-67-9	2,4-Dimethylphenol	550	U
111-91-1	bis(2-Chloroethoxy)methane	550	U
120-83-2	2,4-Dichlorophenol	550	U
120-82-1	1,2,4-Trichlorobenzene	550	U
91-20-3	Naphthalene	550	U
106-47-8	4-Chloroaniline	550	U
87-68-3	Hexachlorobutadiene	550	U
59-50-7	4-Chloro-3-methylphenol	550	U
91-57-6	2-Methylnaphthalene	550	U
77-47-4	Hexachlorocyclopentadiene	550	U
88-06-2	2,4,6-Trichlorophenol	550	U
95-95-4	2,4,5-Trichlorophenol	1400	U
91-58-7	2-Chloronaphthalene	550	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	550	U
208-96-8	Acenaphthylene	550	U
606-20-2	2,6-Dinitrotoluene	550	U
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	550	U

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1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC91
S1

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718042

Sample wt/vol 30 0 (g/mL) g Lab File ID GH018042C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 40 decanted (Y/N) N Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 9

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
51-28-5	2,4-Dinitrophenol	1400	U
100-02-7	4-Nitrophenol	1400	U
132-64-9	Dibenzofuran	550	U
121-14-2	2,4-Dinitrotoluene	550	U
84-66-2	Diethylphthalate	550	U
7005-72-3	4-Chlorophenyl-phenylether	550	U
86-73-7	Fluorene	550	U
100-01-6	4-Nitroaniline	1400	U
534-52-1	4,6-Dinitro-2-methylphenol	1400	U
86-30-6	N-nitrosodiphenylamine (1)	550	U
101-55-3	4-Bromophenyl-phenylether	550	U
118-74-1	Hexachlorobenzene	550	U
87-86-5	Pentachlorophenol	1400	U
85-01-8	Phenanthrene	220	J
120-12-7	Anthracene	550	U
86-74-8	Carbazole	550	U
84-74-2	Di-n-butylphthalate	550	U
206-44-0	Fluoranthene	320	J
129-00-0	Pyrene	240	J
85-68-7	Butylbenzylphthalate	550	U
91-94-1	3,3'-Dichlorobenzidine	550	U
56-55-3	Benzo(a)anthracene	170	J
218-01-9	Chrysene	160	J
117-81-7	bis(2-Ethylhexyl)phthalate	100	J
117-84-0	Di-n-octylphthalate	550	U
205-99-2	Benzo(b)fluoranthene	310	XJ
207-08-9	Benzo(k)fluoranthene	280	XJ
50-32-8	Benzo(a)pyrene	150	J
193-39-5	Indeno(1,2,3-cd)pyrene	550	U
53-70-3	Dibenzo(a,h)anthracene	550	U
191-24-2	Benzo(g,h,i)perylene	550	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC91

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718042

Sample wt/vol 30 0 (g/mL) g Lab File ID GH018042C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 40 decanted (Y/N) N Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 9

Number TICs found 17

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1	ALDOL (BC)	5 14	9170	AJB U
2	UNKNOWN	5 97	229	J
3	VOA TCL	6 04	124	J
4	CYCLOHEXENONE	6 20	102	J
5	UNKNOWN	6 91	153	J
6	UNKNOWN	8 41	100	J
7	UNKNOWN CARBOXYLIC ACID	12 58	237	J
8	UNKNOWN	13 62	121	J
9	UNKNOWN	13 68	965	J
10	LABORATORY ARTIFACT	13 76	711	J
11	UNKNOWN	14 28	112	J
12	UNKNOWN	14 77	322	J
13	UNKNOWN	15 74	111	J
14	UNKNOWN ALCOHOL	16 89	359	J
15	UNKNOWN	19 62	351	J
16	UNKNOWN	28 00	2721	J
17	UNKNOWN	28 72	580	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC92
S2

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718052

Sample wt/vol 30 4 (g/mL) g Lab File ID GH018052C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 42 decanted (Y/N) N Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 9

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	560	U
111-44-4	bis(2-Chloroethyl)ether	560	U
95-57-8	2-Chlorophenol	560	U
541-73-1	1,3-Dichlorobenzene	560	U
106-46-7	1,4-Dichlorobenzene	560	U
95-50-1	1,2-Dichlorobenzene	560	U
95-48-7	2-Methylphenol	560	U
108-60-1	~~2,2'-oxybis(1-Chloropropane)~~	~~560~~	~~U~~
106-44-5	4-Methylphenol	260	J
621-64-7	N-Nitroso-di-n-propylamine	560	U
67-72-1	Hexachloroethane	560	U
98-95-3	Nitrobenzene	560	U
78-59-1	Isophorone	560	U
88-75-5	2-Nitrophenol	560	U
105-67-9	2,4-Dimethylphenol	560	U
111-91-1	bis(2-Chloroethoxy)methane	560	U
120-83-2	2,4-Dichlorophenol	560	U
120-82-1	1,2,4-Trichlorobenzene	560	U
91-20-3	Naphthalene	560	U
106-47-8	4-Chloroaniline	560	U
87-68-3	Hexachlorobutadiene	560	U
59-50-7	4-Chloro-3-methylphenol	560	U
91-57-6	2-Methylnaphthalene	560	U
77-47-4	Hexachlorocyclopentadiene	560	U
88-06-2	2,4,6-Trichlorophenol	560	U
95-95-4	2,4,5-Trichlorophenol	1400	U
91-58-7	2-Chloronaphthalene	560	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	560	U
208-96-8	Acenaphthylene	560	U
606-20-2	2,6-Dinitrotoluene	560	U
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	560	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC92
52

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718052

Sample wt/vol 30 4 (g/mL) g Lab File ID GH018052C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 42 decanted (Y/N) N Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 9

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
51-28-5	2,4-Dinitrophenol	1400	U
100-02-7	4-Nitrophenol	1400	U
132-64-9	Dibenzofuran	560	U
121-14-2	2,4-Dinitrotoluene	560	U
84-66-2	Diethylphthalate	560	U
7005-72-3	4-Chlorophenyl-phenylether	560	U
86-73-7	Fluorene	560	U
100-01-6	4-Nitroaniline	1400	U
534-52-1	4,6-Dinitro-2-methylphenol	1400	U
86-30-6	N-nitrosodiphenylamine (1)	560	U
101-55-3	4-Bromophenyl-phenylether	560	U
118-74-1	Hexachlorobenzene	560	U
87-86-5	Pentachlorophenol	1400	U
85-01-8	Phenanthrene	230	J
120-12-7	Anthracene	560	U
86-74-8	Carbazole	560	U
84-74-2	Di-n-butylphthalate	560	U
206-44-0	Fluoranthene	350	J
129-00-0	Pyrene	270	J
85-68-7	Butylbenzylphthalate	560	U
91-94-1	3,3'-Dichlorobenzidine	560	U
56-55-3	Benzo(a)anthracene	150	J
218-01-9	Chrysene	160	J
117-81-7	bis(2-Ethylhexyl)phthalate	85	J
117-84-0	Di-n-octylphthalate	560	U
205-99-2	Benzo(b)fluoranthene	320	XJ
207-08-9	Benzo(k)fluoranthene	300	XJ
50-32-8	Benzo(a)pyrene	140	J
193-39-5	Indeno(1,2,3-cd)pyrene	560	U
53-70-3	Dibenzo(a,h)anthracene	560	U
191-24-2	Benzo(g,h,i)perylene	560	U

(1) - Cannot be separated from Diphenylamine

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC92

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718052

Sample wt/vol 30 4 (g/mL) g Lab File ID GH018052C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 42 decanted (Y/N) N Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 9

Number TICs found 28

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1		ALDOL (BC)	5 14	6181	AJB 4
2		UNKNOWN	5 98	147	J
3		UNKNOWN	6 20	151	J
4		UNKNOWN	6 91	151	J
5		UNKNOWN	8 41	170	J
6	103-82-2	BENZENEACETIC ACID	8 98	138	NJ
7		UNKNOWN	11 90	83	J
8		UNKNOWN CARBOXYLIC ACID	12 59	360	J
9		UNKNOWN CARBOXYLIC ACID	12 97	122	J
10		UNKNOWN	13 34	155	J
11		UNKNOWN CARBOXYLIC ACID	13 69	889	J
12		LABORATORY ARTIFACT	13 77	786	J
13		UNKNOWN	14 28	214	J
14		UNKNOWN	14 32	140	J
15		UNKNOWN	14 37	121	J
16		UNKNOWN	14 72	246	J
17		UNKNOWN	14 77	159	J
18		LABORATORY ARTIFACT	15 23	337	J
19		LABORATORY ARTIFACT	15 47	213	J
20		LABORATORY ARTIFACT	15 52	615	J
21		UNKNOWN	15 68	164	J
22		LABORATORY ARTIFACT	15 81	509	J
23		LABORATORY ARTIFACT	16 25	171	J
24		UNKNOWN	16 32	232	J
25		LABORATORY ARTIFACT	16 60	184	J
26		UNKNOWN	16 90	297	J
27		UNKNOWN	18 73	145	J
28		UNKNOWN	19 67	351	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC93
53

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718053

Sample wt/vol 30 5 (g/mL) g Lab File ID GH018053C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 33 decanted (Y/N) Y Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 9

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	110	J
111-44-4	bis(2-Chloroethyl)ether	480	U
95-57-8	2-Chlorophenol	480	U
541-73-1	1,3-Dichlorobenzene	480	U
106-46-7	1,4-Dichlorobenzene	480	U
95-50-1	1,2-Dichlorobenzene	480	U
95-48-7	2-Methylphenol	480	U
108-60-1	2,2'-oxybis(1-Chloropropane)	480	U
106-44-5	4-Methylphenol	2400	
621-64-7	N-Nitroso-di-n-propylamine	480	U
67-72-1	Hexachloroethane	480	U
98-95-3	Nitrobenzene	480	U
78-59-1	Isophorone	480	U
88-75-5	2-Nitrophenol	480	U
105-67-9	2,4-Dimethylphenol	480	U
111-91-1	bis(2-Chloroethoxy)methane	480	U
120-83-2	2,4-Dichlorophenol	480	U
120-82-1	1,2,4-Trichlorobenzene	480	U
91-20-3	Naphthalene	480	U
106-47-8	4-Chloroaniline	480	U
87-68-3	Hexachlorobutadiene	480	U
59-50-7	4-Chloro-3-methylphenol	480	U
91-57-6	2-Methylnaphthalene	480	U
77-47-4	Hexachlorocyclopentadiene	480	U
88-06-2	2,4,6-Trichlorophenol	480	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	480	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	480	U
208-96-8	Acenaphthylene	480	U
606-20-2	2,6-Dinitrotoluene	480	U
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	480	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC93
53

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718053

Sample wt/vol 30 5 (g/mL) g Lab File ID GH018053C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 33 decanted (Y/N) Y Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 9

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	480	U
121-14-2	2,4-Dinitrotoluene	480	U
84-66-2	Diethylphthalate	480	U
7005-72-3	4-Chlorophenyl-phenylether	480	U
86-73-7	Fluorene	480	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-methylphenol	1200	U
86-30-6	N-nitrosodiphenylamine (1)	480	U
101-55-3	4-Bromophenyl-phenylether	480	U
118-74-1	Hexachlorobenzene	480	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	480	U
120-12-7	Anthracene	480	U
86-74-8	Carbazole	480	U
84-74-2	Di-n-butylphthalate	480	U
206-44-0	Fluoranthene	74	J
129-00-0	Pyrene	60	J
85-68-7	Butylbenzylphthalate	480	U
91-94-1	3,3'-Dichlorobenzidine	480	U
56-55-3	Benzo(a)anthracene	480	U
218-01-9	Chrysene	480	U
117-81-7	bis(2-Ethylhexyl)phthalate	180	J
117-84-0	Di-n-octylphthalate	480	U
205-99-2	Benzo(b)fluoranthene	76	XJ
207-08-9	Benzo(k)fluoranthene	71	XJ
50-32-8	Benzo(a)pyrene	480	U
193-39-5	Indeno(1,2,3-cd)pyrene	480	U
53-70-3	Dibenzo(a,h)anthracene	480	U
191-24-2	Benzo(g,h,i)perylene	480	U

(1) - Cannot be separated from Diphenylamine

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC93

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718053

Sample wt/vol 30 5 (g/mL) g Lab File ID GH018053C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 33 decanted (Y/N) Y Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 9

Number TICs found 34

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1	ALDOL (BC)	5 16	6655	AJB U
2	UNKNOWN CARBOXYLIC ACID	5 36	3288	J
3	UNKNOWN CARBOXYLIC ACID	5 69	699	J
4	UNKNOWN SILOXANE	7 92	1140	J
5	UNKNOWN CARBOXYLIC ACID	9 05	1936	J
6	UNKNOWN SILOXANE	9 31	2138	J
7	UNKNOWN SILOXANE	10 56	1842	J
8	UNKNOWN	10 96	579	J
9	SUBSTITUTED PHENOL	11 39	223	J
10	UNKNOWN SILOXANE	11 66	1299	J
11	UNKNOWN	11 95	292	J
12	UNKNOWN	12 15	1734	J
13	UNKNOWN SILOXANE	12 60	1470	J
14	UNKNOWN SILOXANE	12 86	385	J
15	UNKNOWN	13 34	329	J
16	UNKNOWN SILOXANE	13 45	860	J
17	UNKNOWN CARBOXYLIC ACID	13 69	1406	J
18	LABORATORY ARTIFACT	13 79	1130	J
19	UNKNOWN SILOXANE	14 22	622	J
20	UNKNOWN	14 28	320	J
21	UNKNOWN	14 37	742	J
22	UNKNOWN	14 68	443	J
23	UNKNOWN SILOXANE	14 92	511	J
24	UNKNOWN	14 98	302	J
25	LABORATORY ARTIFACT	15 52	859	J
26	UNKNOWN SILOXANE	15 60	1119	J
27	LABORATORY ARTIFACT	15 81	722	J
28	UNKNOWN CARBOXYLIC ACID	16 03	505	J
29	UNKNOWN SILOXANE	16 36	1263	J
30	UNKNOWN ALCOHOL	16 84	870	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC93

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718053

Sample wt/vol 30 5 (g/mL) g Lab File ID GH018053C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 33 decanted (Y/N) Y Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 9

Number TICs found 34

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1		UNKNOWN SILOXANE	17 31	1260	J
2		UNKNOWN	17 81	720	J
3		UNKNOWN SILOXANE	18 61	2048	J
4		UNKNOWN ALDEHYDE	20 11	2881	J
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC94 54

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718054

Sample wt/vol 30 6 (g/mL) g Lab File ID GH018054C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 41 decanted (Y/N) N Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 8

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	86	J
111-44-4	bis(2-Chloroethyl)ether	550	U
95-57-8	2-Chlorophenol	550	U
541-73-1	1,3-Dichlorobenzene	550	U
106-46-7	1,4-Dichlorobenzene	550	U
95-50-1	1,2-Dichlorobenzene	550	U
95-48-7	2-Methylphenol	550	U
108-60-1	2,2'-oxybis(1-Chloropropane)	550	U
106-44-5	4-Methylphenol	2100	
621-64-7	N-Nitroso-di-n-propylamine	550	U
67-72-1	Hexachloroethane	550	U
98-95-3	Nitrobenzene	550	U
78-59-1	Isophorone	550	U
88-75-5	2-Nitrophenol	550	U
105-67-9	2,4-Dimethylphenol	550	U
111-91-1	bis(2-Chloroethoxy)methane	550	U
120-83-2	2,4-Dichlorophenol	550	U
120-82-1	1,2,4-Trichlorobenzene	550	U
91-20-3	Naphthalene	550	U
106-47-8	4-Chloroaniline	550	U
87-68-3	Hexachlorobutadiene	550	U
59-50-7	4-Chloro-3-methylphenol	550	U
91-57-6	2-Methylnaphthalene	550	U
77-47-4	Hexachlorocyclopentadiene	550	U
88-06-2	2,4,6-Trichlorophenol	550	U
95-95-4	2,4,5-Trichlorophenol	1400	U
91-58-7	2-Chloronaphthalene	550	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	550	U
208-96-8	Acenaphthylene	550	U
606-20-2	2,6-Dinitrotoluene	550	U
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	550	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC94 54

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718054

Sample wt/vol 30 6 (g/mL) g Lab File ID GH018054C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 41 decanted (Y/N) N Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 8

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
51-28-5	2,4-Dinitrophenol	1400	U
100-02-7	4-Nitrophenol	1400	U
132-64-9	Dibenzofuran	550	U
121-14-2	2,4-Dinitrotoluene	550	U
84-66-2	Diethylphthalate	550	U
7005-72-3	4-Chlorophenyl-phenylether	550	U
86-73-7	Fluorene	550	U
100-01-6	4-Nitroaniline	1400	U
534-52-1	4,6-Dinitro-2-methylphenol	1400	U
86-30-6	N-nitrosodiphenylamine (1)	550	U
101-55-3	4-Bromophenyl-phenylether	550	U
118-74-1	Hexachlorobenzene	550	U
87-86-5	Pentachlorophenol	1400	U
85-01-8	Phenanthrene	550	U
120-12-7	Anthracene	550	U
86-74-8	Carbazole	550	U
84-74-2	Di-n-butylphthalate	550	U
206-44-0	Fluoranthene	94	J
129-00-0	Pyrene	70	J
85-68-7	Butylbenzylphthalate	550	U
91-94-1	3,3'-Dichlorobenzidine	550	U
56-55-3	Benzo(a)anthracene	550	U
218-01-9	Chrysene	550	U
117-81-7	bis(2-Ethylhexyl)phthalate	120	J
117-84-0	Di-n-octylphthalate	550	U
205-99-2	Benzo(b)fluoranthene	84	JX
207-08-9	Benzo(k)fluoranthene	78	JX
50-32-8	Benzo(a)pyrene	550	U
193-39-5	Indeno(1,2,3-cd)pyrene	550	U
53-70-3	Dibenzo(a,h)anthracene	550	U
191-24-2	Benzo(g,h,i)perylene	550	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 OLM03 0

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC94

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718054

Sample wt/vol 30 6 (g/mL) g Lab File ID GH018054C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 41 decanted (Y/N) N Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 8

Number TICs found 32

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1	ALDOL (BC)	5 14	6732	AJB U
2	UNKNOWN CARBOXYLIC ACID	5 32	2450	J
3	UNKNOWN CARBOXYLIC ACID	5 44	1293	J
4	UNKNOWN CARBOXYLIC ACID	5 64	505	J
5	UNKNOWN CARBOXYLIC ACID	8 28	166	J
6	UNKNOWN	8 41	123	J
7 103-82-2	BENZENEACETIC ACID	9 04	1476	NJ
8	DIHYDROINDOLONE	10 97	306	J
9	UNKNOWN CARBOXYLIC ACID	11 29	124	J
10	UNKNOWN	12 15	1461	J
11	UNKNOWN CARBOXYLIC ACID	12 59	545	J
12	UNKNOWN	12 78	219	J
13	UNKNOWN CARBOXYLIC ACID	12 97	185	J
14	UNKNOWN	13 03	132	J
15	UNKNOWN	13 13	110	J
16	UNKNOWN	13 34	291	J
17	UNKNOWN	13 44	223	J
18 109-29-5	OXACYCLOHEPTADECAN-2-ONE	13 69	868	NJ
19	LABORATORY ARTIFACT	13 78	1100	J
20	UNKNOWN	14 28	331	J
21	UNKNOWN	14 32	321	J
22	UNKNOWN	14 37	1168	J
23	UNKNOWN	14 69	504	J
24	UNKNOWN	14 79	158	J
25	UNKNOWN	15 12	152	J
26	LABORATORY ARTIFACT	15 24	327	J
27	LABORATORY ARTIFACT	15 52	544	J
28	UNKNOWN	15 82	325	J
29	UNKNOWN ALCOHOL	16 85	1004	J
30	UNKNOWN ALDEHYDE	17 83	902	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC94

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718054

Sample wt/vol 30 6 (g/mL) g Lab File ID GH018054C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 41 decanted (Y/N) N Date Extracted 05/26/95

Concentrated Extract Volume 500 (uL) Date Analyzed 05/29/95

Injection Volume 2 0 (uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 8

Number TICs found 32

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1	UNKNOWN ALCOHOL	18 65	390	J
2	UNKNOWN	20 16	2742	J
3				
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FORM I SV-TIC OLM03 0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC95
55

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718055

Sample wt/vol 30 6 (g/mL) g Lab File ID GH018055C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 46 decanted (Y/N) N Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 8

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	120	J
111-44-4	bis(2-Chloroethyl)ether	600	U
95-57-8	2-Chlorophenol	600	U
541-73-1	1,3-Dichlorobenzene	600	U
106-46-7	1,4-Dichlorobenzene	600	U
95-50-1	1,2-Dichlorobenzene	600	U
95-48-7	2-Methylphenol	600	U
108-60-1	2,2'-oxybis(1-Chloropropane)	600	U
106-44-5	4-Methylphenol	3900	
621-64-7	N-Nitroso-di-n-propylamine	600	U
67-72-1	Hexachloroethane	600	U
98-95-3	Nitrobenzene	600	U
78-59-1	Isophorone	600	U
88-75-5	2-Nitrophenol	600	U
105-67-9	2,4-Dimethylphenol	600	U
111-91-1	bis(2-Chloroethoxy)methane	600	U
120-83-2	2,4-Dichlorophenol	600	U
120-82-1	1,2,4-Trichlorobenzene	600	U
91-20-3	Naphthalene	600	U
106-47-8	4-Chloroaniline	600	U
87-68-3	Hexachlorobutadiene	600	U
59-50-7	4-Chloro-3-methylphenol	600	U
91-57-6	2-Methylnaphthalene	600	U
77-47-4	Hexachlorocyclopentadiene	600	U
88-06-2	2,4,6-Trichlorophenol	600	U
95-95-4	2,4,5-Trichlorophenol	1500	U
91-58-7	2-Chloronaphthalene	600	U
88-74-4	2-Nitroaniline	1500	U
131-11-3	Dimethylphthalate	600	U
208-96-8	Acenaphthylene	600	U
606-20-2	2,6-Dinitrotoluene	600	U
99-09-2	3-Nitroaniline	1500	U
83-32-9	Acenaphthene	600	U

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC95 S5

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718055

Sample wt/vol 30 6 (g/mL) g Lab File ID GH018055C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 46 decanted (Y/N) N Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 8

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) ug/Kg	Q
51-28-5	2,4-Dinitrophenol	1500	U
100-02-7	4-Nitrophenol	1500	U
132-64-9	Dibenzofuran	600	U
121-14-2	2,4-Dinitrotoluene	600	U
84-66-2	Diethylphthalate	600	U
7005-72-3	4-Chlorophenyl-phenylether	600	U
86-73-7	Fluorene	600	U
100-01-6	4-Nitroaniline	1500	U
534-52-1	4,6-Dinitro-2-methylphenol	1500	U
86-30-6	N-nitrosodiphenylamine (1)	600	U
101-55-3	4-Bromophenyl-phenylether	600	U
118-74-1	Hexachlorobenzene	600	U
87-86-5	Pentachlorophenol	1500	U
85-01-8	Phenanthrene	600	U
120-12-7	Anthracene	600	U
86-74-8	Carbazole	600	U
84-74-2	Di-n-butylphthalate	600	U
206-44-0	Fluoranthene	73	J
129-00-0	Pyrene	600	U
85-68-7	Butylbenzylphthalate	600	U
91-94-1	3,3'-Dichlorobenzidine	600	U
56-55-3	Benzo(a)anthracene	600	U
218-01-9	Chrysene	600	U
117-81-7	bis(2-Ethylhexyl)phthalate	110	J
117-84-0	Di-n-octylphthalate	600	U
205-99-2	Benzo(b)fluoranthene	68	JX
207-08-9	Benzo(k)fluoranthene	63	JX
50-32-8	Benzo(a)pyrene	600	U
193-39-5	Indeno(1,2,3-cd)pyrene	600	U
53-70-3	Dibenzo(a,h)anthracene	600	U
191-24-2	Benzo(g,h,i)perylene	600	U

(1) - Cannot be separated from Diphenylamine

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC95

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718055

Sample wt/vol 30 6 (g/mL) g Lab File ID GH018055C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 46 decanted (Y/N) N Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 8

Number TICs found 34

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1	ALDOL (BC)	5 15	7358	AJB U
2	UNKNOWN CARBOXYLIC ACID	5 37	4615	J
3	UNKNOWN CARBOXYLIC ACID	5 71	1035	J
4 19781-68-1	CYCLOPROPANE, 1-ETHYL-2-METH	7 43	181	J
5	UNKNOWN CARBOXYLIC ACID	8 29	235	J
6	UNKNOWN	8 42	124	J
7 103-82-2	BENZENEACETIC ACID	9 06	2231	NJ
8	DIHYDROINDOLONE	10 97	326	J
9	UNKNOWN CARBOXYLIC ACID	11 30	125	J
10	UNKNOWN	12 15	1889	J
11	UNKNOWN CARBOXYLIC ACID	12 60	716	J
12	UNKNOWN	12 78	288	J
13	UNKNOWN CARBOXYLIC ACID	12 98	213	J
14	UNKNOWN	13 04	153	J
15	UNKNOWN	13 35	642	J
16	UNKNOWN	13 44	248	J
17	UNKNOWN CARBOXYLIC ACID	13 70	1303	J
18	LABORATORY ARTIFACT	13 79	1547	J
19	UNKNOWN	14 29	503	J
20	UNKNOWN	14 32	462	J
21	UNKNOWN	14 37	1808	J
22	UNKNOWN	14 57	208	J
23	UNKNOWN	14 69	724	J
24	UNKNOWN	14 80	259	J
25	UNKNOWN PAH	15 20	392	J
26	LABORATORY ARTIFACT	15 52	717	J
27	LABORATORY ARTIFACT	15 83	447	J
28	UNKNOWN CARBOXYLIC ACID	16 11	594	J
29	UNKNOWN	16 35	334	J
30	UNKNOWN ALCOHOL	16 86	1765	J

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO

ETC95

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718055

Sample wt/vol 30 6 (g/mL) g Lab File ID GH018055C05

Level (low/med) LOW Date Received 05/17/95

% Moisture 46 decanted (Y/N) N Date Extracted 05/26/95

Concentrated Extract Volume 500(uL) Date Analyzed 05/29/95

Injection Volume 2 0(uL) Dilution Factor 1 0

GPC Cleanup (Y/N) Y pH 6 8

Number TICs found 34

CONCENTRATION UNITS
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST CONC	Q
1		UNKNOWN	17 86	2161	J
2		UNKNOWN ALCOHOL	18 64	849	J
3		UNKNOWN	19 73	381	J
4		UNKNOWN	20 29	9211	J
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FORM I SV-TIC OLM03 0

2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

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

	EPA SAMPLE NO	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	ETC91	99	120	150	130			0
02	ETC91MS	86	98	120	130			0
03	ETC91MSD	84	99	120	120			0
04	ETC92	74	90	100	100			0
05	ETC93	76	91	120	130			0
06	ETC94	72	83	120	130			0
07	ETC95	70	86	120	130			0
08	PBLK45	84	95	99	110			0
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	QC LIMITS
TCX = Tetrachloro-m-xylene	(30-150)
DCB = Decachlorobiphenyl	(30-150)

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

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix Spike - EPA Sample No ETC91

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC
gamma-BHC (Lindane)	27 778	0 00	25	90	46-127
Heptachlor	27 778	0 00	23	83	35-130
Aldrin	27 778	0 00	25	90	34-132
Dieldrin	55 556	1 2	48	84	31-134
Endrin	55 556	0 00	55	99	42-139
4,4'-DDT	55 556	0 00	56	101	23-134

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC
gamma-BHC (Lindane)	27 778	24	86	5	50	46-127
Heptachlor	27 778	23	83	0	31	35-130
Aldrin	27 778	24	86	5	43	34-132
Dieldrin	55 556	48	84	0	38	31-134
Endrin	55 556	54	97	2	45	42-139
4,4'-DDT	55 556	55	99	2	50	23-134

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

* Values outside of QC limits

RPD 0 out of 6 outside limits
Spike Recovery 0 out of 12 outside limits

COMMENTS

FORM III PEST-2 OLM03 0

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO

PBLK45

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Lab Sample ID 719523 Lab File ID

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

Sulfur Cleanup (Y/N) N Date Extracted 06/06/95

Date Analyzed (1) 06/08/95 Date Analyzed (2) 06/08/95

Time Analyzed (1) 1735 Time Analyzed (2) 1735

Instrument ID (1) VARIAN02 Instrument ID (2) VARIAN03

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	ETC91MS	718049	06/08/95	06/08/95
02	ETC91MSD	718050	06/08/95	06/08/95
03	ETC91	718042	06/08/95	06/08/95
04	ETC92	718052	06/08/95	06/08/95
05	ETC93	718053	06/08/95	06/08/95
06	ETC94	718054	06/08/95	06/08/95
07	ETC95	718055	06/08/95	06/08/95
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Comments

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

PBLK45

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 719523

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

% Moisture decanted (Y/N) Date Received

Extraction (SepF/Cont/Sonc) SONC Date Extracted 06/06/95

Concentrated Extract Volume 10000 (uL) Date Analyzed 06/08/95

Injection Volume 2 0 (uL) Dilution Factor 1

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

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1 7	U
319-85-7	beta-BHC	1 7	U
319-86-8	delta-BHC	1 7	U
58-89-9	gamma-BHC (Lindane)	1 7	U
76-44-8	Heptachlor	1 7	U
309-00-2	Aldrin	1 7	U
1024-57-3	Heptachlor epoxide	1 7	U
959-98-8	Endosulfan I	1 7	U
60-57-1	Dieldrin	3 3	U
72-55-9	4 4'-DDE	3 3	U
72-20-8	Endrin	3 3	U
33213-65-9	Endosulfan II	3 3	U
72-54-8	4 4 -DDD	3 3	U
1031-07-8	Endosulfan sulfate	3 3	U
50-29-3	4 4'-DDT	3 3	U
72-43-5	Methoxychlor	1 2	JP
53494-70-5	Endrin ketone	3 3	U
7421-93-4	Endrin aldehyde	3 3	U
5103-71-9	alpha-Chlordane	1 7	U
5103-74-2	gamma-Chlordane	1 7	U
8001-35-2	Toxaphene	170	U
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	67	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC91
S1

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718042

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

% Moisture 40 decanted (Y/N) N Date Received 05/17/95

Extraction (SepF/Cont/Sonc) SONC Date Extracted 06/06/95

Concentrated Extract Volume 10000 (uL) Date Analyzed 06/08/95

Injection Volume 2 0 (uL) Dilution Factor 1

GPC Cleanup (Y/N) Y pH 6 9 Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2 8	U
319-85-7	beta-BHC	2.8	U
319-86-8	delta-BHC	3 0	PJ
58-89-9	gamma-BHC (Lindane)	2 8	U
76-44-8	Heptachlor	2 8	U
309-00-2	Aldrin	2 8	U
1024-57-3	Heptachlor epoxide	2 8	U
959-98-8	Endosulfan I	2 8	U
60-57-1	Dieldrin	1 2	JP
72-55-9	4,4 -DDE	0 37	JP
72-20-8	Endrin	5 5	U
33213-65-9	Endosulfan II	0 38	JP
72-54-8	4,4'-DDD	5.5	U
1031-07-8	Endosulfan sulfate	13	PJ
50-29-3	4,4'-DDT	5 5	U
72-43-5	Methoxychlor	28	U
53494-70-5	Endrin ketone	5 5	U
7421-93-4	Endrin aldehyde	5 5	U
5103-71-9	alpha-Chlordane	2.8	U
5103-74-2	gamma-Chlordane	0 38	JP
8001-35-2	Toxaphene	280	U
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	55	U
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	31	JP
11096-82-5	Aroclor-1260	55	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC92 52

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718052

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

% Moisture 42 decanted (Y/N) N Date Received 05/17/95

Extraction (SepF/Cont/Sonc) SONC Date Extracted 06/06/95

Concentrated Extract Volume 10000 (uL) Date Analyzed 06/08/95

Injection Volume 2 0 (uL) Dilution Factor 1

GPC Cleanup (Y/N) Y pH 6 9 Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2 9	U
319-85-7	beta-BHC	2 9	U
319-86-8	delta-BHC	2.9	U
58-89-9	gamma-BHC (Lindane)	0 53	JP
76-44-8	Heptachlor	2 9	U
309-00-2	Aldrin	2 9	U
1024-57-3	Heptachlor epoxide	2 9	U
959-98-8	Endosulfan I	2 9	U
60-57-1	Dieldrin	0 91	JP
72-55-9	4,4'-DDE	5 7	U
72-20-8	Endrin	5.7	U
33213-65-9	Endosulfan II	0 89	JP
72-54-8	4,4'-DDD	2.0	JP
1031-07-8	Endosulfan sulfate	5.7	U
50-29-3	4,4'-DDT	3 5	JP
72-43-5	Methoxychlor	22	JP
53494-70-5	Endrin ketone	1 7	JP
7421-93-4	Endrin aldehyde	5 7	U
5103-71-9	alpha-Chlordane	2 3	J
5103-74-2	gamma-Chlordane	0 44	JP
8001-35-2	Toxaphene	290	U
12674-11-2	Aroclor-1016	57	U
11104-28-2	Aroclor-1221	120	U
11141-16-5	Aroclor-1232	57	U
53469-21-9	Aroclor-1242	57	U
12672-29-6	Aroclor-1248	310	PJ
11097-69-1	Aroclor-1254	57	U
11096-82-5	Aroclor-1260	57	U

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC93
53

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718053

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

% Moisture 33 decanted (Y/N) Y Date Received 05/17/95

Extraction (SepF/Cont/Sonc) SONC Date Extracted 06/06/95

Concentrated Extract Volume 10000 (uL) Date Analyzed 06/08/95

Injection Volume 2 0 (uL) Dilution Factor 1

GPC Cleanup (Y/N) Y pH 6 9 Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2 5	U
319-85-7	beta-BHC	2 5	U
319-86-8	delta-BHC	2 5	U
58-89-9	gamma-BHC (Lindane)	2 5	U
76-44-8	Heptachlor	2 5	U
309-00-2	Aldrin	2 5	U
1024-57-3	Heptachlor epoxide	2 5	U
959-98-8	Endosulfan I	2 5	U
60-57-1	Dieldrin	0 66	JP
72-55-9	4,4 -DDE	2 4	JP
72-20-8	Endrin	4.9	U
33213-65-9	Endosulfan II	1 2	JP
72-54-8	4,4'-DDD	4 9	U
1031-07-8	Endosulfan sulfate	4 9	U
50-29-3	4,4'-DDT	4 9	U
72-43-5	Methoxychlor	25.0 ~~4.1~~ 1	JPB
53494-70-5	Endrin ketone	4 9	U
7421-93-4	Endrin aldehyde	1.4	J
5103-71-9	alpha-Chlordane	0 56	JP
5103-74-2	gamma-Chlordane	0 37	JP
8001-35-2	Toxaphene	250	U
12674-11-2	Aroclor-1016	49	U
11104-28-2	Aroclor-1221	100	U
11141-16-5	Aroclor-1232	49	U
53469-21-9	Aroclor-1242	49	U
12672-29-6	Aroclor-1248	49	U
11097-69-1	Aroclor-1254	51	PJ
11096-82-5	Aroclor-1260	49	U

gac 6 21 c

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC94
54

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718054

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

% Moisture 41 decanted (Y/N) N Date Received 05/17/95

Extraction (SepF/Cont/Sonc) SONC Date Extracted 06/06/95

Concentrated Extract Volume 10000 (uL) Date Analyzed 06/08/95

Injection Volume 2 0 (uL) Dilution Factor 1

GPC Cleanup (Y/N) Y pH 6 8 Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	0 64	JP
319-85-7	beta-BHC	2 9	U
319-86-8	delta-BHC	2 9	U
58-89-9	gamma-BHC (Lindane)	2 9	U
76-44-8	Heptachlor	2 9	U
309-00-2	Aldrin	2 9	U
1024-57-3	Heptachlor epoxide	2 9	U
959-98-8	Endosulfan I	2 9	U
60-57-1	Dieldrin	5 6	U
72-55-9	4,4'-DDE	1 9	JP
72-20-8	Endrin	5 6	U
33213-65-9	Endosulfan II	5 6	U
72-54-8	4,4'-DDD	5 6	U
1031-07-8	Endosulfan sulfate	5 6	U
50-29-3	4,4 -DDT	5 6	U
72-43-5	Methoxychlor	~~2904 0~~	JPBU
53494-70-5	Endrin ketone	5 6	U
7421-93-4	Endrin aldehyde	5 6	U
5103-71-9	alpha-Chlordane	2 9	U
5103-74-2	gamma-Chlordane	2 9	U
8001-35-2	Toxaphene	290	U
12674-11-2	Aroclor-1016	56	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	56	U
53469-21-9	Aroclor-1242	56	U
12672-29-6	Aroclor-1248	56	U
11097-69-1	Aroclor-1254	8 4	JP
11096-82-5	Aroclor-1260	56	U

FORM I PEST OLM03 0

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

ETC95
55

Lab Name COMPUCHEM ENV CORP Contract 68D50009

Lab Code COMPU Case No 23582 SAS No SDG No ETC91

Matrix (soil/water) SOIL Lab Sample ID 718055

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

% Moisture 46 decanted (Y/N) N Date Received 05/17/95

Extraction (SepF/Cont/Sonc) SONC Date Extracted 06/06/95

Concentrated Extract Volume 10000 (uL) Date Analyzed 06/08/95

Injection Volume 2 0 (uL) Dilution Factor 1

GPC Cleanup (Y/N) Y pH 6 8 Sulfur Cleanup (Y/N) N

CAS NO	COMPOUND	CONCENTRATION UNITS (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3 1	U
319-85-7	beta-BHC	3 1	U
319-86-8	delta-BHC	3 1	U
58-89-9	gamma-BHC (Lindane)	3 1	U
76-44-8	Heptachlor	3 1	U
309-00-2	Aldrin	3 1	U
1024-57-3	Heptachlor epoxide	3 1	U
959-98-8	Endosulfan I	3 1	U
60-57-1	Dieldrin	0 35	JP
72-55-9	4,4'-DDE	1 1	JP
72-20-8	Endrin	6 1	U
33213-65-9	Endosulfan II	6 1	U
72-54-8	4 4 -DDD	1 2	JP
1031-07-8	Endosulfan sulfate	0 93	JP
50-29-3	4,4 -DDT	6 1	U
72-43-5	Methoxychlor	31	U
53494-70-5	Endrin ketone	6 1	U
7421-93-4	Endrin aldehyde	6 1	U
5103-71-9	alpha-Chlordane	3 1	U
5103-74-2	gamma-Chlordane	3 1	U
8001-35-2	Toxaphene	310	U
12674-11-2	Aroclor-1016	61	U
11104-28-2	Aroclor-1221	120	U
11141-16-5	Aroclor-1232	61	U
53469-21-9	Aroclor-1242	61	U
12672-29-6	Aroclor-1248	61	U
11097-69-1	Aroclor-1254	61	U
11096-82-5	Aroclor-1260	61	U

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No _____ CERCLIS No ILD980902175

Case No 23582 Site Name Location WAUKEGAN MUNI #1

Contractor or EPA Lab Compu Data User E&E

No of Samples 5 Date Sampled or Data Received 6-13-95

Have Chain-of-Custody records been received? Yes ✓ No ✓
Have traffic reports or packing lists been received? Yes ✓ No ____
If no, are traffic report or packing list numbers written on the chain-of-custody record? Yes ✓ No ____
If no, which traffic report or packing list numbers are missing?

_____ _____ _____ _____

_____ _____ _____ _____

Are basic data forms in? Yes ✓ No ____
No of samples claimed 5 No of samples received 5

Received by Lynette Burnett Date 6-13-95

Received by LSSS Lynette Burnett Date 6-15-95

Review started: 6-21-95 ~~6-20-95~~ 6-21-95 Reviewer Signature Jeffrey C Clark

Total time spent on review 5.5 Date review completed 6-21-95

Copied by Patricia J Scott Date 06/29/95

Mailed to User by _____ Date _____

DATA USERS:
Please fill in the blanks below and return this form to
Sylvia Griffin, Data Mgmt. Coordinator, Region V, 5SCRL

Data received by _____ Date _____

Data review received by _____ Date _____

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Dioxin Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK

PROBLEMS: Please indicate reasons why data are not suitable for your uses

_____

_____

Received by Data Mgmt Coordinator for Files. Data _____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

SUBJECT: Review of Region V CLP Data
Received for Review on June 13, 1995

FROM. Dennis Wesolowski, Chief (SQC-14J)
Contract Analytical Services Section

TO. Data User: E & E Patricia J Scott for D Wesolowski 06/29/95

We have reviewed the data for the following case:

SITE NAME. Waukegan Muni LF #1 (IL)

CASE NUMBER. 23582 SDG NUMBER: ETC91

Number and Type of Samples: 5 (Soil)

Sample Numbers: ETC 91-95

Laboratory. Compuchem Hrs. for Review: 6.5

Following are our findings:

The data are acceptable and usable with the qualifications described in the attached narrative

Patricia J Scott

cc Regional TPO

CADRE REVIEW 2.1

LABORATORY COMPUCHEM
CASE #: 23582
SDG #: ETC91
SITE NAME: Waukegan Muni LF #1 (IL)

This review covers five (5) low concentration soil samples numbered ETC91, ETC92, ETC93, ETC94 and ETC95 Compuchem Environmental Corporation, NC received the samples on 05-17-95 in good condition All samples were analyzed for the full list of organic analytes following Statement of Work (SOW) document No OLM03 1 protocol

The Volatile soil analyses were performed within the technical holding time of fourteen (14) days after sample collection All soil Semivolatile sample extractions were performed within the holding time of fourteen (14) days All pesticde sample extractions exceeded the holding time of fourteen (14) days by seven (7) days All positive Pesticide results are flagged as estimated "J" and any non-detected Pesticide results are flagged with the sample quantitation limit as estimated"UJ"
All Semivolatile and Pesticide extracts were analyzed within forty (40) days following the extraction

The reviewer's narrative and data qualifiers from CADRE 2 1 are noted in the following pages

Reviewed by Krystyna Minczuk__Lockheed/ESAT
Date __June 22nd, 1995__

LABORATORY: COMPUCHEM
CASE #: 23582
SDG #: ETC91
SITE NAME. Waukegan Muni LF #1 (IL)

Below is a summary of the out-of-control audits and the possible effect on the data for this case

1.HOLDING TIME

DC-5 The following volatile soil samples have aromatic analytes outside primary holding time criteria
Hits are qualified "J" and non-detects are qualified "UJ"

ETC91
Benzene, Toluene, Chlorobenzene, Ethylbenzene
Styrene, Xylene (total)

ETC91MS
Benzene, Toluene, Chlorobenzene, Ethylbenzene
Styrene, Xylene (total)

ETC91MSD
Benzene, Toluene, Chlorobenzene, Ethylbenzene
Styrene, Xylene (total)

ETC92
Benzene, Toluene, Chlorobenzene, Ethylbenzene
Styrene, Xylene (total)

ETC93
Benzene, Toluene, Chlorobenzene, Ethylbenzene
Styrene, Xylene (total)

ETC94
Benzene, Toluene, Chlorobenzene, Ethylbenzene
Styrene, Xylene (total)

ETC95
Benzene, Toluene, Chlorobenzene, Ethylbenzene
Styrene, Xylene (total)

VHBLK18
Benzene, Toluene, Chlorobenzene, Ethylbenzene
Styrene, Xylene (total)

According to Region V guidelines the holding time for aromatic analytes is the same as for non-aromatic, therefore the reviewer changed the flag for aromatic analytes from "UJ" to "U" for non-

Reviewed by Krystyna Minczuk__Lockheed/ESAT
Date __June 22nd, 1995__

detected For the results above the CRQL removed the "J" flag

DC-163 The following pesticide soil samples are outside primary extraction holding time criteria
Hits are qualified "J" and non-detects are qualified "UJ"

ETC91, ETC91MS, ETC91MSD, ETC92, ETC93, ETC94
ETC95

2.GC/MS TUNING PERFORMANCE

DC-12 The following volatile samples are not associated with any instrument performance check Hits and non-detects are flagged "M"

ETC91, ETC91MS, ETC91MSD, ETC92, ETC93, ETC94
ETC95, VBLKI3, VBLKQ8, VHBLK18

The "M" flag for above noted samples was replaced by reviewer with the final flag Please, refer to section 13 for the final flag of the results

3 CALIBRATION

DC-14 The following volatile samples were not associated with any calibration because no associated instrument performance check could be found
Hits and non-detects are flagged "M"

ETC91, ETC91MS, ETC91MSD, ETC92, ETC93, ETC94
ETC95, VBLKI3, VBLKQ8, VHBLK18

The "M" flag for above noted samples was replaced by reviewer with the final flag Please, refer to section 13 for the final flag of the results

4.METHOD BLANK

DC-26 No method blanks were found for the following volatile samples due to lack of an instrument performance check
Hits are flagged "M" and non-detects are not flagged

ETC91, ETC91MS, ETC91MSD, ETC92, ETC93, ETC94
ETC95, VHBLK18

The "M" flag of the positive hits for above noted samples was

replaced by reviewer with the final flag Please, refer to section 13 for the final flag of the results

5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY
No problems found for this qualification

6.MATRIX SPIKE/MATRIX SPIKE DUPLICATE
DC-38 The relative percent difference (RPD) between the following volatile matrix spike and matrix spike duplicate recoveries is outside criteria
Hits and non-detects are not flagged

ETC91MS
Trichloroethene, Benzene, Chlorobenzene

ETC91MSD
Trichloroethene, Benzene, Chlorobenzene

DC-39 The following volatile matrix spike/matrix spike duplicate samples have percent recovery outside criteria
Hits and non-detects are not flagged

ETC91MSD
Chlorobenzene

7.FIELD BLANK AND FIELD DUPLICATE
N/A

8.INTERNAL STANDARD
DC-40 The following volatile samples have no associated internal standard Hits and non-detects are flagged "M"

ETC91, ETC91MS, ETC91MSD, ETC92, ETC93, ETC94
ETC95, VBLKI3, VBLKQ8, VHBLK18

The "M" flag for above noted samples was replaced by reviewer with the final flag Please, refer to section 13 for the final flag of the results

9.COMPOUND IDENTIFICATION
N/A

Reviewed by Krystyna Minczuk__Lockheed/ESAT
Date __June 22nd, 1995__

10.COMPOUND QUANTITATION AND REPORTED DETECTION LIMIT

DC-45 The following volatile samples have analyte concentrations below the quantitation limit (CRQL) All results below the CRQL are qualified "J"

ETC95
Toluene

VBLKI3
Methylene Chloride

VBLKQ8
Methylene Chloride

VHBLK18
Methylene Chloride

DC-66 The quantitation limits of the following volatile samples could not be calculated, due to missing information Hits are flagged "M" and non-detects are not flagged

VBLKI3, VBLKQ8

The "M" flag of the positive hits for above noted samples was replaced by reviewer with the final flag Please, refer to section 13 for the final flag of the results

DC-110 The following semivolatile samples have analyte concentrations below the quantitation limit (CRQL) All results below the CRQL are qualified "J"

ETC91
Phenanthrene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene

ETC91MS
Phenanthrene, Anthracene, Fluoranthene, Benzo(a)anthracene, Chrysene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, , Benzo(k)fluoranthene, Benzo(a)pyrene

Reviewed by Krystyna Minczuk__Lockheed/ESAT
Date __June 22nd, 1995__

ETC91MSD
Phenanthrene, Fluoranthene, Benzo(a)anthracene, Chrysene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene

ETC92
4-Methylphenol, Phenanthrene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene

ETC93
Phenol, Fluoranthene, Pyrene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene

ETC94
Phenol, Fluoranthene, Pyrene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene

ETC95
Phenol, Fluoranthene, bis(2-Ethylhexyl)phthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene

DC-111 The quantitation limits of the following semivolatile samples could not be calculated due to missing information Hits are flagged "M" and non-detects are not flagged

SBLK55

The "M" flag of the positive hits for SBLK55 sample was replaced by reviewer with the final flag Please, refer to section 13 for the final flag of the results

DC-158 The following pesticide samples have analyte concentrations below the quantitation limit (CRQL) All results below the CRQL are qualified "J"

ETC91
Dieldrin, 4,4'-DDE, Endosulfan II, gamma-Chlordane

Reviewed by Krystyna Minczuk__Lockheed/ESAT
Date __June 22nd, 1995__

Aroclor-1254

ETC91MS
delta-BHC, Endosulfan II, Endrin ketone,
alpha-Chlordane, gamma-Chlordane, Aroclor-1254

ETC91MSD
alpha-BHC, Endosulfan II, Endrin ketone,
alpha-Chlordane, gamma-Chlordane, Aroclor-1254

ETC92
gamma-BHC (Lindane), Dieldrin, Endosulfan II,
4,4'-DDD, 4,4'-DDT, Methoxychlor, Endrin ketone,
alpha-Chlordane, gamma-Chlordane

ETC93
Dieldrin, 4,4'-DDE, Endosulfan II, Methoxychlor
Endrin aldehyde, alpha-Chlordane, gamma-Chlordane

ETC94
alpha-BHC, 4,4'-DDE, Methoxychlor, Aroclor-1254

ETC95
Dieldrin, 4,4'-DDE, 4,4'-DDD, Endosulfan sulfate

PBLK45
Methoxychlor

DC-159 The quantitation limits of the following pesticide samples could not be calculated due to missing information
Hits are qualified "M" and non-detects are not flagged

PBLK45

The "M" flag for positive hits in the sample PBLK45 was replaced by reviewer with the final flag Please, refer to section 13 for the final flag of the results

11 SYSTEM PERFORMANCE
No problems found for this qualification

Reviewed by Krystyna Minczuk__Lockheed/ESAT
Date __June 22nd, 1995__

LABORATORY. COMPUCHEM
CASE #: 23582
SDG #: ETC91
SITE NAME: Waukegan Muni LF #1 (IL)

12.ADDITIONAL INFORMATIION
N/A

13 CADRE SUMMARY

FILENAME ETC91 DATE 06/22/95 TIME 11 10

CRITERIA FILE FGDR091

DATA

	Original	X	Qualified

QUALIFICATIONS PERFORMED

X	Quantitation Limit		Sample Cleanup
	Percent Moisture		ICS
X	Holding Time		LCS
X	Calibration		Duplicates
X	Matrix Spike		Furnace AA QC
X	IPC		Serial Dilutions
X	Internal Standards		Sample Result Verif
X	SMC/Surrogate		Laboratory Blanks
X	System Performance	X	Field QC

PRINT NON DETECTS

X	Yes		No

PRINT REJECTED RESULTS

X	Yes		No

Reviewed by Krystyna Minczuk__Lockheed/ESAT
Date __June 22nd, 1995__

LABORATORY COMPUCHEM
CASE #: 23582
SDG # ETC91
SITE NAME: Waukegan Muni LF #1 (IL)

TCL QUALIFIED SPREADSHEET

CASE NO 23582
SDG NO ETC91

SITE
LABORATORY COMPUCHEM LABORATORIES I

EPA SAMPLE NUMBER	ETC91		ETC91MS		ETC91MSD		ETC92		ETC93	
REGIONAL SAMPLE NUMBER										
SAMPLE LOCATION										
SAMPLE TYPE	Routine Sample		Matrix Spike		Matrix Spike Du		Routine Sample		Routine Sample	
MATRIX/ANALYSIS	SOIL/LOW		SOIL/LOW		SOIL/LOW		SOIL/LOW		SOIL/LOW	
DILUTION FACTOR	1 0		1 0		1 0		1 0		1 0	
PERCENT MOISTURE	40		40		40		42		42	
VOA										
Chloromethane	17	U	17	U	17	U	17	U	17	U
Bromomethane	17	U	17	U	17	U	17	U	17	U
Vinyl Chloride	17	U	17	U	17	U	17	U	17	U
Chloroethane	17	U	17	U	17	U	17	U	17	U
Methylene Chloride	17	U	26		50		62	U	48	U
Acetone	17	U	17	U	17	U	17	U	17	U
Carbon Disulfide	17	U	17	U	17	U	17	U	17	U
1 1 Dichloroethene	17	U	78		84		17	U	17	U
1 1 Dichloroethane	17	U	17	U	17	U	17	U	17	U
1 2 Dichloroethene (total)	17	U	17	U	17	U	17	U	17	U
Chloroform	17	U	17	U	17	U	17	U	17	U
1 2 Dichloroethane	17	U	17	U	17	U	17	U	17	U
2 Butanone	17	U	17	U	17	U	17	U	17	U
1 1 1 Trichloroethane	17	U	17	U	17	U	17	U	17	U
Carbon Tetrachloride	17	U	17	U	17	U	17	U	17	U
Bromodichloromethane	17	U	17	U	17	U	17	U	17	U
1 2 Dichloropropane	17	U	17	U	17	U	17	U	17	U
cis 1 3 Dichloropropene	17	U	17	U	17	U	17	U	17	U
Trichloroethene	17	U	86		110		17	U	17	U
Dibromochloromethane	17	U	17	U	17	U	17	U	17	U
1 1 2 Trichloroethane	17	U	17	U	17	U	17	U	17	U
Benzene	17	U	85		110		17	U	17	U
trans 1 3 Dichloropropene	17	U	17	U	17	U	17	U	17	U
Bromoform	17	U	17	U	17	U	17	U	17	U
4 Methyl 2 Pentanone	17	U	17	U	17	U	17	U	17	U
2 Hexanone	17	U	17	U	17	U	17	U	17	U
Tetrachloroethene	17	U	17	U	17	U	17	U	17	U
1 1 2 2 Tetrachloroethane	17	U	17	U	17	U	17	U	17	U
Toluene	17	U	90		110		17	U	17	U
Chlorobenzene	17	U	88		110		17	U	17	U
Ethylbenzene	17	U	17	U	17	U	17	U	17	U
Styrene	17	U	17	U	17	U	17	U	17	U
Xylene (total)	17	U	17	U	17	U	17	U	17	U

FILENAME ETC91 SDG DATE 06/22/95 TIME 11 10 CADRE 2 10

Water units are reported in ug/L
Soil units are reported in ug/Kg

Reviewed by Krystyna Minczuk__Lockheed/ESAT
Date __June 22nd, 1995__

LABORATORY COMPUCHEM
CASE #. 23582
SDG #: ETC91
SITE NAME: Waukegan Muni LF #1 (IL)

TCL QUALIFIED SPREADSHEET

CASE NO 23582
SDG NO ETC91

SITE
LABORATORY COMPUCHEM LABORATORIES I

EPA SAMPLE NUMBER	ETC94		ETC95		VBLK13		VBLK08		VHBLK18	
REGIONAL SAMPLE NUMBER										
SAMPLE LOCATION										
SAMPLE TYPE	Routine Sample		Routine Sample		Method Blank		Method Blank		Routine Sample	
MATRIX/ANALYSIS	SOIL/LOW		SOIL/LOW		SOIL/LOW		SOIL/LOW		SOIL/LOW	
DILUTION FACTOR	1 0		1 0		1 0		1 0		1 0	
PERCENT MOISTURE	41		46						0	
VOA										
Chloromethane	17	U	18	U	10	U	10	U	10	U
Bromomethane	17	U	18	U	10	U	10	U	10	U
Vinyl Chloride	17	U	18	U	10	U	10	U	10	U
Chloroethane	17	U	18	U	10	U	10	U	10	U
Methylene Chloride	36	U	280	B	9	J	8	J	6	J
Acetone	17	U	18	U	10	U	10	U	14	U
Carbon Disulfide	17	U	18	U	10	U	10	U	10	U
1 1 Dichloroethene	17	U	18	U	10	U	10	U	10	U
1 1 Dichloroethane	17	U	18	U	10	U	10	U	10	U
1 2-Dichloroethene (total)	17	U	18	U	10	U	10	U	10	U
Chloroform	17	U	18	U	10	U	10	U	10	U
1 2 Dichloroethane	17	U	18	U	10	U	10	U	10	U
2 Butanone	17	U	18	U	10	U	10	U	10	U
1 1 1 Trichloroethane	17	U	18	U	10	U	10	U	10	U
Carbon Tetrachloride	17	U	18	U	10	U	10	U	10	U
Bromodichloromethane	17	U	18	U	10	U	10	U	10	U
1 2 Dichloropropane	17	U	18	U	10	U	10	U	10	U
cis 1 3 Dichloropropene	17	U	18	U	10	U	10	U	10	U
Trichloroethene	17	U	18	U	10	U	10	U	10	U
Dibromochloromethane	17	U	18	U	10	U	10	U	10	U
1 1 2 Trichloroethane	17	U	18	U	10	U	10	U	10	U
Benzene	17	U	18	U	10	U	10	U	10	U
trans 1 3 Dichloropropene	17	U	18	U	10	U	10	U	10	U
Bromoform	17	U	18	U	10	U	10	U	10	U
4 Methyl 2 Pentanone	17	U	18	U	10	U	10	U	10	U
2 Hexanone	17	U	18	U	10	U	10	U	10	U
Tetrachloroethene	17	U	18	U	10	U	10	U	10	U
1 1 2 2 Tetrachloroethane	17	U	18	U	10	U	10	U	10	U
Toluene	17	U	4	J	10	U	10	U	10	U
Chlorobenzene	17	U	18	U	10	U	10	U	10	U
Ethylbenzene	17	U	18	U	10	U	10	U	10	U
Styrene	17	U	18	U	10	U	10	U	10	U
Xylene (total)	17	U	18	U	10	U	10	U	10	U

FILENAME ETC91 SDG DATE 06/22/95 TIME 11 10 CADRE 2 10

Water units are reported in ug/L
Soil units are reported in ug/Kg

Reviewed by Krystyna Minczuk__Lockheed/ESAT
Date __June 22nd, 1995__

LABORATORY. COMPUCHEM
CASE #: 23582
SDG #: ETC91
SITE NAME. Waukegan Muni LF #1 (IL)

TCL QUALIFIED SPREADSHEET

CASE NO 23582
SDG NO ETC91

SITE
LABORATORY COMPUCHEM LABORATORIES I

EPA SAMPLE NUMBER	ETC91		ETC91MS		ETC91MSD		ETC92		ETC93	
REGIONAL SAMPLE NUMBER										
SAMPLE LOCATION										
SAMPLE TYPE	Routine Sample		Matrix Spike		Matrix Spike Du		Routine Sample		Routine Sample	
MATRIX/ANALYSIS	SOIL/LOW		SOIL/LOW		SOIL/LOW		SOIL/LOW		SOIL/LOW	
DILUTION FACTOR	1 0		1 0		1 0		1 0		1 0	
PERCENT MOISTURE	40		40		40		42		33	
BNA										
Phenol	550	U	3000		2800		570	U	110	J
bis(2 Chloroethyl) ether	550	U	550	U	550	U	570	U	490	U
2 Chlorophenol	550	U	2900		2700		570	U	490	U
1 3 Dichlorobenzene	550	U	550	U	550	U	570	U	490	U
1 4 Dichlorobenzene	550	U	2000		1800		570	U	490	U
1 2 Dichlorobenzene	550	U	550	U	550	U	570	U	490	U
2 Methylphenol	550	U	550	U	550	U	570	U	490	U
2 2' oxybis(1 Chloropropane	550	U	550	U	550	U	570	U	490	U
4 Methylphenol	550	U	550	U	550	U	260	J	2400	
N Nitroso di n propylamine	550	U	2500		2300		570	U	490	U
Hexachloroethane	550	U	550	U	550	U	570	U	490	U
Nitrobenzene	550	U	550	U	550	U	570	U	490	U
Isophorone	550	U	550	U	550	U	570	U	490	U
2 Nitrophenol	550	U	550	U	550	U	570	U	490	U
2 4 Dimethylphenol	550	U	550	U	550	U	570	U	490	U
bis(2 Chloroethoxy) methane	550	U	550	U	550	U	570	U	490	U
2 4 Dichlorophenol	550	U	550	U	550	U	570	U	490	U
1 2 4 Trichlorobenzene	550	U	2400		2200		570	U	490	U
Naphthalene	550	U	550	U	550	U	570	U	490	U
4 Chloroaniline	550	U	550	U	550	U	570	U	490	U
Hexachlorobutadiene	550	U	550	U	550	U	570	U	490	U
4 Chloro 3 methylphenol	550	U	3400		3100		570	U	490	U
2 Methylnaphthalene	550	U	550	U	550	U	570	U	490	U
Hexachlorocyclopentadiene	550	U	550	U	550	U	570	U	490	U
2 4 6 Trichlorophenol	550	U	550	U	550	U	570	U	490	U
2 4 5 Trichlorophenol	1300	U	1300	U	1300	U	1400	U	1200	U
2 Chloronaphthalene	550	U	550	U	550	U	570	U	490	U
2 Nitroaniline	1300	U	1300	U	1300	U	1400	U	1200	U
Dimethylphthalate	550	U	550	U	550	U	570	U	490	U
Acenaphthylene	550	U	550	U	550	U	570	U	490	U
2 6 Dinitrotoluene	550	U	550	U	550	U	570	U	490	U
3 Nitroaniline	1300	U	1300	U	1300	U	1400	U	1200	U
Acenaphthene	550	U	2200		2000		570	U	490	U
2 4 Dinitrophenol	1300	U	1300	U	1300	U	1400	U	1200	U
4 Nitrophenol	1300	U	3000		2500		1400	U	1200	U
Dibenzofuran	550	U	550	U	550	U	570	U	490	U
2 4 Dinitrotoluene	550	U	2200		1800		570	U	490	U

FILENAME ETC91 SDG DATE 06/22/95 TIME 11 10 CADRE 2 10

Water units are reported in ug/L
Soil units are reported in ug/Kg

Reviewed by Krystyna Minczuk__Lockheed/ESAT
Date __June 22nd, 1995__

LABORATORY: COMPUCHEM
CASE #: 23582
SDG #: ETC91
SITE NAME: Waukegan Muni LF #1 (IL)

TCL QUALIFIED SPREADSHEET

CASE NO 23582
SDG NO ETC91

SITE
LABORATORY COMPUCHEM LABORATORIES I

EPA SAMPLE NUMBER	ETC91		ETC91MS		ETC91MSD		ETC92		ETC93	
REGIONAL SAMPLE NUMBER										
SAMPLE LOCATION										
SAMPLE TYPE	Routine Sample		Matrix Spike		Matrix Spike Du		Routine Sample		Routine Sample	
MATRIX/ANALYSIS	SOIL/LOW		SOIL/LOW		SOIL/LOW		SOIL/LOW		SOIL/LOW	
DILUTION FACTOR	1 0		1 0		1 0		1 0		1 0	
PERCENT MOISTURE	40		40		40		42		33	
BNA										
Diethylphthalate	550	U	550	U	550	U	570	U	490	U
4 Chlorophenyl phenyl ether	550	U	550	U	550	U	570	U	490	U
Fluorene	550	U	550	U	550	U	570	U	490	U
4 Nitroaniline	1300	U	1300	U	1300	U	1400	U	1200	U
4 6 Dinitro 2 methylphenol	1300	U	1300	U	1300	U	1400	U	1200	U
N nitrosodiphenylamine	550	U	550	U	550	U	570	U	490	U
4 Bromophenyl-phenylether	550	U	550	U	550	U	570	U	490	U
Hexachlorobenzene	550	U	550	U	550	U	570	U	490	U
Pentachlorophenol	1300	U	2700		2300		1400	U	1200	U
Phenanthrene	220	J	320	J	230	J	230	J	490	U
Anthracene	550	U	78	J	550	U	570	U	490	U
Carbazole	550	U	550	U	550	U	570	U	490	U
Di n butylphthalate	550	U	550	U	550	U	570	U	490	U
Fluoranthene	320	J	510	J	310	J	350	J	74	J
Pyrene	240	J	2200		2100		270	J	60	J
Butylbenzylphthalate	550	U	550	U	550	U	570	U	490	U
3,3' Dichlorobenzidine	550	U	550	U	550	U	570	U	490	U
Benzo(a)anthracene	170	J	210	J	180	J	150	J	490	U
Chrysene	160	J	200	J	160	J	160	J	490	U
bis(2 Ethylhexyl)phthalate	100	J	100	J	110	J	85	J	180	J
Di n octylphthalate	550	U	550	U	550	U	570	U	490	U
Benzo(b)fluoranthene	310	J	410	J	330	J	320	J	76	J
Benzo(k)fluoranthene	280	J	380	J	310	J	300	J	71	J
Benzo(a)pyrene	150	J	190	J	140	J	140	J	490	U
Indeno(1 2 3 cd)pyrene	550	U	550	U	550	U	570	U	490	U
Dibenz(a h)anthracene	550	U	550	U	550	U	570	U	490	U
Benzo(g h i)perylene	550	U	550	U	550	U	570	U	490	U

FILENAME ETC91 SDG DATE 06/22/95 TIME 11 10 CADRE 2 10

Water units are reported in ug/L
Soil units are reported in ug/Kg

Reviewed by Krystyna Minczuk__Lockheed/ESAT
Date __June 22nd, 1995__

LABORATORY: COMPUCHEM
CASE #: 23582
SDG #: ETC91
SITE NAME· Waukegan Muni LF #1 (IL)

TCL QUALIFIED SPREADSHEET

CASE NO 23582
SDG NO ETC91

SITE
LABORATORY COMPUCHEM LABORATORIES I

EPA SAMPLE NUMBER	ETC94		ETC95		SBLK55					
REGIONAL SAMPLE NUMBER										
SAMPLE LOCATION										
SAMPLE TYPE	Routine Sample		Routine Sample		Method Blank					
MATRIX/ANALYSIS	SOIL/LOW		SOIL/LOW		SOIL/LOW					
DILUTION FACTOR	1 0		1 0		1 0					
PERCENT MOISTURE	41		46							
BNA										
Phenol	86	J	120	J	330	U				
bis(2 Chloroethyl) ether	540	U	590	U	330	U				
2 Chlorophenol	540	U	590	U	330	U				
1 3 Dichlorobenzene	540	U	590	U	330	U				
1 4 Dichlorobenzene	540	U	590	U	330	U				
1 2 Dichlorobenzene	540	U	590	U	330	U				
2 Methylphenol	540	U	590	U	330	U				
2 2' oxybis(1 Chloropropane	540	U	590	U	330	U				
4 Methylphenol	2100		3900		330	U				
N Nitroso di n propylamine	540	U	590	U	330	U				
Hexachloroethane	540	U	590	U	330	U				
Nitrobenzene	540	U	590	U	330	U				
Isophorone	540	U	590	U	330	U				
2 Nitrophenol	540	U	590	U	330	U				
2 4 Dimethylphenol	540	U	590	U	330	U				
bis(2 Chloroethoxy) methane	540	U	590	U	330	U				
2 4 Dichlorophenol	540	U	590	U	330	U				
1 2 4 Trichlorobenzene	540	U	590	U	330	U				
Naphthalene	540	U	590	U	330	U				
4 Chloroaniline	540	U	590	U	330	U				
Hexachlorobutadiene	540	U	590	U	330	U				
4 Chloro 3 methylphenol	540	U	590	U	330	U				
2 Methylnaphthalene	540	U	590	U	330	U				
Hexachlorocyclopentadiene	540	U	590	U	330	U				
2 4 6 Trichlorophenol	540	U	590	U	330	U				
2 4 5 Trichlorophenol	1300	U	1400	U	800	U				
2 Chloronaphthalene	540	U	590	U	330	U				
2 Nitroaniline	1300	U	1400	U	800	U				
Dimethylphthalate	540	U	590	U	330	U				
Acenaphthylene	540	U	590	U	330	U				
2 6 Dinitrotoluene	540	U	590	U	330	U				
3 Nitroaniline	1300	U	1400	U	800	U				
Acenaphthene	540	U	590	U	330	U				
2 4 Dinitrophenol	1300	U	1400	U	800	U				
4 Nitrophenol	1300	U	1400	U	800	U				
Dibenzofuran	540	U	590	U	330	U				
2 4 Dinitrotoluene	540	U	590	U	330	U				

FILENAME ETC91 SDG DATE 06/22/95 TIME 11 10 CADRE 2 10

Water units are reported in ug/L
Soil units are reported in ug/Kg

Reviewed by Krystyna Minczuk__Lockheed/ESAT
Date __June 22nd, 1995__

LABORATORY· COMPUCHEM
CASE #: 23582
SDG #: ETC91
SITE NAME: Waukegan Muni LF #1 (IL)

TCL QUALIFIED SPREADSHEET

CASE NO 23582
SDG NO ETC91

SITE
LABORATORY COMPUCHEM LABORATORIES I

EPA SAMPLE NUMBER	ETC94		ETC95		SBLK55					
REGIONAL SAMPLE NUMBER										
SAMPLE LOCATION										
SAMPLE TYPE	Routine Sample		Routine Sample		Method Blank					
MATRIX/ANALYSIS	SOIL/LOW		SOIL/LOW		SOIL/LOW					
DILUTION FACTOR	1 0		1 0		1 0					
PERCENT MOISTURE	41		46							
BNA										
Diethylphthalate	540	U	590	U	330	U				
4-Chlorophenyl phenyl ether	540	U	590	U	330	U				
Fluorene	540	U	590	U	330	U				
4 Nitroaniline	1300	U	1400	U	800	U				
4 6 Dinitro 2 methylphenol	1300	U	1400	U	800	U				
N nitrosodiphenylamine	540	U	590	U	330	U				
4 Bromophenyl phenylether	540	U	590	U	330	U				
Hexachlorobenzene	540	U	590	U	330	U				
Pentachlorophenol	1300	U	1400	U	800	U				
Phenanthrene	540	U	590	U	330	U				
Anthracene	540	U	590	U	330	U				
Carbazole	540	U	590	U	330	U				
Di n butylphthalate	540	U	590	U	330	U				
Fluoranthene	94	J	73	J	330	U				
Pyrene	70	J	590	U	330	U				
Butylbenzylphthalate	540	U	590	U	330	U				
3 3' Dichlorobenzidine	540	U	590	U	330	U				
Benzo(a)anthracene	540	U	590	U	330	U				
Chrysene	540	U	590	U	330	U				
bis(2 Ethylhexyl)phthalate	120	J	110	J	330	U				
Di n octylphthalate	540	U	590	U	330	U				
Benzo(b)fluoranthene	84	J	68	J	330	U				
Benzo(k)fluoranthene	78	J	63	J	330	U				
Benzo(a)pyrene	540	U	590	U	330	U				
Indeno(1 2 3 cd)pyrene	540	U	590	U	330	U				
Dibenz(a h)anthracene	540	U	590	U	330	U				
Benzo(g h i)perylene	540	U	590	U	330	U				

FILENAME ETC91 SDG DATE 06/22/95 TIME 11 10 CADRE 2 10

Water units are reported in ug/L
Soil units are reported in ug/Kg

Reviewed by Krystyna Minczuk__Lockheed/ESAT
Date __June 22nd, 1995__

LABORATORY· COMPUCHEM
CASE #: 23582
SDG #: ETC91
SITE NAME: Waukegan Muni LF #1 (IL)

TCL QUALIFIED SPREADSHEET

CASE NO 23582
SDG NO ETC91

SITE
LABORATORY COMPUCHEM LABORATORIES I

EPA SAMPLE NUMBER	ETC91		ETC91MS		ETC91MSD		ETC92		ETC93	
REGIONAL SAMPLE NUMBER										
SAMPLE LOCATION										
SAMPLE TYPE	Routine Sample		Matrix Spike		Matrix Spike Du		Routine Sample		Routine Sample	
MATRIX/ANALYSIS	SOIL/		SOIL/		SOIL/		SOIL/		SOIL/	
DILUTION FACTOR	1 0		1 0		1 0		1 0		1 0	
PERCENT MOISTURE	40		40		40		42		33	
PES										
alpha BHC	2 8	UJ	2 8	UJ	0 17	J	2 9	UJ	2 5	UJ
beta BHC	2 8	UJ	2 8	UJ	2 8	UJ	2 9	UJ	2 5	UJ
delta BHC	3 0	J	1 6	J	3 1	J	2 9	UJ	2 5	UJ
gamma BHC (Lindane)	2 8	UJ	25	J	24	J	0 53	J	2 5	UJ
Heptachlor	2 8	UJ	23	J	23	J	2 9	UJ	2 5	UJ
Aldrin	2 8	UJ	25	J	24	J	2 9	UJ	2 5	UJ
Heptachlor epoxide	2 8	UJ	2 8	UJ	2 8	UJ	2 9	UJ	2 5	UJ
Endosulfan I	2 8	UJ	2 8	UJ	2 8	UJ	2 9	UJ	2 5	UJ
Dieldrin	1 2	J	48	J	48	J	0 91	J	0 66	J
4,4' DDE	0 37	J	5 5	UJ	5 5	UJ	5 7	UJ	2 4	J
Endrin	5 5	UJ	55	J	54	J	5 7	UJ	4 9	UJ
Endosulfan II	0 38	J	0 51	J	0 50	J	0 89	J	1 2	J
4 4' DDD	5 5	UJ	5 5	UJ	5 5	UJ	2 0	J	4 9	UJ
Endosulfan sulfate	13	J	5 5	J	5 5	UJ	5 7	UJ	4 9	UJ
4 4' DDT	5 5	UJ	56	J	55	J	3 5	J	4 9	
Methoxychlor	28	UJ	28	UJ	28	UJ	22	J	1 1	
Endrin ketone	5 5	UJ	0 39	J	0 40	J	1 7	J	4 9	UJ
Endrin aldehyde	5 5	UJ	5 5	UJ	5 5	UJ	5 7	UJ	1 4	J
alpha Chlordane	2 8	UJ	0 96	J	0 99	J	2 3	J	0 56	J
gamma-Chlordane	0 38	J	0 73	J	0 57	J	0 44	J	0 37	J
Toxaphene	280	UJ	280	UJ	280	UJ	290	UJ	250	UJ
Aroclor 1016	55	UJ	55	UJ	55	UJ	57	UJ	49	UJ
Aroclor 1221	110	UJ	110	UJ	110	UJ	120	UJ	100	UJ
Aroclor 1232	55	UJ	55	UJ	55	UJ	57	UJ	49	UJ
Aroclor 1242	55	UJ	55	UJ	55	UJ	57	UJ	49	UJ
Aroclor 1248	55	UJ	55	UJ	55	UJ	310	J	49	UJ
Aroclor 1254	31	J	38	J	42	J	57	UJ	51	J
Aroclor 1260	55	UJ	55	UJ	55	UJ	57	UJ	49	UJ

FILENAME ETC91 SDG DATE 06/22/95 TIME 11 10 CADRE 2 10

Water units are reported in ug/L
Soil units are reported in ug/Kg

Reviewed by Krystyna Minczuk__Lockheed/ESAT
Date __June 22nd, 1995__

LABORATORY: COMPUCHEM
CASE #. 23582
SDG #: ETC91
SITE NAME: Waukegan Muni LF #1 (IL)

TCL QUALIFIED SPREADSHEET

CASE NO 23582
SDG NO ETC91

SITE
LABORATORY COMPUCHEM LABORATORIES I

EPA SAMPLE NUMBER	ETC94		ETC95		PBLK45			
REGIONAL SAMPLE NUMBER								
SAMPLE LOCATION								
SAMPLE TYPE	Routine Sample		Routine Sample		Method Blank			
MATRIX/ANALYSIS	SOIL/		SOIL/		SOIL/			
DILUTION FACTOR	1 0		1 0		1 0			
PERCENT MOISTURE	41		46					
PES								
alpha BHC	0 64	J	3 2	UJ	1 7	U		
beta BHC	2 9	UJ	3 2	UJ	1 7	U		
delta BHC	2 9	UJ	3 2	UJ	1 7	U		
gamma BHC (Lindane)	2 9	UJ	3 2	UJ	1 7	U		
Heptachlor	2 9	UJ	3 2	UJ	1 7	U		
Aldrin	2 9	UJ	3 2	UJ	1 7	U		
Heptachlor epoxide	2 9	UJ	3 2	UJ	1 7	U		
Endosulfan I	2 9	UJ	3 2	UJ	1 7	U		
Dieldrin	5 6	UJ	0 35	J	3 3	U		
4 4' DDE	1 9	J	1 1	J	3 3	U		
Endrin	5 6	UJ	6 1	UJ	3 3	U		
Endosulfan II	5 6	UJ	6 1	UJ	3 3	U		
4 4' DDD	5 6	UJ	1 2	J	3 3	U		
Endosulfan sulfate	5 6	UJ	0 93	J	3 3	U		
4 4' DDT	5 6	UJ	6 1	UJ	3 3	U		
Methoxychlor	4 0	J	31	UJ	1 2	J		
Endrin ketone	5 6	UJ	6 1	UJ	3 3	U		
Endrin aldehyde	5 6	UJ	6 1	UJ	3 3	U		
alpha Chlordane	2 9	UJ	3 2	UJ	1 7	U		
gamma Chlordane	2 9	UJ	3 2	UJ	1 7	U		
Toxaphene	290	UJ	310	UJ	170	U		
Aroclor 1016	56	UJ	61	UJ	33	U		
Aroclor 1221	110	UJ	120	UJ	67	U		
Aroclor 1232	56	UJ	61	UJ	33	U		
Aroclor-1242	56	UJ	61	UJ	33	U		
Aroclor 1248	56	UJ	61	UJ	33	U		
Aroclor-1254	7 6	J	61	UJ	33	U		
Aroclor 1260	56	UJ	61	UJ	33	U		

FILENAME ETC91 SDG DATE 06/22/95 TIME 11 10 CADRE 2 10

Water units are reported in ug/L
Soil units are reported in ug/Kg

Reviewed by Krystyna Minczuk__Lockheed/ESAT
Date __June 22nd, 1995__

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No· _____ CERCLIS No ILD980902175

Case No 23582 Site Name Location WAUKEGAN MUNI #1

Contractor or EPA Lab Compu Data User E&E

No of Samples· 5 Date Sampled or Data Received 6-13-95

Have Chain-of-Custody records been received? Yes ✓ No ✓
Have traffic reports or packing lists been received? Yes ✓ No ____
If no, are traffic report or packing list numbers written on the chain-of-custody record? Yes ✓ No ____
If no, which traffic report or packing list numbers are missing?

_____ _____ _____ _____

_____ _____ _____ _____

Are basic data forms in? Yes ✓ No ____
No of samples claimed 5 No of samples received 5

Received by Lynette Burnett Date 6-13-95

Received by LSSS Lynette Burnett Date: 6-15-95

Review started 6/21/95 ~~6-21-95~~ 6/21/95 Reviewer Signature [illegible] KM

Total time spent on review 6.5 Date review completed 6-22-95

Copied by Patricia J Scott Date 06/29/95

Mailed to User by _____ Date. _____

DATA USERS:
Please fill in the blanks below and return this form to
Sylvia Griffin, Data Mgmt Coordinator, Region V, 5SCRL

Data received by _____ Date _____

Data review received by _____ Date _____

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Dioxin Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK

PROBLEMS: Please indicate reasons why data are not suitable for your uses

_____

_____

Received by Data Mgmt Coordinator for Files. Data· _____