Sample Number
F2053

Organics Analysis Data Sheet
(Page 1)

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Laboratory Name WESTON
Lab Sample ID No 8601-464-0030
Sample Matrix Water
Data Release Authorized By

Case No 5445
QC Report No NA
Contract No 6801-6781
Date Sample Received Jan 11, 1986

Volatile Compounds

Concentration (Low) Medium (Circle One)
Date Extracted/Prepared Jan 13, 1986
Date Analyzed Jan 13, 1986
Conc/(Dil Factor) 1 pH 4.00
Percent Moisture (Not Decanted) NA

CAS Number		(ug/l) or ug/Kg (Circle One)
74 87 3	Chloromethane	10U
74 83 9	Bromomethane	
75 01 4	Vinyl Chloride	
75 00 3	Chloroethane	
75 09 2	Methylene Chloride	5U
67 64 1	Acetone	18.
75 15 0	Carbon Disulfide	5U
75 35 4	1 1 Dichloroethene	
75 34 3	1 1 Dichloroethane	
156 60 5	Trans 1 2 Dichloroethene	
67 66 3	Chloroform	
107 06 2	1 2 Dichloroethane	
78 93 3	2 Butanone	10U
71 55 6	1 1 1 Trichloroethane	5U
56 23 5	Carbon Tetrachloride	
108 05 4	Vinyl Acetate	10U
75 27 4	Bromodichloromethane	5U

CAS Number		(ug/l) or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	5U
10061 02 6	Trans 1 3 Dichloropropene	
79 01 6	Trichloroethene	
124 48 1	Dibromochloromethane	
79 00 5	1 1 2 Trichloroethane	
71 43 2	Benzene	
10061 01 5	cis 1 3 Dichloropropene	
110 75 8	2 Chloroethylvinylether	10U
75 25 2	Bromoform	5U
591 78 6	4 Methyl 2 Pentanone	10U
108 10 1	2 Hexanone	
127 18 4	Tetrachloroethene	5U
79 34 5	1 1 2 2 Tetrachloroethane	
108 88 3	Toluene	
108 90 7	Chlorobenzene	
100 41 4	Ethylbenzene	
100 42 5	Styrene	
	Total Xylenes	

Data Reporting Qual f ers

For report ng results to EPA the following results qualif ers are used
Additional flags or footnotes explaining results are encouraged However the def n t on of each flag must be explic t

Value If the esult s a alue g eater than o equal to the detection l m t epo t the alue

U Ind cates compound was analyzed fo but not detected Report the m mum detect on l m t fo the sample w th the U (e g 10U) based on necessary concent at on d lut on act o (Th s s not necessar ly the nst ment detect on l m t) The footnote should ead U Compound was analyzed fo but not detected The number s the m n mum atta nable detect on l m t for the sample

J Ind cates an est mated alue Th s flag s sed e the whe est mat g a concent at on fo tentat elv dent f ed compounds whe e a 1 1 espo se s assumed o when the mass spectral data nd cated the p esence of a compound that meets the dent f cat on c te a b t the es lt s less than the spec f ed detect on l m t b t ze o (e g 10J) If l m t of detect on s 10 µg l and a o of 3 µg l s calculated eport as 3J

C Th s flag appl es to pest c de pa amete s whe e the ident f cat on has been conf med by GC MS S ngle component pest c des ≥10 ng ul n the f nal ext act should be co f med by GC MS

B Th s flag s used when the analyte s found n the blank as well as a sample It nd cates poss ble probable blank co ta n nat on and wa ns the data user to take app op ate act o

Other Other spec f c flags and footnotes may be equ ed to p ope ly def ne the results If used they must be fully desc bed and such desc pt on attached to the data summa y eport

141947

000373

141947

Laboratory Name R F WESTON INC
Case No 5445

Sample Number
F2053

ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration LOW
Date Extracted/Prepared 01/13/86
Date Analyzed 01/17/86
Conc/Dil Factor 1
Percent Moisture (Decanted) _____

GPC Cleanup ___ Yes _X_ No
Separatory Funnel Extraction _X_ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		UG/L		CAS Number		UG/L	
108-95 2	Phenol	31		83 32-9	Acenaphthene	2	6J
111-44-4	bis(2-Chloroethyl)Ether	10	U	51-28-5	2,4-Dinitrophenol	50	U
95-57 8	2-Chlorophenol	80		100-02-7	4-Nitrophenol	52	
541 73 1	1 3-Dichlorobenzene	10	U	132 64-9	Dibenzofuran	8	1J
106-46-7	1,4 Dichlorobenzene	10	U	121 14-2	2,4-Dinitrotoluene	10	U
100-51 6	Benzyl Alcohol	10	U	606 20-2	2,6-Dinitrotoluene	10	U
95 50 1	1,2 Dichlorobenzene	10	U	84 66-2	Diethylphthalate	10	U
95 48 7	2-Methylphenol	10	U	7005-72 3	4 Chlorophenyl-phenylether	10	U
39638 32 9	bis'2-Chloroisopropyl)Ether	10	U	86-73-7	Fluorene	5	8J
106-44 5	4-Methylphenol	10	U	100-10-6	4-Nitroaniline	50	U
621-64-7	N-Nitroso-Di n-Propylamine	10	U	534 52-1	4,6-Dinitro-2-Methylphenol	50	U
67-72-1	Hexachloroethane	10	U	86-30-6	N-Nitro odiphenylamine (1)	10	U
98-95 3	Nitrobenzene	10	U	101 55-3	4-Bromophenyl-phenylether	10	U
78-59 1	Isophorone	10	U	118-74-1	Hexachlorobenzene	10	U
88-75 5	2-Nitrophenol	10	U	87-86-5	Pentachlorophenol	46	J
105 67-9	2,4-Dimethylphenol	10	U	85-01-8	Phenanthrene	39	
65-85-0	Benzoic Acid	50	U	120 12-7	Anthracene	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U	84-74-2	Di n-Butylphthalate	10	U
120-83 2	2,4 Dichlorophenol	10	U	20b-44-0	Fluoranthene	24	
120-82-1	1,2,4-Trichlorobenzene	10	U	129-00-0	Pyrene	4	9J
91-20-3	Naphthalene	2	3J	85-68-7	Butylbenzylphthalate	10	U
106-47 8	4-Chloroaniline	10	U	91-94-1	3,3 -Dichlorobenzidine	20	U
87-68-3	Hexachlorobutadiene	10	U	56-55-3	Benzo(a)Anthracene	10	U
59-50-7	4-Chloro-3-Methylphenol	74		117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
91-57 6	2-Methylnaphthalene	3	9J	218-01-9	Chrysene	2	6J
77-47-4	Hexachlorocyclopentadiene	10	U	117-84-0	Di-n-Octyl Phthalate	10	U
88-06-2	2,4,6-Trichlorophenol	10	U	205-99-2	Benzo(b)Fluoranthene	10	U
95-95-4	2,4,5-Trichlorophenol	50	U	207-08-9	Benzo(k)Fluoranthene	10	U
91-58 7	2-Chloronaphthalene	10	U	50-32-8	Benzo(a)Pyrene	10	U
88-74-4	2-Nitroaniline	50	U	193-39-5	Indeno(1,2,3 cd)Pyrene	10	U
131-11-3	Dimethyl Phthalate	10	U	53 70-3	Dibenz(a,h)Anthracene	10	U
208 96 8	Acenaphthylene	10	U	191-24-2	Benzo(g,h,i)Perylene	10	U
99-09 2	3-Nitroaniline	50	U				

(1) Cannot be separated from diphenylamine

Laboratory Name WESTON

Case No 5445

Sample Number F 2053

Organics Analysis Data Sheet
(Page 3)

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Pesticide / PCBs

Concentration (Low) Medium (Circle One)

Date Extracted Prepared 1-11 86

Date Analyzed 1-30-86

Conc/Dil Factor 5

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☑Yes

CAS Number		ug/L or ug/Kg (Circle One)
319 84 6	Alpha BHC	0.25 U
319 85 7	Beta BHC	0.25 U
319 86 8	Delta BHC	0.25 U
58 89 9	Gamma BHC (Lindane)	0.25 U
76 44 8	Heptachlor	0.25 U
309 00 2	Aldrin	0.25 U
1024 57 3	Heptachlor Epoxide	0.25 U
959 98 8	Endosulfan I	0.25 U
60 57 1	Dieldrin	0.5 U
72 55 9	4 4 DDE	0.5 U
72 20 8	Endrin	0.5 U
33213 65 9	Endosulfan II	0.5 U
72 54 8	4 4 DDD	0.5 U
1031 07 8	Endosulfan Sulfate	0.5 U
50 29 3	4 4 DDT	0.5 U
72 43 5	Methoxychlor	2.5 U
53494 70 5	Endrin Ketone	0.5 U
57 74 9	Chlordane	2.5 U
8001 35 2	Toxaphene	5.0 U
12674 11 2	Aroclor 1016	2.5 U
11104 28 2	Aroclor 1221	2.5 U
11141 16 5	Aroclor 1232	2.5 U
53469 21 9	Aroclor 1242	2.5 U
12672 29 6	Aroclor 1248	2.5 U
11097 69 1	Aroclor 1254	5.0 U
11096 82 5	Aroclor 1260	5.0 U

V_i Volume of extract injected (ul)

V_s Volume of water extracted (ml)

W_s Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s 1000 or W_s _____ V_t 10,000 V_i 5.2

Laboratory Name WESTON

Case No _____

Sample Number F2053

0117B1691
CASE 5445
6801 - 6781

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Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1		Unknown	ABN	1323	21 J
2		"		1361	8J
3		Unknown Ketone		1386	9J
4		Unknown		1395	11J
5		"		1464	6J
6		"		1483	4J
7		Unknown HC		1544	9J
8		Methylanthracene isomer		1594	15J
9		Unknown-HC		1629	9J
10		Unknown		1654	7J
11		"		1683	6J
12		"		1691	8J
13		Unknown HC		1711	8J
14		" "		1789	5J
15		" "		1864	5J
16		" "		1937	5J
17					
18		None found	VOA		
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Sample Number
F2054

Organics Analysis Data Sheet
(Page 1)

Laboratory Name WESTON
Case No 5445
Lab Sample ID No 8601-464-0040
QC Report No NA
Sample Matrix Water
Contract No 6801-6781
Data Release Authorized By
Date Sample Received Jan 11, 1986

Volatile Compounds

Concentration (Low) Medium (Circle One)
Date Extracted (Prepared) Jan 13, 1986
Date Analyzed Jan 13, 1986
Conc (Dil Factor) 1 pH 4.15
Percent Moisture (Not Decanted) NA

CAS Number		(ug/l) or ug/Kg (Circle One)
74 87 3	Chloromethane	10U
74 83 9	Bromomethane	1
75 01 4	Vinyl Chloride	1
75 00 3	Chloroethane	1
75 09 2	Methylene Chloride	5U
67 64 1	Acetone	16
75 15 0	Carbon Disulfide	5U
75 35 4	1 1 Dichloroethene	1
75 34 3	1 1 Dichloroethane	1
156 60 5	Trans 1 2 Dichloroethene	1
67 66 3	Chloroform	1
107 06 2	1 2 Dichloroethane	1
78 93 3	2 Butanone	10U
71 55 6	1 1 1 Trichloroethane	5U
56 23 5	Carbon Tetrachloride	1
108 05 4	Vinyl Acetate	10U
75 27 4	Bromodichloromethane	5U

CAS Number		(ug/l) or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	5U
10061 02 6	Trans 1 3 Dichloropropene	1
79 01 6	Trichloroethene	1
124 48 1	Dibromochloromethane	1
79 00 5	1 1 2 Trichloroethane	1
71 43 2	Benzene	1
10061 01 5	cis 1 3 Dichloropropene	1
110 75 8	2 Chloroethylvinylether	10U
75 25 2	Bromoform	5U
591 78 6	4 Methyl 2 Pentanone	10U
108 10 1	2 Hexanone	1
127 18 4	Tetrachloroethene	5U
79 34 5	1 1 2 2 Tetrachloroethane	1
108 88 3	Toluene	1
108 90 7	Chlorobenzene	1
100 41 4	Ethylbenzene	1
100 42 5	Styrene	1
	Total Xylenes	1

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used Add tional flags or footnotes explaining results are encouraged However the def n t on of each flag must be explic t

Value If the esult s a alue greate than or equal to the detection l m t eport the value

U Ind cates compound was analyzed for but not detected Report the m n mum detect on l m t fo the sample w th the U (e g 10U) based on necessary concentrat on d lut on act on (Th s s not necessar ly the nstrument detect on l m t) The footnote should read U Compound was analyzed fo but not detected The number s the m n mum atta nable detect on l m t for the sample

J Ind cates an est mated value Th s flag s used e the when est mat ng a concent at o for tentat ely dent f ed compounds where a 1 1 esponse s ass med or when the mass spectral data nd cated the p esence of a compo nd that meets the dent f cation cr te a but the esult s less than the spec f ed detect on l m t but ab ze o (e g 10J) If l m t of detect on s 10 µg l and a l on of 3 µg l s calc lated epo t as 3J

C Th s flag appl es to pest c de paramete s whe e the ident fcat on has been conf rmed by GC MS S ngle component pesticides ≥10 ng ul n the f nal extract should be conf rmed by GC MS

B Th s flag s used when the analyte s found n the blank as well as a sample It nd cates poss ble probable blank contam nation and warns the data user to take appropr ate act on

Other Othe specif c flags and footnotes may be equ ed to p ope ly def ne the esults If used they must be fully desc bed and such desc ption attached to the data summary eport

Laboratory Name: R F WESTON INC
Case No 5445

Sample Number
F2054

ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration LOW
Date Extracted/Prepared 01/13/86
Date Analyzed 01/17/86
Conc/Dil Factor 1
Percent Moisture (Decanted)

GPC Cleanup ___ Yes _X_ No
Separatory Funnel Extraction _X_ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		UG/L		CAS Number		UG/L	
108 95 2	Phenol	10	U	83-32-9	Acenaphthene	4	5J
111-44-4	bis(2-Chloroethyl)Ether	10	U	51-28-5	2,4-Dinitrophenol	50	U
95 57-8	2-Chlorophenol	10	U	100-02-7	4-Nitrophenol	50	U
541-73-1	1,3-Dichlorobenzene	10	U	132-64-9	Dibenzofuran	3	1J
106-46 7	1,4 Dichlorobenzene	10	U	121-14-2	2,4-Dinitrotoluene	10	U
100-51-6	Benzyl Alcohol	10	U	606-20-2	2,6-Dinitrotoluene	10	U
95 50 1	1,2 Dichlorobenzene	10	U	84 66 2	Diethylphthalate	10	U
95-48-7	2-Methylphenol	10	U	7005-72-3	4-Chlorophenyl-phenylether	10	U
39638 32 9	bis(2-Chloroisopropyl)Ether	10	U	86-73-7	Fluorene	4	0J
106-44-5	4-Methylphenol	10	U	100-10-6	4-Nitroaniline	50	U
621 64-7	N-Nitroso-Di n-Propylamine	10	U	534 52-1	4,6-Dinitro 2-Methylphenol	50	U
67 72-1	Hexachloroethane	10	U	86-30-6	N-Nitrosodiphenylamine (1)	10	U
98-95-3	Nitrobenzene	10	U	101 55 3	4-Bromophenyl-phenylether	10	U
78-59 1	Isophorone	10	U	118-74-1	Hexachlorobenzene	10	U
88-75 5	2-Nitrophenol	10	U	87-86-5	Pentachlorophenol	130	
105-67 9	2,4-Dimethylphenol	10	U	85-01-8	Phenanthrene	19	
65-85-0	Benzoic Acid	50	U	120-12-7	Anthracene	10	U
111-91 1	bis(2-Chloroethoxy)Methane	10	U	84-74-2	Di-n-Butylphthalate	10	U
120-83 2	2,4-Dichlorophenol	10	U	206-44-0	Fluoranthene	27	
120-82-1	1,2,4-Trichlorobenzene	10	U	129-00-0	Pyrene	7	3J
91-20-3	Naphthalene	10	U	85-68-7	Butylbenzylphthalate	10	U
106-47-8	4-Chloroaniline	10	U	91-94-1	3,3'-Dichlorobenzidine	20	U
87 68 3	Hexachlorobutadiene	10	U	56-55-3	Benzo(a)Anthracene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U	117-81-7	bis(2-Ethylhexyl)Phthalate	1	1J
91-57-6	2-Methylnaphthalene	10	U	218 01-9	Chrysene	2	8J
77-47-4	Hexachlorocyclopentadiene	10	U	117-84-0	Di-n-Octyl Phthalate	10	U
88-06 2	2,4,6-Trichlorophenol	10	U	205-99-2	Benzo(b)Fluoranthene	1	2J
95-95-4	2,4,5-Trichlorophenol	50	U	207-08-9	Benzo(k)Fluoranthene	10	U
91-58 7	2-Chloronaphthalene	10	U	50-32-8	Benzo(a)Pyrene	10	U
88 74 4	2-Nitroaniline	50	U	193 39-5	Indeno(1,2,3-cd)Pyrene	10	U
131 11-3	Dimethyl Phthalate	10	U	53-70-3	Dibenz(a,h)Anthracene	10	U
208 96-8	Acenaphthylene	10	U	191-24-2	Benzo(g,h,i)Perylene	10	U
99-09-2	3-Nitroaniline	50	U				

(1) Cannot be separated from diphenylamine

Laboratory Name WESTON

Case No 5445

Sample Number F2554

Organics Analysis Data Sheet
(Page 3)

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Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted Prepared 1-11-86

Date Analyzed 1-30-86

Conc/Dil Factor 5

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☑Yes

CAS Number		ug/L or ug/Kg (Circle One)
319 84 6	Alpha BHC	0.25 U
319 85 7	Beta BHC	0.25 U
319 86 8	Delta BHC	0.25 U
58 89 9	Gamma BHC (Lindane)	0.25 U
76 44 8	Heptachlor	0.25 U
309 00 2	Aldrin	0.25 U
1024 57 3	Heptachlor Epoxide	0.25 U
959 98 8	Endosulfan I	0.25 U
60 57 1	Dieldrin	0.5 U
72 55 9	4 4 DDE	0.5 U
72 20 8	Endrin	0.5 U
33213 65 9	Endosulfan II	0.5 U
72 54 8	4 4 DDD	0.5 U
1031 07 8	Endosulfan Sulfate	0.5 U
50 29 3	4 4 DDT	0.5 U
72 43 5	Methoxychlor	2.5 U
53494 70 5	Endrin Ketone	0.5 U
57 74 9	Chlordane	2.5 U
8001 35 2	Toxaphene	5.0 U
12674 11 2	Aroclor 1016	2.5 U
11104 28 2	Aroclor 1221	2.5 U
11141 16 5	Aroclor 1232	2.5 U
53469 21 9	Aroclor 1242	2.5 U
12672 29 6	Aroclor 1248	2.5 U
11097 69 1	Aroclor 1254	5.0 U
11096 82 5	Aroclor 1260	5.0 U

V_t Volume of extract injected (ul)

V_s Volume of water extracted (ml)

W_s Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s 1000 or W_s _____ V_t 10,000 V_i 32

Laboratory Name WESTON

Case No 5445

Sample Number FZ054

C117B1692
CASE 5445
6801-6781

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Organics Analysis Data Sheet
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Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug kg)
1	—	Tetrachlorophenol	ABN	1202	7J
2	—	"		1212	7J
3	—	Unknown		1323	6J
4	—	"		1361	9J
5	—	"		1455	6J
6	—	"		1463	7J
7	—	"		1484	5J
8	—	Unknown HC		1544	13J
9	—	Anthracene Dione		1595	16J
10	—	Unknown HC		1629	16J
11	—	H Naphtho Pyrandione		1652	7J
12	—	Unknown		1684	6J
13	—	"		1692	7J
14	—	Unknown HC		1711	18J
15	—	Unknown		1746	5J
16	—	Dihydroxy Anthracenedione		1779	5J
17	—	Unknown HC		1789	11J
18	—	Unknown		1818	6J
19	—	Unknown HC		1864	7J
20	—	Ethyl sulfonyl Ethyl Methyl Pyrrolidinedione	—	1936	5J
21					
22		None found	1 OF		
23					
24					
25					
26					
27					
28					
29					
30					

IV. STANDARDS DATA PACKAGE

A. INSTRUMENT DETECTION LIMITS

B. INITIAL CALIBRATION DATA

C. CONTINUING CALIBRATION DATA

D. PESTICIDES

IV STANDARDS DATA PACKAGE

A INSTRUMENT DETECTION LIMITS

Environmental Protection Agency CLP Sample Management Office
P O Box 818 Alexandria Virginia 22313 703/557 2490

Sample Number
Instrument Detection Limit

Organics Analysis Data Sheet
(Page 1)

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Laboratory Name ROY F. WESTON, INC. Case No 5445

Lab Sample ID No _____ QC Report No _____

Sample Matrix _____ Contract No 6801-6781

Data Release Authorized By _____ Date Sample Received _____

Volatile Compounds

Concentration Low Medium (Circle One)

Date Extracted/Prepared _____

Date Analyzed _____

Conc/Dil Factor _____ pH _____

Percent Moisture _____

Percent Moisture (Decanted) _____

CAS Number		ug/l or ug/Kg (Circle One)
74-87 3	Chloromethane	47
74 83 9	Bromomethane	43
75 01-4	Vinyl Chloride	49
75-00 3	Chloroethane	2.6
75-09 2	Methylene Chloride	0 6
67 64 1	Acetone	31
75 15 0	Carbon Disulfide	2.6
75 35 4	1 1 Dichloroethene	0.9
75 34 3	1 1 Dichloroethane	12
156 60 5	Trans 1 2 Dichloroethene	13
67 66 3	Chloroform	1.0
107 06 2	1 2 Dichloroethane	1.1
78 93 3	2 Butanone	1.4
71 55 6	1 1 1 Trichloroethane	1.0
56 23 5	Carbon Tetrachloride	0.6
108 05 4	Vinyl Acetate	3.4
75 27 4	Bromodichloromethane	0 9

CAS Number		ug/l or ug/Kg (Circle One)
79 34 5	1 1 2 2 Tetrachloroethane	14
78 87 5	1 2 Dichloropropane	25
10061 02 6	Trans 1 3 Dichloropropene	12
79 01 6	Trichloroethene	1.5
124 48 1	Dibromochloromethane	13
79 00 5	1 1 2 Trichloroethane	2.2
71 43 2	Benzene	18
10061 01 5	cis 1 3 Dichloropropene	10
110 75 8	2 Chloroethylvinylether	25
75 25 2	Bromoform	10
591 78 6	2 Hexanone	2.9
108 10 1	4 Methyl 2 Pentanone	2.4
127 18 4	Tetrachloroethene	14
108 88 3	Toluene	16
108 90 7	Chlorobenzene	16
100 41 4	Ethylbenzene	1.4
100 42 5	Styrene	12
	Total Xylenes	13

Data Report ng Qualifiers

For reporting results to EPA the following results qualifiers are used Additional flags or footnotes explaining results are encouraged However the definition of each flag must be explicit

Value If the result is a value greater than or equal to the detection l mit report the alue

U Indicates compound was analyzed for but not detected Report the m n mum detection l m t for the sample with the U (e g 10U) based on necessary concentration dilution actions (This s not necessar ly the nstrument detection l m t) The footnote should read U Compound was analyzed for but not detected The number s the m nimum atta nable detection limit for the sample

J Indicates an est mated value Th s flag is used either when est mat ng a concentration for tentatively identified compounds where a 1 1 esponse s assumed or when the mass spectral data ndicates the presence of a compound that meets the identification crter a but the result s less than the specified detection limit but greater than zero (e g 10J)

C This flag applies to pesticide pa ameters where the dent fication has been conf rmed by GC MS S ngle component pesticides ≥10 ng ul n the f nal extract should be conf rmed by GC MS

B Th s flag s used when the analyte is found n the blank as well as a sample It nd cates possible probable blank contam nation and warns the data user to take appropr ate action

Other Other spec f c flags and footnotes may be equ ed to properly def ne the esults If sed they must be fully descr bed and such desc ption attached to the data summary eport

Environmental Protection Agency CLP Sample Management Office
P O Box 818 Alexandria Virginia 22313 703/557 2490

Sample Number
Instrument
Detection Limits

Organics Analysis Data Sheet
(Page 2)

ROY F. WESTON, INC
#6801-6781 871

S O I L

Semivolatile Compounds

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared _____

Date Analyzed _____

GPC/Dil Factor _____

CAS Number (330u unless indicated)		ug/l or ug/Kg (Circle One)
62 75 9	N Nitrosodimethylamine	330u
108 95 2	Phenol	330u
62 53 3	Aniline	330u
111 44 4	bis(2 Chloroethyl)Ether	330u
95 57 8	2 Chlorophenol	330u
541 73 1	1 3 Dichlorobenzene	330u
106 46 7	1 4 Dichlorobenzene	330u
100 51 6	Benzyl Alcohol	330u
95 50 1	1 2 Dichlorobenzene	330u
95 48 7	2 Methylphenol	330u
39638 32 9	bis(2-chloroisopropyl)Ether	330u
106 44 5	4 Methylphenol	330u
621 64 7	N Nitroso Di n Propylamine	330u
67 72 1	Hexachloroethane	330u
98 95 3	Nitrobenzene	330u
78 59 1	Isophorone	330u
88 75 5	2 Nitrophenol	330u
105 67 9	2 4 Dimethylphenol	330u
65 85 0	Benzoic Acid	1600u
111 91 1	bis(2 Chloroethoxy)Methane	330u
120 83 2	2 4-Dichlorophenol	330u
120 82 1	1 2 4-Trichlorobenzene	330u
91 20 3	Naphthalene	330u
106 47 8	4 Chloroaniline	330u
87 68 3	Hexachlorobutadiene	330u
59 50 7	4 Chloro 3 Methylphenol	330u
91 57 6	2 Methylnaphthalene	330u
77 47-4	Hexachlorocyclopentadiene	330u
88 06 2	2 4 6 Trichlorophenol	330u
95 95 4	2 4 5 Trichlorophenol	1600u
91 58 7	2 Chloronaphthalene	330u
88 74-4	2 Nitroaniline	1600u
131 11 3	Dimethyl Phthalate	330u
208 96 8	Acenaphthylene	330u
99 09 2	3 Nitroaniline	1600u

CAS Number		ug/l or ug/Kg (Circle One)
83 32 9	Acenaphthene	330u
51 28 5	2 4 Dinitrophenol	1600u
100-02 7	4 Nitrophenol	1600u
132 64 9	Dibenzofuran	330u
121 14 2	2 4 Dinitrotoluene	330u
606 20 2	2 6 Dinitrotoluene	330u
84 66 2	Diethylphthalate	330u
7005 72 3	4 Chlorophenyl phenylether	330u
86 73 7	Fluorene	330u
100-01 6	4 Nitroaniline	1600u
534 52 1	4 6 Dinitro 2 Methylphenol	1600u
86 30 6	N Nitrosodiphenylamine (1)	330u
101 55 3	4 Bromophenyl phenylether	330u
118 74 1	Hexachlorobenzene	330u
87-86 5	Pentachlorophenol	1600u
85-01 8	Phenanthrene	330u
120 12 7	Anthracene	330u
84 74 2	Di n Butylphthalate	330u
206-44-0	Fluoranthene	330u
92 87 5	Benzidine	1600u
129-00-0	Pyrene	330u
85 68 7	Butylbenzylphthalate	330u
91 94 1	3 3 Dichlorobenzidine	600u
56 55 3	Benzo(a)Anthracene	330u
117 81 7	bis(2 Ethylhexyl)Phthalate	330u
218-01 9	Chrysene	330u
117 84-0	Di n Octyl Phthalate	330u
205 99 2	Benzo(b)Fluoranthene	330u
207-08 9	Benzo(k)Fluoranthene	330u
50 32 8	Benzo(a)Pyrene	330u
193 39 5	Indeno(1 2 3 cd)Pyrene	330u
53 70 3	Dibenz(a h)Anthracene	330u
191 24 2	Benzo(g h i)Perylene	330u

(1)-Cannot be separated from diphenylamine

Environmental Protection Agency CLP Sample Management Office
P O Box 818 Alexandria Virginia 22313 703/557 2490

Sample Number
INSTRUMENT DETECTION LIMIT

ROY F. WESTON, INC
#6801-6781

Organics Analysis Data Sheet
(Page 2)

WATER

Semivolatile Compounds

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared _____

Date Analyzed _____

Conc/Dil Factor _____

CAS Number		ug/l or ug/Kg (Circle One)
62 75 9	N Nitrosodimethylamine	10u
108 95 2	Phenol	10u
62 53 3	Aniline	10u
111-44 4	bis(2 Chloroethyl)Ether	10u
95 57 8	2 Chlorophenol	10u
541 73 1	1 3 Dichlorobenzene	10u
106 46 7	1 4-Dichlorobenzene	10u
100 51 6	Benzyl Alcohol	10u
95 50 1	1 2 Dichlorobenzene	10u
95 48 7	2 Methylphenol	10u
39638 32 9	bis(2-chloroisopropyl)Ether	10u
106 44 5	4 Methylphenol	10u
621 64 7	N Nitroso Di n Propylamine	10u
67 72 1	Hexachloroethane	10u
98 95 3	Nitrobenzene	10u
78 59 1	Isophorone	10u
88 75 5	2 Nitrophenol	10u
105 67 9	2 4 Dimethylphenol	10u
65 85 0	Benzoic Acid	50u
111 91 1	bis(2 Chloroethoxy)Methane	10u
120 83 2	2 4 Dichlorophenol	10u
120 82 1	1 2 4-Trichlorobenzene	10u
91 20 3	Naphthalene	10u
106-47 8	4 Chloroaniline	10u
87 68 3	Hexachlorobutadiene	10u
59 50 7	4 Chloro 3 Methylphenol	10u
91 57 6	2 Methylnaphthalene	10u
77 47 4	Hexachlorocyclopentadiene	10u
88 06 2	2 4 6 Trichlorophenol	10u
95 95 4	2 4 5 Trichlorophenol	50u
91 58 7	2 Chloronaphthalene	10u
88 74-4	2 Nitroaniline	50u
131 11 3	Dimethyl Phthalate	10u
	enaphthylene	10u
	Nitroaniline	50u

CAS Number		ug/l or ug/Kg (Circle One)
83 32 9	Acenaphthene	10u
51 28 5	2 4 Dinitrophenol	50u
100-02 7	4 Nitrophenol	50u
132 64 9	Dibenzofuran	10u
121 14 2	2 4-Dinitrotoluene	10u
606 20 2	2 6 Dinitrotoluene	10u
84 66 2	Diethylphthalate	10u
7005 72 3	4 Chlorophenyl phenylether	10u
86 73 7	Fluorene	10u
100-01 6	4 Nitroaniline	50u
534 52 1	4 6 Dinitro 2 Methylphenol	50u
86 30 6	N Nitrosodiphenylamine (1)	10u
101 55 3	4 Bromophenyl phenylether	10u
118 74-1	Hexachlorobenzene	10u
87-86 5	Pentachlorophenol	50u
85-01 8	Phenanthrene	10u
120 12 7	Anthracene	10u
84 74 2	Di n Butylphthalate	10u
206-44-0	Fluoranthene	10u
92 87 5	Benzidine	50u
129-00-0	Pyrene	10u
85 68 7	Butylbenzylphthalate	10u
91 94 1	3 3 Dichlorobenzidine	20u
56 55 3	Benzo(a)Anthracene	10u
117 81 7	bis(2 Ethylhexyl)Phthalate	10u
218 01 9	Chrysene	10u
117 84-0	Di n Octyl Phthalate	10u
205 99 2	Benzo(b)Fluoranthene	10u
207-08 9	Benzo(k)Fluoranthene	10u
50 32 8	Benzo(a)Pyrene	10u
193 39 5	Indeno(1 2 3 cd)Pyrene	10u
53 70 3	Dibenz(a h)Anthracene	10u
191 24 2	Benzo(g h i)Perylene	10u

(1)-Cannot be separated from diphenylamine

Laboratory Name WESTON

Case No _____

Sample Number instrument detection limit

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration Low (Medium) (Circle One)

Date Extracted Prepared _____

Date Analyzed _____

Conc/Dil Factor _____

Percent Moisture (Decanted) _____

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
108 95 2	Phenol	20,000 u
111 44 4	bis(2 Chloroethyl)Ether	
95 57 8	2 Chlorophenol	
541 73 1	1 3 D chlorobenzene	
106 46 7	1 4 Dichlorobenzene	
100 51 6	Benzyl Alcohol	
95 50 1	1 2 D chlorobenzene	
95 48 7	2 Methylphenol	
39638 32 9	bis 2 chloroisop opyl)Ether	
106 44 5	4 Methylphenc	
621 64 7	N Nitroso Di n Propylamine	
67 72 1	Hexachloroethane	
98 95 3	N t obenzene	
78 59 1	Isophorone	
88 75 5	2 Nitrophenol	
105 67 9	2 4 D methylphenol	
65 85 0	Benzoic Ac d	100,000 u
111 91 1	bis(2 Chloroethoxy)Methane	20,000u
120 83 2	2 4 Dichlorophenol	
120 82 1	1 2 4 Trichlorobenzene	
91 20 3	Naphthalene	
106 47 8	4 Chloroaniline	
87 68 3	Hexachlorobutadiene	
59 50 7	4 Chloro 3 Methylphenol	
91 57 6	2 Methylnaphthalene	
77 47 4	Hexachlorocyclopentadiene	
88 06 2	2 4 6 Trichlorophenol	
95 95 4	2 4 5 Trichlorophenol	100,000u
91 58 7	2 Chloronaphthalene	20,000u
88 74 4	2 Nitroaniline	100,000u
131 11 3	D methyl Phthalate	20,000u
208 96 8	Acenaphthylene	
99 09 2	3 Nitroaniline	100,000u

CAS Number		ug/l or (ug Kg) (Circle One)
83 32 9	Acenaphthene	20,000u
51 28 5	2 4 Dinitrophenol	100,000u
100 02 7	4 Nitrophenol	
132 64 9	Dibenzofuran	20,000u
121 14 2	2 4 Dinitrotoluene	
606 20 2	2 6 Dinitrotoluene	
84 66 2	Diethylphthalate	
7005 72 3	4 Chlorophenyl phenylether	
86 73 7	Fluorene	
100 01 6	4 Nitroaniline	100,000u
534 52 1	4 6 Dinitro 2 Methylphenol	
86 30 6	N Nitrosodiphenylamine (1)	20,000u
101 55 3	4 Bromophenyl phenylether	
118 74 1	Hexachlorobenzene	
87 86 5	Pentachlorophenol	100,000u
85 01 8	Phenanthrene	20,000u
120 12 7	Anthracene	
84 74 2	D n Butylphthalate	
206 44 0	Fluoranthene	
129 00 0	Pyrene	
85 68 7	Butylbenzylphthalate	
91 94 1	3 3 Dichlorobenzidine	40,000u
56 55 3	Benzo(a)Anthracene	20,000u
117 81 7	bis(2 Ethylhexyl)Phthalate	
218 01 9	Chrysene	
117 84 0	D n Octyl Phthalate	
205 99 2	Benzo(b)Fluoranthene	
207 08 9	Benzo(k)Fluoranthene	
50 32 8	Benzo(a)Pyrene	
193 39 5	Indeno(1 2 3 cd)Py ene	
53 70 3	Dibenz(a h)Anthracene	
191 24 2	Benzo(g h i)Perylene	

(1) Cannot be separated from d phenylam ne

Instrument Detection Limits
GC #4 Signal DAC

Environmental Protection Agency CLP Sample Management Office
P O Box 818 Alexandria Virginia 22313 703/557 2490

Sample Number 57.

Organics Analysis Data Sheet
(Page 3)

ROY F. WESTON, INC.
#6801-6781

CASE# _____

Pesticide/PCBs

Concentration Low Medium (Circle One)

Date Extracted/Prepared _____

Date Analyzed _____

Conc/Dil Factor _____

ng.

CAS Number		ug/l or ug/Kg (Circle One)
319 84 6	Alpha BHC	.013
319 85 7	Beta BHC	.013
319 86 8	Delta BHC	.015
58 89 9	Gamma BHC (Lindane)	.017
76 44 8	Heptachlor	.011
309 00 2	Aldrin	.0083
1024 57 3	Heptachlor Epoxide	.011
959 98 8	Endosulfan I	.012
60 57 1	Dieldrin	.013
72 55 9	4 4 DDE	.033
72 20 8	Endrin	.024
33213 65 9	Endosulfan II	.027
72 54 8	4 4 DDD	.024
7421 93-4	Endrin Aldehyde	.023
1031-07 8	Endosulfan Sulfate	.025
50 29 3	4 4 DDT	.022
72-43 5	Methoxychlor	.13
53494 70 5	Endrin Ketone	.024
57 74 9	Chlordane	.31
8001 35 2	Toxaphene	.44
12674 11 2	Aroclor 1016	.33
11104 28 2	Aroclor 1221	.30
11141 16 5	Aroclor 1232	.38
53469 21 9	Aroclor 1242	.31
12672 29 6	Aroclor 1248	.29
11097 69 1	Aroclor 1254	.33
11096 82 5	Aroclor 1260	.29

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s _____ V_t _____ V_i _____

IV STANDARDS DATA PACKAGE (VOA)

B INITIAL CALIBRATION DATA

1 FORM VI

2 RECONSTRUCTED ION CHROMATOGRAMS

3. QUANTITATION REPORTS

C CONTINUING CALIBRATION DATA

1 FORM VII

2. RECONSTRUCTED ION CHROMATOGRAM(s)

3 QUANTITATION REPORT(s)

@ RAILROAD

Sample Number
F2055

Organics Analysis Data Sheet
(Page 1)

15 j

Laboratory Name WESTON
Case No 5445
Lab Sample ID No 8601-464-0110
QC Report No NA
Sample Matrix Water
Contract No 6801-6781
Data Release Authorized By
Date Sample Received Jan 11, 1986

Volatile Compounds

Concentration (Low) Medium (Circle One)
Date Extracted/Prepared (Prepared) Jan 13, 1986
Date Analyzed Jan 13, 1986
Conc/Dil Factor (Dil Factor) 1 pH 6.35
Percent Moisture (Not Decanted) NA

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	10U
74 83 9	Bromomethane	"
75 01 4	Vinyl Chloride	"
75 00 3	Chloroethane	"
75 09 2	Methylene Chloride	5U
67 64 1	Acetone	10U
75 15 0	Carbon Disulfide	5U
75 35 4	1 1 Dichloroethene	"
75 34 3	1 1 Dichloroethane	"
156 60 5	Trans 1 2 Dichloroethene	"
67 66 3	Chloroform	"
107 06 2	1 2 Dichloroethane	"
78 93 3	2 Butanone	10U
71 55 6	1 1 1 Trichloroethane	5U
56 23 5	Carbon Tetrachloride	"
108 05 4	Vinyl Acetate	10U
75 27 4	Bromodichloromethane	5U

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	5U
10061 02 6	Trans 1 3 Dichloropropene	"
79-01 6	Trichloroethene	"
124 48 1	Dibromochloromethane	"
79 00 5	1 1 2 Trichloroethane	"
71 43 2	Benzene	"
10061 01 5	cis 1 3 Dichloropropene	"
110 75 8	2 Chloroethylvinylether	10U
75 25 2	Bromoform	5U
591 78 6	4 Methyl 2 Pentanone	10U
108 10 1	2 Hexanone	"
127 18 4	Tetrachloroethene	5U
79 34 5	1 1 2 2 Tetrachloroethane	"
108 88 3	Toluene	"
108 90 7	Chlorobenzene	"
100 41 4	Ethylbenzene	"
100 42 5	Styrene	"
	Total Xylenes	"

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used Additional flags or footnotes explaining results are encouraged However the definition of each flag must be explicit

Value If the result is a value greater than or equal to the detection limit report the value

U Indicates compound was analyzed for but not detected Report the minimum detection limit for the sample with the U (e g 10U) based on necessary concentration dilution action (This is not necessarily the instrument detection limit) The footnote should read U Compound was analyzed for but not detected The number is the minimum attainable detection limit for the sample

J Indicates an estimated value This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e g 10J) If limit of detection is 10 µg l and a value of 3 µg l is calculated report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC MS Single component pesticides ≥10 ng ul in the final extract should be confirmed by GC MS

B This flag is used when the analyte is found in the blank as well as a sample It indicates possible probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results If used they must be fully described and such description attached to the data summary report

000390

Laboratory Name R F WESTON INC
Case No 5445

Sample Number
F2055

ORGANICS ANALYSIS DATA SHEET

(Page 2)

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SEMIVOLATILE COMPOUNDS

Concentration LOW
Date Extracted/Prepared 01/13/86
Date Analyzed 01/17/86
Conc/Dil Factor 1
Percent Moisture (Decanted)

GPC Cleanup __ Yes _I_ No
Separatory Funnel Extraction _I_ Ye
Continuous Liquid-Liquid Extraction __ Yes

CAS Number		UG/L		CAS Number		UG/L	
108 95 2	Phenol	10	U	83-32-9	Acenaphthene	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U	51-28 5	2,4-Dinitrophenol	50	U
95 57 8	2-Chlorophenol	10	U	100-02-7	4-Nitrophenol	50	U
541-73-1	1,3 Dichlorobenzene	10	U	132-64-9	Dibenzofuran	10	U
106-46 7	1,4-Dichlorobenzene	10	U	121 14-2	2,4 Dinitrotoluene	10	U
100 51 6	Benzyl Alcohol	10	U	606 20-2	2 6-Dinitrotoluene	10	U
95 0 1	1,2-Dichlorobenzene	10	U	84 66-2	Diethylphthalate	10	U
95-48 7	2-Methylphenol	10	U	7005 72-3	4-Chlorophenyl-phenylether	10	U
39638 32 9	bis(2-Chloroisopropyl)Ether	10	U	86 73-7	Fluorene	10	U
106-44 5	4 Methylphenol	10	U	100 10-6	4-Nitroaniline	50	U
621 64-7	N-Nitroso Di-n-Propylamine	10	U	534 52-1	4,6-Dinitro-2-Methylphenol	50	U
67-72 1	Hexachloroethane	10	U	86-30-6	N Nitrosodiphenylamine (1)	10	U
98-95 3	Nitrobenzene	10	U	101-55-3	4-Bromophenyl-phenylether	10	U
78 59 1	Isophorone	10	U	118-74-1	Hexachlorobenzene	10	U
88-75 5	2-Nitrophenol	10	U	87-86-5	Pentachlorophenol	50	U
105-67-9	2,4 Dimethylphenol	10	U	85-01-8	Phenanthrene	10	U
65-85-0	Benzoic Acid	50	U	120-12-7	Anthracene	10	U
111-91 1	bis(2-Chloroethoxy)Methane	10	U	84-74-2	Di-n-Butylphthalate	2	6J
120-83 2	2,4 Dichlorophenol	10	U	206 44-0	Fluoranthene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U	129 00-0	Pyrene	10	U
91-20-3	Naphthalene	10	U	85-68-7	Butylbenzylphthalate	10	U
106-47-8	4-Chloroaniline	10	U	91-94-1	3,3 -Dichlorobenzidine	20	U
87-68 3	Hexachlorobutadiene	10	U	56-55-3	Benzo(a)Anthracene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U	117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
91 57 6	2-Methylnaphthalene	10	U	218 01-9	Chrysene	10	U
77 47 4	Hexachlorocyclopentadiene	10	U	117-84-0	Di-n-Octyl Phthalate	10	U
88-06-2	2,4,6-Trichlorophenol	10	U	205-99-2	Benzo(b)Fluoranthene	10	U
95-95-4	2,4,5-Trichlorophenol	50	U	207-08-9	Benzo(k)Fluoranthene	10	U
91-58 7	2-Chloronaphthalene	10	U	50 32-8	Benzo(a)Pyrene	10	U
88-74 4	2-Nitroaniline	50	U	193 39-5	Indeno(1,2,3-cd)Pyrene	10	U
131 11 3	Dimethyl Phthalate	10	U	53-70-3	Dibenz(a,h)Anthracene	10	U
208 96 8	Acenaphthylene	10	U	191 24-2	Benzo(g,h,i)Perylene	10	U
99-09 2	3-Nitroaniline	50	U				

(1) Cannot be separated from diphenylamine

Laboratory Name WESTON

Case No 5445

Sample Number F2055

Organics Analysis Data Sheet
(Page 3)

15

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted Prepared 1-11-86

Date Analyzed 1-30-86

Conc Dil Factor 1

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☑Yes

CAS Number		ug/l or ug/Kg (Circle One)
319 84 6	Alpha BHC	0.05 U
319 85 7	Beta BHC	0.05 U
319 86 8	Delta BHC	0.05 U
58 89 9	Gamma BHC (Lindane)	0.05 U
76 44 8	Heptachlor	0.05 U
309 00 2	Aldrin	0.05 U
1024 57 3	Heptachlor Epoxide	0.05 U
959 98 8	Endosulfan I	0.05 U
60 57 1	Dieldrin	0.1 U
72 55 9	4 4 DDE	0.1 U
72 20 8	Endrin	0.1 U
33213 65 9	Endosulfan II	0.1 U
72 54 8	4 4 DDD	0.1 U
1031 07 8	Endosulfan Sulfate	0.1 U
50 29 3	4 4 DDT	0.1 U
72 43 5	Methoxychlor	0.5 U
53494 70 5	Endrin Ketone	0.1 U
57 74 9	Chlordane	0.5 U
8001 35 2	Toxaphene	1.0 U
12674 11 2	Aroclor 1016	0.5 U
11104 28 2	Aroclor 1221	0.5 U
11141 16 5	Aroclor 1232	0.5 U
53469 21 9	Aroclor 1242	0.5 U
12672 29 6	Aroclor 1248	0.5 U
11097 69 1	Aroclor 1254	1.0 U
11096 82 5	Aroclor 1260	1.0 U

V_i Volume of extract injected (ul)

V_s Volume of water extracted (ml)

W_s Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s 1000 or W_s _____ V_t 10000 V_i 32

Laboratory Name WESTON

Case No

Sample Number F2055

0117B1696 15

Case 5445

68C1-6781

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug kg)
1	—	Unknown	ABN	1276	4J
2					
3		None found	VOA		
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

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Sample Number
F2055-S

17.

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: WESTON
Case No: 5445
Lab Sample ID No: 8601-454-0130
QC Report No: NA
Sample Matrix: Soil
Contract No: 6801-6781
Data Release Authorized By:
Date Sample Received: Jan 11, 1986

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: Jan 14, 1986
Date Analyzed: Jan 14, 1986
Conc/Dil Factor: 1.17 pH: 5.55
Percent Moisture (Not Decanted): 19.2

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	12 U
74 83 9	Bromomethane	〃
75 01 4	Vinyl Chloride	〃
75 00 3	Chloroethane	〃
75 09 2	Methylene Chloride	20 B
67 64 1	Acetone	5 JB
75 15 0	Carbon Disulfide	6 U
75 35 4	1 1 Dichloroethene	〃
75 34 3	1 1 Dichloroethane	〃
156 60 5	Trans 1 2 Dichloroethene	〃
67 66 3	Chloroform	3 J
107 06 2	1 2 Dichloroethane	6 U
78 93 3	2 Butanone	2 JB
71 55 6	1 1 1 Trichloroethane	6 U
56 23 5	Carbon Tetrachloride	〃
108 05 4	Vinyl Acetate	12 U
75 27 4	Bromodichloromethane	6 U

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	6 U
10061 02 6	Trans 1 3 Dichloropropene	〃
79 01 6	Trichloroethene	〃
124 48 1	Dibromochloromethane	〃
79 00 5	1 1 2 Trichloroethane	〃
71 43 2	Benzene	〃
10061 01 5	cis 1 3 Dichloropropene	〃
110 75 8	2 Chloroethylvinylether	12 U
75 25 2	Bromoform	6 U
591 78 6	4 Methyl 2 Pentanone	12 U
108 10 1	2 Hexanone	〃
127 18 4	Tetrachloroethene	6 U
79 34 5	1 1 2 2 Tetrachloroethane	〃
108 88 3	Toluene	〃
108 90 7	Chlorobenzene	〃
100 41 4	Ethylbenzene	〃
100 42 5	Styrene	〃
	Total Xylenes	〃

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution action. (This is not necessarily the instrument detector limit). The footnote should read U Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10 µg l and a concentration of 3 µg l is calculated report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC MS. Single component pesticides ≥10 ng µl in the final extract should be confirmed by GC MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used they must be fully described and such descriptions should accompany the data summary report.

Laboratory Name R F WESTON INC
Case No 5445

Sample Number F2055S

ORGANICS ANALYSIS DATA SHEET

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17

SEMIVOLATILE COMPOUNDS

Concentration LOW
Date Extracted/Prepared 01/14/86
Date Analyzed 01/29/86
Dil Factor 1 410
Percent Moisture ~~(Decanted)~~ 19 2

GPC Cleanup I Yes __ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

JW 2/7/86

CAS Number		UG/KG		CAS Number		UG/KG	
108 95 2	Phenol	580	U	83-32-9	Acenaphthene	580	U
111-44 4	bis(2-Chloroethyl)Ether	580	U	51 28 5	2,4-Dinitrophenol	2800	U
95-57 8	2-Chlorophenol	580	U	100-02-7	4-Nitrophenol	2800	U
541-73-1	1,3-Dichlorobenzene	580	U	132 64-9	Dibenzofuran	580	U
106-46 7	1,4-Dichlorobenzene	580	U	121 14 2	2,4-Dinitrotoluene	580	U
100 51 6	Ben yl Alcohol	580	U	606-20-2	2,6-Dinitrotoluene	580	U
95 50 1	1,2 Dichlorobenzene	580	U	84 66 2	Diethylphthalate	580	U
95-48 7	2-Methylphenol	580	U	7005-72-3	4-Chlorophenyl-phenylether	580	U
39638-32 9	bis(2-Chloroisopropyl)Ether	580	U	86-73-7	Fluorene	580	U
106-44 5	4 Methylphenol	580	U	100-10-6	4-Nitroaniline	2800	U
621-64-7	N-Nitroso-Di-n-Propylamine	580	U	534-52-1	4,6-Dinitro-2-Methylphenol	2800	U
67 72-1	Hexachloroethane	580	U	86-30-6	N-Nitrosodiphenylamine (1)	580	U
98-95 3	Nitrobenzene	580	U	101-55-3	4-Bromophenyl-phenylether	580	U
78 59-1	Isophorone	580	U	118 74-1	Hexachlorobenzene	580	U
88 75 5	2-Nitrophenol	580	U	87 86-5	Pentachlorophenol	1900	J
105 67 9	2,4-Dimethylphenol	580	U	85-01-8	Phenanthrene	280	BJ
65-85-0	Benzoic Acid	2800	U	120-12 7	Anthracene	110	J
111-91 1	bis(2-Chloroethoxy)Methane	580	U	84-74-2	Di-n-Butylphthalate	580	BU
120 83 2	2,4 Dichlorophenol	580	U	206-44-0	Fluoranthene	800	
120 82 1	1,2,4-Trichlorobenzene	580	U	129-00-0	Pyrene	580	
91-20 3	Naphthalene	580	U	85-68-7	Butylbenzylphthalate	580	U
106-47-8	4-Chloroaniline	580	U	91-94-1	3,3 -Dichlorobenzidine	1200	U
87-68 3	Hexachlorobutadiene	580	U	56-55-3	Benzo(a)Anthracene	220	J
59 50-7	4-Chloro-3-Methylphenol	580	U	117-81-7	bis(2-Ethylhexyl)Phthalate	64	BJ
91 57-6	2-Methylnaphthalene	580	U	218-01-9	Chrysene	530	J
77-47-4	Hexachlorocyclopentadiene	580	U	117 84-0	Di-n-Octyl Phthalate	580	U
88 06-2	2,4,6-Trichlorophenol	580	U	205 99-2	Benzo(b)Fluoranthene	770	
95-95 4	2,4,5-Trichlorophenol	2800	U	207-08-9	Benzo(k)Fluoranthene	580	U
91-58 7	2-Chloronaphthalene	580	U	50-32-8	Benzo(a)Pyrene	180	J
88 74-4	2-Nitroaniline	2800	U	193-39-5	Indeno(1,2,3-cd)Pyrene	350	J
131 11-3	Dimethyl Phthalate	580	U	53-70-3	Dibenz(a,h)Anthracene	88	J
208 96 8	Acenaphthylene	580	U	191-24-2	Benzo(g,h,i)Perylene	280	J
99-09-2	3-Nitroaniline	2800	U				

(1) Cannot be separated from diphenylamine

Form I

total PNA = 6088 ppb ~6 ppm

Laboratory Name WESTON

Case No 5445

Sample Number
F2055 5

Organics Analysis Data Sheet
(Page 3)

17

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted Prepared 1-31-86

Date Analyzed 2-6-86

Cond (Dil) Factor 5

Percent Moisture (decanted) 19

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319 84 6	Alpha BHC	50 u
319 85 7	Beta BHC	50 u
319 86 8	Delta BHC	50 u
58 89 9	Gamma BHC (Lindane)	50 u
76 44 8	Heptachlor	50 u
309 00 2	Aldrin	50 u
1024 57 3	Heptachlor Epoxide	50 u
959 98 8	Endosulfan I	50 u
60 57 1	Dieldrin	100 u
72 55 9	4 4 DDE	100 u
72 20 8	Endrin	100 u
33213 65 9	Endosulfan II	100 u
72 54 8	4 4 DDD	100 u
1031 07 8	Endosulfan Sulfate	100 u
50 29 3	4 4 DDT	100 u
72 43 5	Methoxychlor	500 u
53494 70 5	Endrin Ketone	100 u
57 74 9	Chlordane	500 u
8001 35 2	Toxaphene	1000 u
12674 11 2	Aroclor 1016	500 u
11104 28 2	Aroclor 1221	500 u
11141 16 5	Aroclor 1232	500 u
53469 21 9	Aroclor 1242	500 u
12672 29 6	Aroclor 1248	500 u
11097 69 1	Aroclor 1254	1000 u
11096 82 5	Aroclor 1260	1000 u

CALCULATED ON A DRY WEIGHT BASIS

V_t - Volume of extract injected (ul)

V_s - Volume of water extracted (ml)

W_s Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s _____ or W_s 31.4 V_t 10,000 V_t ~~4.0~~ 3 L SLH 2-6-86

Environmental Protection Agency CLP Sample Management Office
P O Box 818 Alexandria Virginia 22313 703 557 2490

Sample Number
F20555

Organics Analysis Data Sheet
(Page 4)

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Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1	—	Ca- HC	BNA	347	4,800JB
2	—	HC		359	4,700JB
3	—	Unknown		537	3,300J
4	—	"		565	2,700J
5	—	HC		1306	1,100J
6	—	HC		1354	1,000J
7	—	HC		1405	2,800J
8	—	HC		1410	1,400J
9	—	HC		1499	4,500J
10	—	HC		1508	1,900J
11	—	HC		1537	820J
12	—	HC		1556	840J
13	—	HC		1590	6,300J
14	—	HC		1625	710J
15	—	Phthalate		1643	1,400J
16	—	HC		1675	5,200J
17	10544-50-0	Sulfur		1689	1,400J
18	—	HC		1835	2,100J
19	—	HC		1910	790J
20	—	PNA, mw 252	↓	2268	990J
21					
22		None found	VOA		
23					
24					
25					
26					
27					
28					
29					
30					

000397

Sample Number
F2056

Organics Analysis Data Sheet
(Page 1)

Laboratory Name WESTON
Case No 5445
Lab Sample ID No 8601-464-0060
QC Report No NA
Sample Matrix Water
Contract No 6801-6781
Data Release Authorized By
Date Sample Received Jan 11, 1986

Volatile Compounds

Concentration (Low) Medium (Circle One)
Date Extracted/Prepared (Prepared) Jan 13, 1986
Date Analyzed Jan 13, 1986
Conc/Dil Factor (Dil Factor) 1 pH 4.25
Percent Moisture (Not Decanted) NA

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	10U
74 83 9	Bromomethane	"
75 01 4	Vinyl Chloride	"
75 00 3	Chloroethane	"
75-09 2	Methylene Chloride	1JB
67 64 1	Acetone	98
75 15 0	Carbon Disulfide	5U
75 35 4	1 1 Dichloroethene	"
75 34 3	1 1 Dichloroethane	"
156 60 5	Trans 1 2 Dichloroethene	"
67 66 3	Chloroform	"
107 06 2	1 2 Dichloroethane	"
78 93 3	2 Butanone	4J
71 55 6	1 1 1 Trichloroethane	5U
56 23 5	Carbon Tetrachloride	"
108 05 4	Vinyl Acetate	10U
75 27 4	Bromodichloromethane	5U

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	5U
10061-02 6	Trans 1 3 Dichloropropene	"
79-01 6	Trichloroethene	"
124 48 1	Dibromochloromethane	"
79 00 5	1 1 2 Trichloroethane	"
71 43 2	Benzene	"
10061 01 5	cis 1 3 Dichloropropene	"
110 75 8	2 Chloroethylvinylether	10U
75 25 2	Bromoform	5U
591 78 6	4 Methyl 2 Pentanone	10U
108 10 1	2 Hexanone	"
127 18 4	Tetrachloroethene	5U
79 34 5	1 1 2 2 Tetrachloroethane	"
108 88 3	Toluene	1J
108 90 7	Chlorobenzene	5U
100 41 4	Ethylbenzene	3J
100 42 5	Styrene	5U
	Total Xylenes	2J

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used Additional flags or footnotes explaining results are encouraged However the definition of each flag must be explicit

Value If the result is a value greater than or equal to the detection limit report the value

U Indicates compound was analyzed for but not detected Report the minimum detection limit for the sample with the U (e g 10U) based on necessary concentration dilution factor (This is not necessarily the instrument detection limit) The footnote should read U Compound was analyzed for but not detected The number is the minimum attainable detection limit for the sample

J Indicates an estimated value This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e g 10J) If limit of detection is 10 µg l and a peak of 3 µg l is calculated report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC MS Single component pesticides ≥10 ng ul in the final extract should be confirmed by GC MS

B This flag is used when the analyte is found in the blank as well as a sample It indicates possible probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results If used they must be fully described and such description attached to the data summary report

Laboratory Name R F WESTON INC
Case No 5445

Sample Number
F2056

ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration LOW
Date Extracted/Prepared 01/13/86
Date Analyzed 01/17/86
Conc/Dil Factor 1
Percent Moisture (Decanted) _____

GPC Cleanup __ Yes _X_ No
Separatory Funnel Extraction _X_ Yes
Continuous Liquid-Liquid Extraction __ Yes

CAS Number		UG/L		CAS Number		UG/L	
108 95-2	Phenol	10	U	83-32-9	Acenaphthene	29	
111-44 4	bis(2-Chloroethyl)Ether	10	U	51-28 5	2,4-Dinitrophenol	50	U
95 57-8	2-Chlorophenol	10	U	100-02-7	4-Nitrophenol	50	U
541 73 1	1,3 Dichlorobenzene	10	U	132 64 9	Dibenzofuran	30	
106-46 7	1,4-Dichlorobenzene	10	U	121-14 2	2,4-Dinitrotoluene	10	U
100 51-6	Benzyl Alcohol	10	U	606 20-2	2,6-Dinitrotoluene	10	U
95 50 1	1 ? Dichlorobenzene	10	U	84 66-2	Diethylphthalate	10	U
95-48-7	2-Methylphenol	7	2J	7005 72-3	4 Chlorophenyl-phenylether	10	U
39638 32-9	bis(2 Chloroisopropyl)Ether	10	U	86 73 7	Fluorene	23	
106-44 5	4-Methylphenol	10	U	100-10-6	4-Nitroaniline	50	U
621-64-7	N-Nitroso-Di n-Propylamine	10	U	534-52 1	4,6-Dinitro 2-Methylphenol	50	U
67 72 1	Hexachloroethane	10	U	86-30-6	N-Nitrosodiphenylamine (1)	10	U
98 95-3	Nitrobenzene	10	U	101-55-3	4-Bromophenyl-phenylether	10	U
78-59-1	Isophorone	10	U	118 74 1	Hexachlorobenzene	10	U
88 75-5	2-Nitrophenol	10	U	87 86 5	Pentachlorophenol	150	
105-67 9	2,4-Dimethylphenol	13		85-01-8	Phenanthrene	42	
65 85-0	Benzoic Acid	50	U	120-12-7	Anthracene	10	U
111 91-1	bis(2-Chloroethoxy)Methane	10	U	84-74-2	Di-n-Butylphthalate	10	U
120 83 2	2,4-Dichlorophenol	10	U	206 44-0	Fluoranthene	17	
120-82 1	1,2,4 Trichlorobenzene	10	U	129 00-0	Pyrene	3	9J
91-20-3	Naphthalene	45		85-68-7	Butylbenzylphthalate	10	U
106-47 8	4-Chloroaniline	10	U	91-94-1	3,3 Dichlorobenzidine	20	U
87-68 3	Hexachlorobutadiene	10	U	56-55-3	Benzo(a)Anthracene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U	117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
91-57-6	2-Methylnaphthalene	47		218-01-9	Chrysene	2	6J
77-47-4	Hexachlorocyclopentadiene	10	U	117-84-0	Di-n-Octyl Phthalate	10	U
88-06-2	2,4,6-Trichlorophenol	10	U	205-99-2	Benzo(b)Fluoranthene	10	U
95-95-4	2,4,5 Trichlorophenol	50	U	207-08-9	Benzo(k)Fluoranthene	10	U
91 58 7	2-Chloronaphthalene	10	U	50-32-8	Benzo(a)Pyrene	10	U
88 74-4	2-Nitroaniline	50	U	193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
131-11-3	Dimethyl Phthalate	10	U	53-70-3	Dibenz(a,h)Anthracene	10	U
208 96-8	Acenaphthylene	2	5J	191-24-2	Benzo(g,h,i)Perylene	10	U
99-09-2	3-Nitroaniline	50	U				

(1) - Cannot be separated from diphenylamine

100'S of Hwy 10

Sample Number
F2084-S

Organics Analysis Data Sheet
(Page 1)

67b

Laboratory Name WESTON
Case No 5445
Lab Sample ID No 8601-454-0140
QC Report No NA
Sample Matrix Soil
Contract No 6801-6781
Data Release Authorized By
Date Sample Received Jan 11, 1986

Volatile Compounds

Concentration (Low) Medium (Circle One)
Date Extracted/Prepared Jan 14, 1986
Date Analyzed Jan 14, 1986
Conc/Dil Factor 1.39 pH 4.75
Percent Moisture (Not Decanted) 32.4

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	14 U
74 83 9	Bromomethane	"
75 01 4	Vinyl Chloride	"
75 00 3	Chloroethane	"
75 09 2	Methylene Chloride	11 B
67 64 1	Acetone	24 B
75 15 0	Carbon Disulfide	7 U
75 35 4	1 1 Dichloroethene	"
75 34 3	1 1 Dichloroethane	"
156 60 5	Trans 1 2 Dichloroethene	"
67 66 3	Chloroform	"
107 06 2	1 2 Dichloroethane	"
78 93 3	2 Butanone	3 JB
71 55 6	1 1 1 Trichloroethane	7 U
56 23 5	Carbon Tetrachloride	"
108 05 4	Vinyl Acetate	14 U
75 27 4	Bromodichloromethane	7 U

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	7 U
10061 02 6	Trans 1 3 Dichloropropene	"
79 01 6	Trichloroethene	"
124 48 1	Dibromochloromethane	"
79 00 5	1 1 2 Trichloroethane	"
71 43 2	Benzene	"
10061 01 5	cis 1 3 Dichloropropene	"
110 75 8	2 Chloroethylvinylether	14 U
75 25 2	Bromoform	7 U
591 78 6	4 Methyl 2 Pentanone	14 U
108 10 1	2 Hexanone	"
127 18 4	Tetrachloroethene	7 U
79 34 5	1 1 2 2 Tetrachloroethane	"
108 88 3	Toluene	"
108 90 7	Chlorobenzene	"
100 41 4	Ethylbenzene	"
100 42 5	Styrene	"
	Total Xylenes	"

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used
Additional flags or footnotes explaining results are encouraged However the definition of each flag must be explicit

Value If the result is a value greater than or equal to the detection limit report the value

U Indicates compound was analyzed for but not detected Report the minimum detection limit for the sample with the U (e g 10U) based on necessary concentration dilution action (This is not necessarily the instrument detection limit) The footnote should read U Compound was analyzed for but not detected The number is the minimum attainable detection limit for the sample

J Indicates an estimated value This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e g 10J) If limit of detection is 10 µg l and a found of 3 µg l is calculated report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC MS Single component pesticides ≥10 ng ul in the final extract should be confirmed by GC MS

B This flag is used when the analyte is found in the blank as well as a sample It indicates possible probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be equired to properly define the results If used they must be fully described and such description attached to the data summary report

000400

10-85

Laboratory Name WESTON

Case No

Sample Number F2084

C1173/1687 661

CASE 5445

6501-6791

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1		NONE FOUND	HBN		
2		None found			
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Laboratory Name WESTON

Case No 5445

Sample Number F2084

Organics Analysis Data Sheet
(Page 3)

6 of 1

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted Prepared 1/7/86

Date Analyzed 1-29-86

Conc Dil Factor 1

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☐Yes

CAS Number		(ug/l or ug/Kg) (Circle One)
319 84 6	Alpha BHC	0.05 U
319 85 7	Beta BHC	0.05 U
319 86 8	Delta BHC	0.05 U
58 89 9	Gamma BHC (Lindane)	0.05 U
76 44 8	Heptachlor	0.05 U
309 00 2	Aldrin	0.05 U
1024 57 3	Heptachlor Epoxide	0.05 U
959 98 8	Endosulfan I	0.05 U
60 57 1	Dieldrin	0.10 U
72 55 9	4 4 DDE	0.10 U
72 20 8	Endrin	0.1 U
33213 65 9	Endosulfan II	0.1 U
72 54 8	4 4 DDD	0.1 U
1031 07 8	Endosulfan Sulfate	0.1 U
50 29 3	4 4 DDT	0.1 U
72 43 5	Methoxychlor	0.5 U
53494 70 5	Endrin Ketone	0.1 U
57 74 9	Chlordane	0.5 U
8001 35 2	Toxaphene	1.0 U
12674 11 2	Aroclor 1016	0.5 U
11104 28 2	Aroclor 1221	0.5 U
11141 16 5	Aroclor 1232	0.5 U
53469 21 9	Aroclor 1242	0.5 U
12672 29 6	Aroclor 1248	0.5 U
11097 69 1	Aroclor 1254	1.0 U
11096 82 5	Aroclor 1260	1.0 U

V_i - Volume of extract injected (ul)

V_s - Volume of water extracted (ml)

W_s - Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s 1000 or W_s _____ V_t 10 000 V_i 3.2

Laboratory Name R F WESTON INC
Case No 5445

Sample Number
F208A

ORGANICS ANALYSIS DATA SHEET

(Page 2)

65J

SEMIVOLATILE COMPOUNDS

Concentration LOW
Date Extracted/Prepared 01/13/86
Date Analyzed 01/17/86
Dil Factor 1 250
Percent Moisture (Decanted)

GPC Cleanup ___ Yes _I_ No
Separatory Funnel Extraction _I_ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		UG/L		CAS Number		UG/L	
108 95-2	Phenol	13	U	83-32-9	Acenaphthene	13	U
111-44-4	bis(2-Chloroethyl)Ether	13	U	51-28-5	2,4-Dinitrophenol	63	U
95-57 8	2-Chlorophenol	13	U	100-02-7	4-Nitrophenol	63	U
541-73-1	1,3-Dichlorobenzene	13	U	132-64-9	Dibenzofuran	13	U
106-46-7	1,4-Dichlorobenzene	13	U	121 14-2	2,4-Dinitrotoluene	13	U
100 51-6	Benzyl Alcohol	13	U	606-20-2	2,6-Dinitrotoluene	13	U
95 50 1	1 2-Dichlorobenzene	13	U	84 66-2	Diethylphthalate	13	U
95-48 7	2 Methylphenol	13	U	7005-72-3	4-Chlorophenyl phenylether	13	U
39638 32-9	bis(2-Chloroisopropyl)Ether	13	U	86-73-7	Fluorene	13	U
106-44-5	4-Methylphenol	13	U	100-10-6	4-Nitroaniline	63	U
621-64-7	N-Nitroso Di n-Propylamine	13	U	534-52-1	4,6-Dinitro-2 Methylphenol	63	U
67 72 1	Hexachloroethane	13	U	86-30-6	N-Nitrosodiphenylamine (1)	13	U
98-95-3	Nitrobenzene	13	U	101-55-3	4-Bromophenyl-phenylether	13	U
78-59-1	Isophorone	13	U	118-74-1	Hexachlorobenzene	13	U
88-75 5	2-Nitrophenol	13	U	87-86-5	Pentachlorophenol	63	U
105-67-9	2,4-Dimethylphenol	13	U	85-01-8	Phenanthrene	13	U
65-85-0	Benzoic Acid	63	U	120-12-7	Anthracene	13	U
111-91-1	bis(2-Chloroethoxy)Methane	13	U	84-74-2	Di-n-Butylphthalate	13	U
120-83 2	2,4-Dichlorophenol	13	U	206-44-0	Fluoranthene	13	U
120-82-1	1,2,4-Trichlorobenzene	13	U	129-00-0	Pyrene	13	U
91-20 3	Naphthalene	13	U	85-68-7	Butylbenzylphthalate	13	U
106-47-8	4-Chloroaniline	13	U	91-94-1	3,3 -Dichlorobenzidine	25	U
87-68-3	Hexachlorobutadiene	13	U	56-55-3	Benzo(a)Anthracene	13	U
59-50-7	4-Chloro-3-Methylphenol	13	U	117-81 7	bis(2-Ethylhexyl)Phthalate	13	U
91-57-6	2-Methylnaphthalene	13	U	218-01-9	Chrysene	13	U
77-47-4	Hexachlorocyclopentadiene	13	U	117-84-0	Di-n-Octyl Phthalate	13	U
88-06 2	2,4,6-Trichlorophenol	13	U	205-99-2	Benzo(b)Fluoranthene	13	U
95-95-4	2,4,5 Trichlorophenol	63	U	207-08-9	Benzo(k)Fluoranthene	13	U
91-58-7	2-Chloronaphthalene	13	U	50-32-8	Benzo(a)Pyrene	13	U
88 74-4	2-Nitroaniline	63	U	193-39-5	Indeno(1,2,3-cd)Pyrene	13	U
131 11-3	Dimethyl Phthalate	13	U	53-70-3	Dibenz(a,h)Anthracene	13	U
208 96-8	Acenaphthylene	13	U	191-24-2	Benzo(g,h,i)Perylene	13	U
99-09-2	3-Nitroaniline	63	U				

(1) - Cannot be separated from diphenylamine

160' S of Hwy 10

Sample Number
F2084

Organics Analysis Data Sheet
(Page 1)

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Laboratory Name WESTON
Case No 5445
Lab Sample ID No 8601-464-0010
QC Report No NA
Sample Matrix Water
Contract No 6801-6781
Data Release Authorized By
Date Sample Received Jan 11, 1986

Volatile Compounds

Concentration (Low) Medium (Circle One)
Date Extracted/Prepared Jan 13, 1986
Date Analyzed Jan 13, 1986
Conc/(Dil Factor) 1 pH 6.25
Percent Moisture (Not Decanted) NA

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	10U
74 83 9	Bromomethane	"
75 01 4	Vinyl Chloride	"
75 00 3	Chloroethane	"
75 09 2	Methylene Chloride	1JB
67 64 1	Acetone	10U
75 15 0	Carbon Disulfide	5U
75 35 4	1 1 Dichloroethene	"
75 34 3	1 1 Dichloroethane	"
156 60 5	Trans 1 2 Dichloroethene	"
67 66 3	Chloroform	"
107 06 2	1 2 Dichloroethane	"
78 93 3	2 Butanone	10U
71 55 6	1 1 1 Trichloroethane	5U
56 23 5	Carbon Tetrachloride	"
108 05 4	Vinyl Acetate	10U
75 27 4	Bromodichloromethane	5U

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	5U
10061 02 6	Trans 1 3 Dichloropropene	"
79 01 6	Trichloroethene	"
124 48 1	Dibromochloromethane	"
79 00 5	1 1 2 Trichloroethane	"
71 43 2	Benzene	"
10061 01 5	cis 1 3 Dichloropropene	"
110 75 8	2 Chloroethylvinylether	10U
75 25 2	Bromoform	5U
591 78 6	4 Methyl 2 Pentanone	10U
108 10 1	2 Hexanone	"
127 18 4	Tetrachloroethene	5U
79 34 5	1 1 2 2 Tetrachloroethane	"
108 88 3	Toluene	"
108 90 7	Chlorobenzene	"
100 41 4	Ethylbenzene	"
100 42 5	Styrene	"
	Total Xylenes	"

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used Additional flags or footnotes explaining results are encouraged However the definition of each flag must be explicit

Value — If the result is a value greater than or equal to the detection limit report the value

U — Indicates compound was analyzed for but not detected Report the minimum detection limit for the sample with the U (e g 10U) based on necessary concentration/dilution action (This is not necessarily the instrument detection limit) The footnote should read U Compound was analyzed for but not detected The number is the minimum attainable detection limit for the sample

J — Indicates an estimated value This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e g 10J) If limit of detection is 10 µg l and a concentration of 3 µg l is calculated report as 3J

C — This flag applies to pesticide parameters where the identification has been confirmed by GC MS Single component pesticides ≥10 ng µl in the final extract should be confirmed by GC MS

B — This flag is used when the analyte is found in the blank as well as a sample It indicates possible probable blank contamination and warns the data user to take appropriate action

Other — Other specific flags and footnotes may be required to properly define the results If used they must be fully described and such description attached to the data summary report

000405

Laboratory Name WESTON

Case No 5447

Sample Number F2083(110)

C118B1699

CASE 5445

6801-6781

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug kg)
1	—	Dimethyl Naphthalene	ABN	1060	420 J
2	—	Unknown HC		1159	1200 J
3	—	Trimethyl Naphthalene		1201	260 J
4	—	" "		1215	320 J
5	—	Unknown PAH		1252	350 J
6	—	Unknown HC		1262	1400 J
7	—	Unknown		1270	300 J
8	—	"		1286	110 J
9	—	Unknown HC		1310	250 J
10	—	"		1362	1000 J
11	—	"		1455	870 J
12	—			1463	280 J
13	—	Unknown		1509	150 J
14	—	Unknown Methylated PAH		1528	170 J
15	—	Unknown PAH		1532	120 J
16	—	Unknown HC		1545	980 J
17	—	Unknown PAH		1596	216 J
18	—	Unknown HC		1629	720 J
19	—	" "		1710	1200 J
20	—	" "		1788	390 J
21					
22		None Found	VOA		
23					
24					
25					
26					
27					
28					
29					
30					

Laboratory Name WESTON

Case No 5445

Sample Number F 2083

Organics Analysis Data Sheet (Page 3)

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Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted Prepared 1-11 XC

Date Analyzed 1 3C - XC

Conc/Dil Factor 10 C

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☑Yes

CAS Number		ug/l or ug/Kg (Circle One)
319 84 6	Alpha BHC	5.0 U
319 85 7	Beta BHC	5 U
319 86 8	Delta BHC	5 U
58 89 9	Gamma BHC (Lindane)	5 U
76 44 8	Heptachlor	5.0 U
309 00 2	Aldrin	5.0 U
1024 57 3	Heptachlor Epoxide	5.0 U
959 98 8	Endosulfan I	5.0 U
60 57 1	Dieldrin	10 U
72 55 9	4 4 DDE	10 U
72 20 8	Endrin	10 U
33213 65 9	Endosulfan II	10 U
72 54 8	4 4 DDD	10 U
1031 07 8	Endosulfan Sulfate	10 U
50 29 3	4 4 DDT	10 U
72 43 5	Methoxychlor	50 U
53494 70 5	Endrin Ketone	10 U
57 74 9	Chlordane	50 U
8001 35 2	Toxaphene	100 U
12674 11 2	Aroclor 1016	50 U
11104 28 2	Aroclor 1221	50 U
11141 16 5	Aroclor 1232	50 U
53469 21 9	Aroclor 1242	50 U
12672 29 6	Aroclor 1248	50 U
11097 69 1	Aroclor 1254	100 U
11096 82 5	Aroclor 1260	100 U

V_i - Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s - Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s 1000 or W_s _____ V_t 10,000 V_i 32

Laboratory Name R F WESTON INC
Case No 5445

Sample Number
F2083

ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration LOW
Date Extracted/Prepared 01/13/86
Date Analyzed 01/18/86
Dil Factor 10.000
Percent Moisture (Decanted) _____

GPC Cleanup __ Ye _X_ No
Separatory Funnel Extraction _X_ Ye
Continuous Liquid Liquid Extraction __ Yes

CAS Number		UG/L		CAS Number		UG/L	
108 95 2	Phenol	100	U	83-32-9	Acenaphthene	96	J
111-44 4	bis(2 Chloroethyl)Ether	100	U	51-28-5	2,4 Dinitrophenol	500	U
95-57 8	2 Chlorophenol	100	U	100-02 7	4-Nitrophenol	500	U
541 73 1	1,3 Dichlorobenzene	100	U	132-64 9	Dibenzofuran	160	
106 46 7	1,4 Dichlorobenzene	100	U	121 14 2	2,4-Dinitrotoluene	100	U
100 51 6	Benzyl Alcohol	100	U	606-20-2	2,6 Dinitrotoluene	100	U
95 50 1	1,2 Dichlorobenzene	100	U	84 66-2	Diethylphthalate	100	U
95 48 7	2 Methylphenol	100	U	7005 72 3	4-Chlorophenyl phenylether	100	U
39638 32 9	bis(2-Chloroisopropyl)Ether	100	U	86 73 7	Fluorene	220	
106-44 5	4-Methylphenol	100	U	100-10-6	4-Nitroaniline	500	U
621-64 7	N Nitroso Di n-Propylamine	100	U	534 52-1	4 6 Dinitro 2-Methylphenol	500	U
67 72 1	Hexachloroethane	100	U	86-30-6	N Nitrosodiphenylamine (1)	100	U
98 95 3	Nitrobenzene	100	U	101 55 3	4 Bromophenyl-phenylether	100	U
78 59 1	Isophorone	100	U	118 74-1	Hexachlorobenzene	100	U
88 75 5	2-Nitrophenol	100	U	87 86-5	Pentachlorophenol	940	
105 67 9	2,4 Dimethylphenol	100	U	85-01 8	Phenanthrene	1300	
65 85 0	Benzoic Acid	500	U	120 12 7	Anthracene	20	J
111 91 1	bis(2-Chloroethoxy)Methane	100	U	84-74-2	Di-n Butylphthalate	100	U
120 83 2	2,4 Dichlorophenol	100	U	206 44 0	Fluoranthene	740	
120 82-1	1 2,4 Trichlorobenzene	100	U	129-00-0	Pyrene	400	
91 20-3	Naphthalene	100	U	85 68-7	Butylbenzylphthalate	100	U
106 47 8	4 Chloroaniline	100	U	91-94-1	3,3 Dichlorobenzidine	200	U
87-68 3	Hexachlorobutadiene	100	U	56-55-3	Benzo(a)Anthracene	40	J
59 50-7	4-Chloro 3 Methylphenol	100	U	117-81-7	bis(2 Ethylhexyl)Phthalate	100	U
91 57 6	2-Methylnaphthalene	70	J	218-01-9	Chrysene	110	
77-47-4	Hexachlorocyclopentadiene	100	U	117-84-0	Di-n-Octyl Phthalate	100	U
88 06 2	2,4,6 Trichlorophenol	100	U	205 99 2	Benzo(b)Fluoranthene	49	J
95-95 4	2,4,5-Trichlorophenol	500	U	207-08-9	Benzo(k)Fluoranthene	100	U
91 58 7	2 Chloronaphthalene	100	U	50-32-8	Benzo(a)Pyrene	100	U
88 74 4	2-Nitroaniline	500	U	193-39-5	Indeno(1 2,3-cd)Pyrene	100	U
131 11-3	Dimethyl Phthalate	100	U	53-70-3	Dibenz a h)Anthracene	100	U
208 96 8	Acenaphthylene	100	U	191 24-2	Benzo(g h i)Perylene	100	U
99 09 2	3 Nitroaniline	500	U				

(1) Cannot be separated from diphenylamine

100'S of Hwy 10

Sample Number
F2083

55

Organics Analysis Data Sheet
(Page 1)

Laboratory Name WESTON
Lab Sample ID No 8601-464-0070
Sample Matrix Water
Data Release Authorized By

Case No 5445
QC Report No NA
Contract No 6801-6781
Date Sample Received Jan 11, 1986

Volatile Compounds

Concentration (Low) Medium (Circle One)
Date Extracted/Prepared Jan 13, 1986
Date Analyzed Jan 13, 1986
Conc/(Dil Factor) 1 pH 3.30
Percent Moisture (Not Decanted) NA

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	10U
74 83 9	Bromomethane	"
75 01 4	Vinyl Chloride	"
75 00 3	Chloroethane	"
75 09 2	Methylene Chloride	1JB
67 64 1	Acetone	120.
75 15-0	Carbon Disulfide	5U
75 35 4	1 1 Dichloroethene	"
75 34 3	1 1 Dichloroethane	"
156 60 5	Trans 1 2 Dichloroethene	"
67 66 3	Chloroform	"
107 06 2	1 2 Dichloroethane	"
78 93 3	2 Butanone	11
71 55 6	1 1 1 Trichloroethane	5U
56 23 5	Carbon Tetrachloride	"
108 05 4	Vinyl Acetate	10U
75 27 4	Bromodichloromethane	5U

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	5U
10061 02 6	Trans 1 3 Dichloropropene	"
79 01 6	Trichloroethene	"
124 48 1	Dibromochloromethane	"
79 00 5	1 1 2 Trichloroethane	"
71 43 2	Benzene	"
10061 01 5	cis 1 3 Dichloropropene	"
110 75 8	2 Chloroethylvinylether	10U
75 25 2	Bromoform	5U
591 78 6	4 Methyl 2 Pentanone	10U
108 10 1	2 Hexanone	"
127 18 4	Tetrachloroethene	5U
79 34 5	1 1 2 2 Tetrachloroethane	"
108 88 3	Toluene	"
108 90 7	Chlorobenzene	"
100 41 4	Ethylbenzene	"
100 42 5	Styrene	"
	Total Xylenes	"

Data Reporting Qualifiers

For report ng results to EPA the following results qualifiers are used Add tional flags or footnotes expla ning results are encouraged However the def n t on of each flag must be explicit

Value — If the esult s a alue greater than or equal to the detection l mit eport the alue

U — Ind cates compound was analyzed for but not detected Report the m n mum detect on l m t fo the sample w th the U (e g 10U) based on necessa y concentrat on d lut on act on (Th s s not necessar ly the nstrument detect on l m t) The footnote should read U Compou d was analyzed for but not detected The number s the m n mum atta nable detect on l mit for the sample

J — Ind cates an est mated alue Th s flag s used eithe when est mat ng a concentrat on fo tentat vely dent f ed compounds whe e a 1 1 response s assumed or when the mass spectral data nd cated the presence of a compound that meets the ident ficat on c ter a b t the esult s less than the specif ed detect on l m t but sn ze o (e g 10J) If l m t of detect on s 10 µg l and a on of 3 µg l s calculated eport as 3J

C — Th s flag appl es to pestic de pa ameters where the ident fication has been conf rmed by GC MS S ngle component pesticides ≥10 ng ul n the f nal extract should be conf rmed by GC MS

B — Th s flag s used when the analyte s found n the blank as well as a sample It nd cates poss ble probable blank contam nation and warns the data user to take appropr ate act on

Other — Other spec f c flags and footnotes may be equ ed to prope ly def ne the esults If used they must be fully desc bed and s ch desc pt on attached to the data summary eport

000409

Laboratory Name WESTON

Case No 5445

Sample Number F20625

1,500 Dilution

TIC

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1	-	Methyl 1,1 Biphenyl, INS	BNA	1300	2,500,000 J
2	-	HC		1326	3,000,000 J
3		Methylcitenzofuran, INS		1334	2,500,000 J
4	-	Methyl 9H fluorene, INS		1377	2,500,000 J
5	-	HC		1406	4,200,000 J
6	-	HC		1411	2,300,000 J
7	-	HC		1499	4,500,000 J
8	-	Jw 10/86 Unknown mw 216?		1528	2,600,000 J
9	-	Methyl Substit. PNA		1578	4,700,000 J
10	-	Methyl Substit. PNA		1583	3,800,000 J
11	-	HC		1589	6,700,000 J
12	-	Substit. PNA		1597	10,000,000 J
13	-	PNA		1645	4,400,000 J
14	-	HC		1676	4,500,000 J
15	-	PNA		1763	20,000,000 J
16	-	Unknown		1768	4,000,000 J
17	-	Unknown		1797	2,000,000 J
18	-	Jw 4/1/86 ~~HC PAA HC~~		1835	4,700,000 J
19	-	PNA		1852	3,100,000 J
20	-	PNA	✓	2222	3,100,000 J
21					
22		Cyclohydrocarbon	VOA	773	2,800 J
23					
24					
25					
26					
27					
28					
29					
30					

INS- Isomer not Specified

Laboratory Name WESTON

Case No 5445

Sample Number
F2052-S

Organics Analysis Data Sheet
(Page 3)

1C

Pesticide / PCBs

Concentration Low Medium (Circle One)

Date Extracted Prepared 1-24-86

Date Analyzed 1-30-8_

Conc/Dil Factor 100

Percent Moisture (decanted) 68 (8% DRY

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319 84 6	Alpha BHC	17,500 U
319 85 7	Beta BHC	17,500 U
319 86 8	Delta BHC	17,500 U
58 89 9	Gamma BHC (Lindane)	17,500 U
76 44 8	Heptachlor	17,500 U
309 00 2	Aldrin	17,500 U
1024 57 3	Heptachlor Epoxide	17,500 U
959 98 8	Endosulfan I	17,500 U
60 57 1	Dieldrin	35,000 U
72 55 9	4 4 DDE	35,000 U
72 20 8	Endrin	35,000 U
33213 65 9	Endosulfan II	35,000 U
72 54 8	4 4 DDD	35,000 U
1031 07 8	Endosulfan Sulfate	35,000 U
50 29 3	4 4 DDT	35,000 U
72 43 5	Methoxychlor	175,000 U
53494 70 5	Endrin Ketone	35,000 U
57 74 9	Chlordane	175,000 U
8001 35 2	Toxaphene	350,000 U
12674 11 2	Aroclor 1016	175,000 U
11104 28 2	Aroclor 1221	175,000 U
11141 16 5	Aroclor 1232	175,000 U
53469 21 9	Aroclor 1242	175,000 U
12672 29 6	Aroclor 1248	175,000 U
11097 69 1	Aroclor 1254	350,000 U
11096 82 5	Aroclor 1260	350,000 U

V_t - Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s _____ or W_s 12 V_t 10,000 V_i 32

Laboratory Name WESTON

Case No 544-

Sample Number F2CB-S 130

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration Low (Medium) (Circle One)

Date Extracted Prepared 11-7/84

Date Analyzed 11-9/84

Conc/Dil Factor 136.364

Percent Moisture (~~Decanted~~) 31.4

JW 4/7/86

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
108 95 2	Phenol	4CEGU
111 44 4	bis(2 Chloroethyl)Ether	"
95 57 8	2 Chlorophenol	"
541 73 1	1 3 D chlorobenzene	"
106 46 7	1 4 Dichlorobenzene	"
100 51 6	Benzyl Alcohol	
95 50 1	1 2 Dichlorobenzene	
95 48 7	2 Methylphenol	
39638 32 9	bis 2 chloroisopropyl)Ether	
106 44 5	4 Methylphenol	
621 64 7	N Nitroso Di n Propylamine	
67 72 1	Hexachloroethane	
98 95 3	Nitrobenzene	
78 59 1	Isophorone	
88 75 5	2 Nitrophenol	
105 67 9	2 4 D methylphenol	"
65 85 0	Benzoic Acid	2CE7U
111 91 1	bis(2 Chloroethoxy)Methane	4DEGU
120 83 2	2 4 Dichlorophenol	↓
120 82 1	1 2 4 Trichlorobenzene	↓
91 20 3	Naphthalene	1EGJ
106 47 8	4 Chloroaniline	4CEGU
87 68 3	Hexachlorobutadiene	↓
59 50 7	4 Chloro 3 Methylphenol	↓
91 57 6	2 Methylnaphthalene	1.9EGJ
77 47 4	Hexachlorocyclopentadiene	4CEGU
88 06 2	2 4 6 Trichlorophenol	↓
95 95 4	2 4 5 Trichlorophenol	2CE7U
91 58 7	2 Chloronaphthalene	4DEGU
88 74 4	2 Nitroaniline	2CE7U
131 11 3	Dimethyl Phthalate	4CEGU
208 96 8	Acenaphthylene	↓
99 09 2	3 Nitroaniline	2CE7U

CAS Number		ug/l or (ug/Kg) (Circle One)
83 32 9	Acenaphthene	1.9E7
51 28 5	2 4 Dinitrophenol	4CE7U
100 02 7	4 Nitrophenol	"
132 64 9	Dibenzofuran	5.7EG
121 14 2	2 4 D nitrotoluene	4CEGU
606 20 2	2 6 Dinitrotoluene	"
84 66 2	Diethylphthalate	"
7005 72 3	4 Chlorophenyl phenylether	↓
86 73 7	Fluorene	1.3E7
100 01 6	4 Nitroaniline	2CE7U
534 52 1	4 6 Dinitro 2 Methylphenol	↓
86 30 6	N Nitrosodiphenylamine (1)	4CEGU
101 55 3	4 Bromophenyl phenylether	"
118 74 1	Hexachlorobenzene	↓
87 86 5	Pentachlorophenol	4CEG
85 01 8	Phenanthrene	5.5E7
120 12 7	Anthracene	4.7EG
84 74 2	Di n Butylphthalate	4CEGU
206 44 0	Fluoranthene 3.8E7	~~4CEGU~~ 4/7/86
129 00 0	Pyrene	1.9E7
85 68 7	Butylbenzylphthalate	4.CEGU
91 94 1	3 3 Dichlorobenzidine	8.0EGU
56 55 3	Benzo(a)Anthracene	4.2EG
117 81 7	bis(2 Ethylhexyl)Phthalate	4DEGU
218 01 9	Chrysene	4.4EG
117 84 0	Di n Octyl Phthalate	4DEGU
205 99 2	Benzo(b)Fluoranthene	"
207 08 9	Benzo(k)Fluoranthene	"
50 32 8	Benzo(a)Pyrene	1CEGJ
193 39 5	Indeno(1 2 3 cd)Pyrene	4CEGU
53 70 3	Dibenz(a h)Anthracene	"
191 24 2	Benzo(g h i)Perylene	↓

(1) Cannot be separated from diphenylamine

Laboratory Name R F WESTON INC
Case No 5445

Sample Number
F2082S
1.50

ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration MEDIUM
Date Extracted/Prepared 01/24/86
Date Analyzed 01/29/86
Dil Factor 22 728
Percent Moisture (~~Decanted~~) 31 4

JW 4/7/86

GPC Cleanup ___ Yes _X_ No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		UG/KG	CAS Number		UG/KG
108-95 2	Phenol	660000U	83-32-9	Acenaphthene	1 0E7 *
111-44-4	bis(2-Chloroethyl)Ether	660000U	51-28-5	2,4-Dinitrophenol	3 2E6 U
95 57-8	2-Chlorophenol	660000U	100-02-7	4-Nitrophenol	3 2E6 U
541-73 1	1 3-Dichlorobenzene	660000U	132-64-9	Dibenzofuran	8 7E6 *
106-46-7	1,4 Dichlorobenzene	660000U	121-14-2	2,4-Dinitrotoluene	660000U
100 51 6	Be vl Alcohol	660000U	606 20-2	2,6 Dinitrotoluene	660000U
95-50 1	1,2-Dichlorobenzene	660000U	84-66-2	Diethylphthalate	660000U
95-48 7	2-Methylphenol	660000U	7005-72-3	4-Chlorophenyl-phenylether	660000U
39638 32 9	bis(2-Chloroisopropyl)Ether	660000U	86-73-7	Fluorene	1 3E7 *
106-44-5	4 Methylphenol	660000U	100-10-6	4-Nitroaniline	3 2E6 U
621-64-7	N-Nitroso-Di-n-Propylamine	660000U	534-52-1	4,6 Dinitro-2-Methylphenol	3 2E6 U
67-72 1	Hexachloroethane	660000U	86-30 6	N-Nitrosodiphenylamine (1)	660000U
95 3	Nitrobenzene	660000U	101-55-3	4-Bromophenyl-phenylether	660000U
39 1	Isophorone	660000U	118-74-1	Hexachlorobenzene	660000U
88 75 5	2-Nitrophenol	660000U	87 86-5	Pentachlorophenol	8 1E6 *
105-67 9	2,4-Dimethylphenol	660000U	85-01-8	Phenanthrene	5 4E7 *
65 85-0	Benzoic Acid	3 2E6 U	120-12-7	Anthracene	4 7E6 *
111-91 1	bis(2-Chloroethoxy)Methane	660000U	84-74-2	Di-n-Butylphthalate	660000U
120-83 2	2,4-Dichlorophenol	660000U	206-44-0	Fluoranthene	3 8E7 *
120-82 1	1,2,4-Trichlorobenzene	660000U	129-00-0	Pyrene	660000U
91 20-3	Naphthalene	1 1E6	85-68-7	Butylbenzylphthalate	660000U
106-47 8	4-Chloroaniline	660000U	91-94-1	3,3 -Dichlorobenzidine	1 3E6 U
87-68 3	Hexachlorobutadiene	660000U	56-55-3	Benzo(a)Anthracene	4 7E6 *
59 50-7	4-Chloro-3-Methylphenol	660000U	117-81-7	bis(2-Ethylhexyl)Phthalate	660000U
91-57 6	2-Methylnaphthalene	2 3E6	218-01-9	Chrysene	4 3E6 *
77-47-4	Hexachlorocyclopentadiene	660000U	117-84-0	Di-n-Octyl Phthalate	660000U
88-06 2	2,4,6-Trichlorophenol	660000U	205 99-2	Benzo(b)Fluoranthene	660000U
95 95-4	2,4,5-Trichlorophenol	3 2E6 U	207-08-9	Benzo(k)Fluoranthene	660000U
91 58-7	2-Chloronaphthalene	660000U	50-32-8	Benzo(a)Pyrene	1 1E6 **
88 74 4	2-Nitroaniline	3 2E6 U	193-39-5	Indeno(1,2,3-cd)Pyrene	370000J
131 11 3	Dimethyl Phthalate	660000U	53-70-3	Dibenz(a,h)Anthracene	120000J
208-96-8	Acenaphthylene	660000U	191-24-2	Benzo(g,h,i)Perylene	310000J
99-09-2	3-Nitroaniline	3 2E6 U			

* Values obtained from 1 300 dilution, run # 012901764

(1) Cannot be separated from diphenylamine

RUNOFF Soil

Sample Number
F2082-S

12b

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: WESTON
Case No: 5445
Lab Sample ID No: 8601-454-0160
QC Report No: NA
Sample Matrix: Soil
Contract No: 6801-6781
Data Release Authorized By: [illegible]
Date Sample Received: Jan. 14, 1986

Volatile Compounds

Concentration: Low (Medium) (Circle One)
Date Extracted/Prepared: Jan 14, 1986
Date Analyzed: Jan 14, 1986
Conc/(Dil Factor): 348 pH: 5.05
Percent Moisture (Not Decanted): 31.4

CAS Number		ug/l or (ug/Kg) (Circle One)
74 87 3	Chloromethane	3,500 U
74 83 9	Bromomethane	"
75 01 4	Vinyl Chloride	"
75 00 3	Chloroethane	"
75 09 2	Methylene Chloride	21,000 B
67 64 1	Acetone	14,000
75 15 0	Carbon Disulfide	1,700 U
75 35 4	1 1 Dichloroethene	"
75 34 3	1 1 Dichloroethane	"
156 60 5	Trans 1 2 Dichloroethene	"
67 66 3	Chloroform	1,300 J
107 06 2	1 2 Dichloroethane	1,700 U
78 93 3	2 Butanone	43,000 B
71 55 6	1 1 1 Trichloroethane	1,700 U
56 23 5	Carbon Tetrachloride	"
108 05 4	Vinyl Acetate	3,500 U
75 27 4	Bromodichloromethane	1,700 U

CAS Number		ug/l or (ug/Kg) (Circle One)
78 87 5	1 2 Dichloropropane	1,700 U
10061 02 6	Trans 1 3 Dichloropropene	"
79 01 6	Trichloroethene	"
124 48 1	Dibromochloromethane	"
79 00 5	1 1 2 Trichloroethane	"
71 43 2	Benzene	"
10061 01 5	cis 1 3 Dichloropropene	"
110 75 8	2 Chloroethylvinylether	3,500 U
75 25 2	Bromoform	1,700 U
591 78 6	4 Methyl 2 Pentanone	3,500 U
108 10 1	2 Hexanone	"
127 18 4	Tetrachloroethene	1,700 U
79 34 5	1 1 2 2 Tetrachloroethane	"
108 88 3	Toluene	"
108 90 7	Chlorobenzene	"
100 41 4	Ethylbenzene	2,700
100 42 5	Styrene	1,700 U
	Total Xylenes	1,700

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However the definition of each flag must be explicit.

Value	If the result is a value greater than or equal to the detection limit report the value
U	Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution factor. (This is not necessarily the instrument detection limit.) The footnote should read U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated report as 3J
C	This flag applies to pesticide parameters where the identification has been confirmed by GC MS. Single component pesticides ≥10 ng/ml in the final extract should be confirmed by GC MS
B	This flag is used when the analyte is found in the blank as well as a sample. It indicates possible probable blank contamination and warns the data user to take appropriate action
Other	Other specific flags and footnotes may be equated to properly define the results. If used they must be fully described and such description attached to the data summary report

Laboratory Name WESTON

Case No 5445

Sample Number F20821 10,

0118B1700

CASE 5445

6801-6781

13.

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1	—	Unknown HC	ABN	1264	140 J
2	—	Unknown		1288	170 J
3	—	Unknown PAH		1326	41 J
4	—	"		1363	130 J
5	—	Unknown HC		1368	42 J
6	—	"		1456	15 J
7	—	"		1465	11 J
8	—	Unknown Methylated PAH		1529	68 J
9	—	" " "		1534	60 J
10	—	Unknown HC		1546	350 J
11	—	"		1581	41 J
12	—	Unknown		1597	150 J
13	—	Unknown HC		1631	320 J
14	—	Unknown Methylated PAH		1649	35 J
15	—	Unknown PAH Carbazole/Phenanthridine		1695	50 J
16	—	Unknown PAH		1748	41 J
17	—	Unknown HC		1791	70 J
18	—	Unknown PAH		1801	50 J
19	—	Unknown HC	—	1966	47 J
20					
21	—	Fine grained	VOA	—	—
22					
23					
24					
25					
26					
27					
28					
29					
30					

000415

Laboratory Name R F WESTON INC
Case No 5445

Sample Number
F2082

ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration LOW
Date Extracted/Prepared 01/13/86
Date Analyzed 01/18/86
Dil Factor 10 000
Percent Moisture (Decanted) _____

GPC Cleanup ___ Yes _X_ No
Separatory Funnel Extraction _X_ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		UG/L		CAS Number		UG/L	
108-95 2	Phenol	100	U	83 32-9	Acenaphthene	250	
111-44-4	bis(2 Chloroethyl)Ether	100	U	51 28 5	2,4-Dinitrophenol	500	U
95-57 8	2-Chlorophenol	100	U	100 02-7	4-Nitrophenol	500	U
541 73 1	1,3 Dichlorobenzene	100	U	132-64-9	Dibenzofuran	130	
106-46 7	1,4 Dichlorobenzene	100	U	121-14 2	2,4-Dinitrotoluene	100	U
100 51-6	Ber yl Alcohol	100	U	606 20-2	2,6-Dinitrotoluene	100	U
95 50 1	1 2 r chlorobenzene	100	U	84 6o-2	Diethylphthalate	10o	U
95-48 7	2-Methylphenol	100	U	7005 72 3	4-Chlorophenyl-phenylether	100	U
39638 32-9	bis(2-Chloroisopropyl)Ether	100	U	86-73-7	Fluorene	210	
106 44 5	4-Methylphenol	100	U	100 10-6	4-Nitroaniline	500	U
621-64-7	N-Nitroso Di-n-Propylamine	100	U	534 52 1	4,6-Dinitro 2 Methylphenol	500	U
67 72-1	Hexachloroethane	100	U	86-30-6	N-Nitrosodiphenylamine (1)	100	U
98 95-3	Nitrobenzene	100	U	101 55-3	4-Bromophenyl-phenylether	100	U
78-59 1	Isophorone	100	U	118 74-1	Hexachlorobenzene	100	U
88 75 5	2-Nitrophenol	100	U	87 86 5	Pentachlorophenol	860	
105 67-9	2,4 Dimethylphenol	100	U	85-01-8	Phenanthrene	520	
65 85-0	Benzoic Acid	500	U	120 12-7	Anthracene	46	J
111-91 1	bi (2-Chloroethoxy)Methane	100	U	84-74-2	Di-n-Butylphthalate	100	U
120-83 2	2,4-Dichlorophenol	100	U	206-44-0	Fluoranthene	960	
120-82-1	1,2,4 Trichlorobenzene	100	U	12o-00-0	Pyrene	330	
91-20-3	Naphthalene	100	U	85 68-7	Butylbenzylphthalate	100	U
106-47-8	4-Chloroaniline	100	U	91-94 1	3,3 -Dichlorobenzidine	200	U
87-68 3	Hexachlorobutadiene	100	U	56-55-3	Benzo(a)Anthracene	51	J
59-50-7	4-Chloro-3-Methylphenol	100	U	117-81-7	bis(2-Ethylhexyl)Phthalate	100	U
91-57-6	2-Methylnaphthalene	100	U	218 01-9	Chrysene	66	J
77-47-4	Hexachlorocyclopentadiene	100	U	117 84-0	Di-n-Octyl Phthalate	100	U
88 06-2	2,4,6-Trichlorophenol	100	U	205-99-2	Benzo(b)Fluoranthene	29	J
95-95 4	2,4,5-Trichlorophenol	500	U	207-08-9	Benzo(k)Fluoranthene	100	U
91 58-7	2-Chloronaphthalene	100	U	50 32-8	Benzo(a)Pyrene	100	U
88-74-4	2-Nitroaniline	500	U	193-39-5	Indeno(1,2,3 cd)Pyrene	100	U
131-11 3	Dimethyl Phthalate	100	U	53-70-3	Dibenz(a,h)Anthracene	100	U
208 96-8	Acenaphthylene	100	U	191-24-2	Benzo(g,h,i)Perylene	100	U
99-09 2	3-Nitroaniline	500	U				

(1) - Cannot be separated from diphenylamine

Laboratory Name WESTON

Case No 5445

Sample Number F2282

Organics Analysis Data Sheet
(Page 3)

131

Pesticide / PCBs

Concentration (Low) Medium (Circle One)

Date Extracted Prepared 1-11-86

Date Analyzed 1-30-86

Conc (Dil Factor) 50

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☑Yes

CAS Number		(ug/l or ug/Kg) (Circle One)
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	5.0 U
72 55 9	4 4 DDE	5.0 U
72 20 8	Endrin	5.0 U
33213 65 9	Endosulfan II	5.0 U
72 54 8	4 4 DDD	5.0 U
1031 07 8	Endosulfan Sulfate	5.0 U
50 29 3	4 4 DDT	5.0 U
72 43 5	Methoxychlor	25 U
53494 70 5	Endrin Ketone	5.0 U
57 74 9	Chlordane	25 U
8001 35 2	Toxaphene	50 U
12674 11 2	Aroclor 1016	25 U
11104 28 2	Aroclor 1221	25 U
11141 16 5	Aroclor 1232	25 U
53469 21 9	Aroclor 1242	25 U
12672 29 6	Aroclor 1248	25 U
11097 69 1	Aroclor 1254	50 U
11096 82 5	Aroclor 1260	50 U

V_i - Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s - Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s 1000 or W_s _____ V_t 10,000 V_i 32

RUNOFF SOUTH

Sample Number
F2082

Organics Analysis Data Sheet
(Page 1)

Laboratory Name WESTON
Case No 5445
Lab Sample ID No 8601-464-0100
QC Report No NA
Sample Matrix Water
Contract No 6801-6781
Data Release Authorized By
Date Sample Received Jan 11, 1986

Volatile Compounds

Concentration (Low) Medium (Circle One)
Date Extracted/Prepared Jan 13, 1986
Date Analyzed Jan 13, 1986
Conc/(Dil Factor) 5 pH 4 40
Percent Moisture (Not Decanted) NA

CAS Number		ug/l or ug/Kg (Circle One)	
74 87 3	Chloromethane	50U	
74 83 9	Bromomethane		
75 01 4	Vinyl Chloride		
75 00 3	Chloroethane		
75-09 2	Methylene Chloride	10JB	
67 64 1	Acetone	280.	*
75 15 0	Carbon Disulfide	25U	
75 35 4	1 1 Dichloroethene		
75 34 3	1 1 Dichloroethane		
156 60 5	Trans 1 2 Dichloroethene		
67 66 3	Chloroform		
107 06 2	1 2 Dichloroethane		
78 93 3	2 Butanone	21J	
71 55 6	1 1 1 Trichloroethane	25U	
56 23 5	Carbon Tetrachloride		
108 05 4	Vinyl Acetate	50U	
75 27 4	Bromodichloromethane	25U	

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	25U
10061 02 6	Trans 1 3 Dichloropropene	
79 01 6	Trichloroethene	
124 48 1	Dibromochloromethane	
79 00 5	1 1 2 Trichloroethane	
71 43 2	Benzene	
10061 01 5	cis 1 3 Dichloropropene	
110 75 8	2 Chloroethylvinylether	50U
75 25 2	Bromoform	25U
591 78 6	4 Methyl 2 Pentanone	50U
108 10 1	2 Hexanone	
127 18 4	Tetrachloroethene	25U
79 34 5	1 1 2 2 Tetrachloroethane	
108 88 3	Toluene	
108 90 7	Chlorobenzene	
100 41 4	Ethylbenzene	
100 42 5	Styrene	
	Total Xylenes	

Data Reporting Qualifiers

For report ng results to EPA, the following results qualifiers are used Additional flags or footnotes explaining results are encouraged However the def nition of each flag must be explicit

Value — If the esult s a alue greate than or equal to the detection l m t eport the alue

U — Ind cates compo nd was analyzed fo but not detected Report the m n m m detect on l m t for the sample with the U (e g 10U) based on necessa y concent at on d lut on act on (Th s s not necessar ly the nstr ment detect on l m t) The footnote should ead U Compo nd was analyzed fo but not detected The numbe s the m n m m atta nable detect on l mit for the sample

J — Indicates an est mated alue Th s flag s used e ther when est mat ng a concentrat on for tentat vely dent f ed compounds whe e a 1 1 esponse s assumed or when the mass spectral data nd cated the p esence of a compound that meets the ident fication - - - - but the esult s less than the spec f ed detect on l m t but than ze o (e g 10J) If l m t of detect on s 10 µg l and a - - - t at on of 3 µg l s calculated eport as 3J

C — Th s flag appl es to pestic de paramete s whe e the ident fcat on has been conf rmed by GC MS S ngle compone t pestic des ≥10 ng ul n the f nal extract should be conf rmed by GC MS

B — Th s flag s used when the analyte s found n the blank as well as a sample It nd cates possible probable blank contam nation and warns the data user to take approp ate action

Other — Other spec f c flags and footnotes may be eq ed to p ope ly def ne the results If used they m st be fully desc bed and such desc ption attached to the data summa y eport

Laboratory Name WESTON

Case No 5445

Sample Number F20575

Organics Analysis Data Sheet
(Page 4)

35 1/2

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1	-	C9 HC	BNA	330	2,400 J B
2	-	C4 - HC		376	6,500 J B
3	-	HC		358	6,200 J B
4	-	Ketone, mw 100		455	1,300 J
5		Unknown		492	1,600 J C
6	-	Unknown		536	2,100 J
7	-	Unknown		565	3,100 J B
8	-	HC		1405	700 J
9	-	HC		1499	880 J
10	-	HC		1507	660 J
11	-	HC		1589	1,400 J
12	-	Subst. PNA		1594	610 J
13	-	HC		1675	1,400 J
14	10544-50-0	Sulfur		1689	850 J
15	-	PNA + Unknown		1765	540 J
16	-	HC		1835	1,100 J
17	-	PNA		2221	1,400 J
18	-	PNA		2262	1,100 J
19	-	Unknown		2310	920 J
20	-	HC	✓	2429	640 J
21					
22		None Observed	VOA		
23		/			
24					
25					
26					
27					
28					
29					
30					

Laboratory Name WESTON

Case No 5445

Sample Number F 2057 S

Organics Analysis Data Sheet
(Page 3)

353

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted Prepared 1-14-86

Date Analyzed 1-30-86

Conc Dil Factor 1

Percent Moisture (decanted) 74.4% DRY

GPC Cleanup ☒Yes ☐No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319 84 6	Alpha BHC	16 U
319 85 7	Beta BHC	16 U
319 86 8	Delta BHC	16 U
58 89 9	Gamma BHC (Lindane)	16 U
76 44 8	Heptachlor	16 U
309 00 2	Aldrin	16 U
1024 57 3	Heptachlor Epoxide	16 U
959 98 8	Endosulfan I	16 U
60 57 1	Dieldrin	32 U
72 55 9	4 4 DDE	32 U
72 20 8	Endrin	32 U
33213 65 9	Endosulfan II	32 U
72 54 8	4 4 DDD	32 U
1031 07 8	Endosulfan Sulfate	32 U
50 29 3	4 4 DDT	32 U
72 43 5	Methoxychlor	160 U
53494 70 5	Endrin Ketone	32 U
57 74 9	Chlordane	160 U
8001 35 2	Toxaphene	320 U
12674 11 2	Aroclor 1016	160 U
11104 28 2	Aroclor 1221	160 U
11141 16 5	Aroclor 1232	160 U
53469 21 9	Aroclor 1242	160 U
12672 29 6	Aroclor 1248	160 U
11097 69 1	Aroclor 1254	320 U
11096 82 5	Aroclor 1260	320 U

V_t Volume of extract injected (ul)

V_s Volume of water extracted (ml)

W_s Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s _____ or W_s 203 V_t 2000 V_t 32

Laboratory Name: R F WESTON INC
Case No 5445

Sample Number
F20575

ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration LOW
Date Extracted/Prepared 01/14/86
Date Analyzed 01/29/86
Dil Factor 1 556
Percent Moisture (~~Decanted~~) 25 9

JW 2/7/86

GPC Cleanup X Yes __ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

CAS Number		UG/KG		CAS Number		UG/KG	
108 95-2	Phenol	690	U	83-32-9	Acenaphthene	670	J
111-44 4	bis(2 Chloroethyl)Ether	690	U	51-28-5	2,4-Dinitrophenol	3400	U
95 57 8	2-Chlorophenol	690	U	100 02-7	4-Nitrophenol	3400	U
541 73-1	1,3 Dichlorobenzene	690	U	132 64-9	Dibenzofuran	510	J
106 46 7	1,4 Dichlorobenzene	690	U	121 14 2	2,4-Dinitrotoluene	690	U
100-51-6	Benzyl Alcohol	690	U	606-20-2	2,6-Dinitrotoluene	690	U
95 50 1	1,2-Dichlorobenzene	690	U	84 66 2	Diethylphthalate	690	U
95 48 7	2 Methylphenol	690	U	7005 72-3	4-Chlorophenyl-phenylether	690	U
39638 32 9	bis(2-Chloroisopropyl)Ether	690	U	86 73-7	Fluorene	710	
106-44 5	4-Methylphenol	690	U	100-10-6	4-Nitroaniline	3400	U
621 64 7	N-Nitroso Di-n-Propylamine	690	U	534 52-1	4,6-Dinitro-2-Methylphenol	3400	U
67 72-1	Hexachloroethane	690	U	86-30-6	N-Nitrosodiphenylamine (1)	690	U
98 95 3	Nitrobenzene	690	U	101-55-3	4-Bromophenyl-phenylether	690	U
78 59 1	Isophorone	690	U	118-74-1	Hexachlorobenzene	690	U
8-75 5	2-Nitrophenol	690	U	87-86-5	Pentachlorophenol	1100	J
105 67-9	2,4-Dimethylphenol	690	U	85-01-8	Phenanthrene	3300	B
65-85 0	Benzoic Acid	3400	U	120-12-7	Anthracene	430	J
111-91 1	bis(2-Chloroethoxy)Methane	690	U	84-74-2	Di-n-Butylphthalate	410	BJ
120-83 2	2 4 Dichlorophenol	690	U	206-44-0	Fluoranthene	2100	
120 82 1	1,2,4-Trichlorobenzene	690	U	129-00 0	Pyrene	1500	
91-20 3	Naphthalene	100	J	85 68-7	Butylbenzylphthalate	690	U
106 47-8	4-Chloroaniline	690	U	91-94-1	3,3 -Dichlorobenzidine	1400	U
87-68 3	Hexachlorobutadiene	690	U	56-55 3	Benzo(a)Anthracene	460	J
59 50-7	4-Chloro-3-Methylphenol	690	U	117-81-7	bis(2-Ethylhexyl)Phthalate	690	BU
91-57 6	2-Methylnaphthalene	160	J	218-01-9	Chrysene	770	
77-47-4	Hexachlorocyclopentadiene	690	U	117 84-0	Di-n-Octyl Phthalate	690	U
88-06-2	2,4,6-Trichlorophenol	690	U	205-99-2	Benzo(b)Fluoranthene	690	U
95 95-4	2,4,5-Trichlorophenol	3400	U	207-08-9	Benzo(k)Fluoranthene	690	U
91-58 7	2-Chloronaphthalene	690	U	50-32-8	Benzo(a)Pyrene	250	J
88 74-4	2 Nitroaniline	3400	U	193-39 5	Indeno(1,2,3-cd)Pyrene	260	J
131 11 3	Dimethyl Phthalate	690	U	53-70-3	Dibenz(a,h)Anthracene	120	J
208 96-8	Acenaphthylene	690	U	191 24-2	Benzo(g,h,i)Perylene	200	J
99-09-2	3-Nitroaniline	3400	U				

(1) Cannot be separated from diphenylamine

Form I

NW Corner of Site

Sample Number
F2057-S

Organics Analysis Data Sheet
(Page 1)

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Laboratory Name WESTON
Case No 5445
Lab Sample ID No 8601-454-01570
QC Report No NA
Sample Matrix Soil
Contract No 6801-6781
Data Release Authorized By
Date Sample Received Jan 11, 1986

Volatile Compounds

Concentration (Low) Medium (Circle One)
Date Extracted/Prepared Jan 14, 1986
Date Analyzed Jan 14, 1986
Conc/Dil Factor 1.3 pH 5.65
Percent Moisture (Not Decanted) 25.6

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	13 U
74 83 9	Bromomethane	
75 01 4	Vinyl Chloride	
75 00 3	Chloroethane	
75 09 2	Methylene Chloride	9 B
67 64 1	Acetone	100 B
75 15 0	Carbon Disulfide	6 U
75 35 4	1 1 Dichloroethene	
75 34 3	1 1 Dichloroethane	
156 60 5	Trans 1 2 Dichloroethene	
67 66 3	Chloroform	1 J
107 06 2	1 2 Dichloroethane	6 U
78 93 3	2 Butanone	3 JB
71 55 6	1 1 1 Trichloroethane	6 U
56 23 5	Carbon Tetrachloride	
108 05 4	Vinyl Acetate	13 U
75 27 4	Bromodichloromethane	6 U

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	6 U
10061 02 6	Trans 1 3 Dichloropropene	
79 01 6	Trichloroethene	
124 48 1	Dibromochloromethane	
79 00 5	1 1 2 Trichloroethane	
71 43 2	Benzene	
10061 01 5	cis 1 3 Dichloropropene	
110 75 8	2 Chloroethylvinylether	13 U
75 25 2	Bromoform	6 U
591 78 6	4 Methyl 2 Pentanone	13 U
108 10 1	2 Hexanone	
127 18 4	Tetrachloroethene	6 U
79 34 5	1 1 2 2 Tetrachloroethane	
108 88 3	Toluene	
108 90 7	Chlorobenzene	
100 41 4	Ethylbenzene	
100 42 5	Styrene	
	Total Xylenes	

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used
Additional flags or footnotes explaining results are encouraged However the definition of each flag must be explicit

Value	If the result is a value greater than or equal to the detection limit report the value
U	Indicates compound was analyzed for but not detected Report the minimum detection limit for the sample with the U (e g 10U) based on necessary concentration dilution action (This is not necessarily the instrument detection limit) The footnote should read U Compound was analyzed for but not detected The number is the minimum attainable detection limit for the sample
J	Indicates an estimated value This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e g 10J) If limit of detection is 10 µg l and a
C	This flag applies to pesticide parameters where the identification has been confirmed by GC MS Single component pesticides ≥10 ng ul in the final extract should be confirmed by GC MS
B	This flag is used when the analyte is found in the blank as well as a sample It indicates possible probable blank contamination and warns the data user to take appropriate action
Other	Other specific flags and footnotes may be required to properly define the results If used they must be fully described and such description attached to the data summary report

Laboratory Name WESTON

Case No _____

Sample Number
F2057

01188/697

CASE 5445

6801-6781

330

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug kg)
1		NONE FOUND	ABN		
2		NONE FOUND	VOA		
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
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25					
26					
27					
28					
29					
30					

Laboratory Name WESTON

Case No 5445

Sample Number F2157

Organics Analysis Data Sheet (Page 3)

331

Pesticide/PCBs

Concentration (Low) / Medium (Circle One)

Date Extracted Prepared 1-11-86

Date Analyzed 1-30 86

Conc Dil Factor 1

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☑Yes

CAS Number		ug/l or ug/Kg (Circle One)
319 84 6	Alpha BHC	0.05 U
319 85 7	Beta BHC	0.05 U
319 86 8	Delta BHC	0.05 U
58 89 9	Gamma BHC (Lindane)	0.05 U
76 44 8	Heptachlor	0.05 U
309 00 2	Aldrin	0.05 U
1024 57 3	Heptachlor Epoxide	0.05 U
959 98 8	Endosulfan I	0.05 U
60 57 1	Dieldrin	0.1 U
72 55 9	4 4 DDE	0.1 U
72 20 8	Endrin	0.1 U
33213 65 9	Endosulfan II	0.1 U
72 54 8	4 4 DDD	0.1 U
1031 07 8	Endosulfan Sulfate	0.1 U
50 29 3	4 4 DDT	0.1 U
72 43 5	Methoxychlor	0.5 U
53494 70 5	Endrin Ketone	0.1 U
57 74 9	Chlordane	0.5 U
8001 35 2	Toxaphene	1.0 U
12674 11 2	Aroclor 1016	0.5 U
11104 28 2	Aroclor 1221	0.5 U
11141 16 5	Aroclor 1232	0.5 U
53469 21 9	Aroclor 1242	0.5 U
12672 29 6	Aroclor 1248	0.5 U
11097 69 1	Aroclor 1254	1.0 U
11096 82 5	Aroclor 1260	1.0 U

V_t Volume of extract injected (ul)

V_s Volume of water extracted (ml)

W_s Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s 1000 or W_s _____ V_t 10000 V_i 5.2

Laboratory Name: R F WESTON INC
Case No 5445

Sample Number
F2057

333

ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration LOW
Date Extracted/Prepared 01/13/86
Date Analyzed 01/18/86
Conc/Dil Factor 1
Percent Moisture (Decanted)

GPC Cleanup __ Yes X No
Separatory Funnel Extraction X Yes
Continuous Liquid-Liquid Extraction __ Yes

CAS Number		UG/L		CAS Number		UG/L	
108-95 2	Phenol	10	U	83-32-9	Acenaphthene	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U	51-28-5	2,4-Dinitrophenol	50	U
95-57-8	2 Chlorophenol	10	U	100-02-7	4-Nitrophenol	50	U
541-73 1	1,3 Dichlorobenzene	10	U	132-64-9	Dibenzofuran	10	U
106-46 7	1,4-Dichlorobenzene	10	U	121-14-2	2,4 Dinitrotoluene	10	U
100-51-6	Benzyl Alcohol	10	U	606-20 2	2,6-Dinitrotoluene	10	U
95 50 1	1 2 Dichlorobenzene	10	U	84 66-2	Diethylphthalate	10	U
95-48 7	2 Methylphenol	10	U	7005 72-3	4-Chlorophenyl-phenylether	10	U
39638 32 9	bis(2-Chloroisopropyl)Ether	10	U	86-73-7	Fluorene	10	U
106-44-5	4-Methylphenol	10	U	100-10-6	4-Nitroaniline	50	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U	534 52-1	4,6-Dinitro-2-Methylphenol	50	U
67-72 1	Hexachloroethane	10	U	86-30-6	N-Nitrosodiphenylamine (1)	4	OJ
98-95-3	Nitrobenzene	10	U	101 55 3	4-Bromophenyl-phenylether	10	U
1 59 1	Isophorone	10	U	118-74 1	Hexachlorobenzene	10	U
d8 75-5	2-Nitrophenol	10	U	87-86-5	Pentachlorophenol	50	U
105-67-9	2,4-Dimethylphenol	10	U	85-01-8	Phenanthrene	10	U
65-85-0	Benzoic Acid	50	U	120-12-7	Anthracene	10	U
111-91 1	bis(2-Chloroethoxy)Methane	10	U	84-74-2	Di-n-Butylphthalate	1	5J
120-83-2	2,4-Dichlorophenol	10	U	206-44-0	Fluoranthene	10	U
120-82 1	1,2,4-Trichlorobenzene	10	U	129-00-0	Pyrene	10	U
91-20 3	Naphthalene	10	U	85-68-7	Butylbenzylphthalate	10	U
106-47-8	4-Chloroaniline	10	U	91-94-1	3,3'-Dichlorobenzidine	20	U
87 68 3	Hexachlorobutadiene	10	U	56-55-3	Benzo(a)Anthracene	10	U
59-50 7	4-Chloro-3-Methylphenol	10	U	117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
91-57-6	2-Methylnaphthalene	10	U	218-01-9	Chrysene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U	117-84-0	Di-n-Octyl Phthalate	10	U
88-06-2	2,4,6-Trichlorophenol	10	U	205-99-2	Benzo(b)Fluoranthene	10	U
95-95-4	2,4,5-Trichlorophenol	50	U	207-08-9	Benzo(k)Fluoranthene	10	U
91-58 7	2-Chloronaphthalene	10	U	50-32-8	Benzo(a)Pyrene	10	U
88-74-4	2-Nitroaniline	50	U	193-39 5	Indeno(1,2,3-cd)Pyrene	10	U
131 11-3	Dimethyl Phthalate	10	U	53-70-3	Dibenz(a,h)Anthracene	10	U
208 96 8	Acenaphthylene	10	U	191-24-2	Benzo(g,h,i)Perylene	10	U
99-09-2	3-Nitroaniline	50	U				

(1) - Cannot be separated from diphenylamine

NW Corner of Site

Sample Number
F2057

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: WESTON
Case No: 5445
Lab Sample ID No: 8601-464-0120
QC Report No: NA
Sample Matrix: Water
Contract No: 6801-6781
Data Release Authorized By:
Date Sample Received: Jan 11, 1986

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: Jan 13, 1986
Date Analyzed: Jan 13, 1986
Conc/Dil Factor: 1 pH: 6.55
Percent Moisture (Not Decanted): NA

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	10U
74 83 9	Bromomethane	"
75-01 4	Vinyl Chloride	"
75 00 3	Chloroethane	"
75 09 2	Methylene Chloride	5U
67 64 1	Acetone	10U
75 15 0	Carbon Disulfide	5U
75 35 4	1 1 Dichloroethene	"
75 34 3	1 1 Dichloroethane	"
156 60 5	Trans 1 2 Dichloroethene	"
67 66 3	Chloroform	"
107 06 2	1 2 Dichloroethane	"
78 93 3	2 Butanone	10U
71 55 6	1 1 1 Trichloroethane	5U
56 23 5	Carbon Tetrachloride	"
108 05 4	Vinyl Acetate	10U
75 27 4	Bromodichloromethane	5U

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	5U
10061 02 6	Trans 1 3 Dichloropropene	"
79-01 6	Trichloroethene	"
124 48 1	Dibromochloromethane	"
79 00 5	1 1 2 Trichloroethane	"
71 43 2	Benzene	"
10061 01 5	cis 1 3 Dichloropropene	"
110 75 8	2 Chloroethylvinylether	10U
75 25 2	Bromoform	5U
591 78 6	4 Methyl 2 Pentanone	10U
108 10 1	2 Hexanone	"
127 18 4	Tetrachloroethene	5U
79 34 5	1 1 2 2 Tetrachloroethane	"
108 88 3	Toluene	"
108 90 7	Chlorobenzene	"
100 41 4	Ethylbenzene	"
100 42 5	Styrene	"
	Total Xylenes	"

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used Add tional flags or footnotes explaining results are encouraged However the def n t on of each flag must be explicit

Value — If the es lt s a val e g eate than or equal to the detect on l m t eport the al e

U — Ind cates compound was analyzed fo but not detected Report the m n m m detect on l m t fo the sample w th the U (e g 10U) based on necessa y concent at on d lut on act on (Th s s not necessar ly the nst ument detect on l m t) The footnote should ead U Compound was analyzed fo but not detected The number s the m n mum atta nable detect on l m t fo the sample

J — Ind cates an est mated alue Th s flag s used e ther when est mat ng a concentrat on for tentat vely dent f ed compounds where a 1 1 esponse s ass med or when the mass spectral data nd cated the presence of a compound that meets the dent f cat on l but the esult s less than the spec f ed detect on l m t b t than ze o (e g 10J) If l m t of detect on s 10 µg l and a concentrat on of 3 µg l s calc lated eport as 3J

C — Th s flag appl es to pest c de parameters whe e the ident f cat on has been conf med by GC MS S ngle component pesticides ≥10 ng ul n the f nal e t act should be conf med by GC MS

B — Th s flag s used when the analyte s found n the blank as well as a sample It nd cates poss ble probable blank contam nat on and warns the data use to take approp ate act on

Other — Othe spec f c flags and footnotes may be equ ed to p ope ly def ne the esults If used they must be fully desc bed and suc desc pt on attached to the data summary eport

Laboratory Name WESTON

Case No

Sample Number F2056

0117B1693 243

CASE 5445

6801 - 6781

Organics Analysis Data Sheet (Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug kg)
1	—	Unknown Benzene Cpd	ABN	578	30 J
2	—	Dihydro Indenone		901	29 J
3	—	Methyl Naphthalene		934	62 J
4	—	Biphenyl		1017	31 J
5	—	Dimethyl Naphthalene		1061	26 J
6	—	Naphthalene carbonitrile		1145	25 J
7	—	"		1173	33 J
8	—	Unknown Chlorinated Phenol		1203	25 J
9	—	Unknown		1324	28 J
10	—	Unknown HC		1362	46 J
11	—	"		1455	25 J
12	—	Unknown		1466	32 J
13	—	"		1486	27 J
14	—	Unknown HC		1545	43 J
15	—	Anthracenedione		1596	23 J
16	—	Unknown HC		1630	40 J
17	—	Naphtho Cyran one		1654	25 J
18		MSC JDK 1-22-86	—	1667	15 J
19	—	Unknown HC		1711	28 J
20	—	"		1790	12 J
21	—	Unknown		2075	1 J
22					
23		None Observed	VOA		
24					
25					
26					
27					
28					
29					
30					

Laboratory Name WESTON

Case No 5445

Sample Number F 2256

Organics Analysis Data Sheet (Page 3)

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Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted Prepared 1-11 86

Date Analyzed 1-30 86

Conc/(Dil Factor) 1C

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☑Yes

CAS Number		ug/L or ug/Kg (Circle One)
3 9 84 6	Alpha BHC	0 5 U
319 85 7	Beta BHC	0 5 U
319 86 8	Delta BHC	0 5 U
58 89 9	Gamma BHC (Lindane)	0 5 U
76 44 8	Heptachlor	0 5 U
309 00 2	Aldrin	0 5 U
1024 57 3	Heptachlor Epoxide	0 5 U
959 98 8	Endosulfan I	0 5 U
60 57 1	Dieldrin	1 0 U
72 55 9	4 4 DDE	1 0 U
72 20 8	Endrin	1 0 U
33213 65 9	Endosulfan II	1 0 U
72 54 8	4 4 DDD	1 0 U
1031 07 8	Endosulfan Sulfate	1 0 U
50 29 3	4 4 DDT	1 0 U
72 43 5	Methoxychlor	5 0 U
53494 70 5	Endrin Ketone	1 0 U
57 74 9	Chlordane	5 0 U
8001 35 2	Toxaphene	10 0 U
12674 11 2	Arocior 1016	5 0 U
11104 28 2	Arocior 1221	5 0 U
11141 16 5	Arocior 1232	5 0 U
53469 21 9	Arocior 1242	5 0 U
12672 29 6	Arocior 1248	5 0 U
11097 69 1	Arocior 1254	10 0 U
11096 82 5	Arocior 1260	10 0 U

V_t - Volume of extract injected (ul)

V_s Volume of water extracted (ml)

W_s Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s 1000 or W_s _____ V_t 10000 V_t 32

Laboratory Name R F WESTON INC
Case No 5445

Sample Number
F2084S

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ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration LOW
Date Extracted/Prepared 01/14/86
Date Analyzed 01/29/86
Dil Factor 1 571
Percent Moisture (~~Decanted~~) 32 4

GPC leanup X Ye_ __ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

2/7/86

CAS Number		UG/KG		CAS Number		UG/KG	
108 9_ 2	Phenol	770	U	83 32 9	Acenaphthene	770	U
111 44 4	bi (2 Chloroethyl)Ether	770	U	51 28-5	2,4-Dinitrophenol	3700	U
9_ 57 8	2-Chlorophenol	770	U	100-0c 7	4-Nitrophenol	3700	U
1 2 1	1,2 Dichloroben ene	770	U	132-64-9	Diben ofuran	770	U
1 4	1 4 Dichloroben ene	770	U	121 14 2	2 4-Dinitrotoluene	770	U
1 1	e 1 hlco cl	70	U	2	2 6-Dinitrotoluene	770	U
95 5 1	1 2 Di hloroben ene	770	U	84 66 2	Diethylphthalate	770	U
95-48	2 Methylphenol	770	U	7005 72 3	4-Chlorophenyl-phenylether	770	U
39638 3c 9	bi (2-Chloroisopropyl)Ether	770	U	8 73 7	Fluorene	770	U
106 44 5	4 Methylphenol	770	U	100 10-6	4 Nitroaniline	3700	U
621-64	N Nitro o-Di-n-Propylamine	770	U	534 52-1	4,6-Dinitro-2-Methylphenol	3700	U
72 1	He achloroethane	770	U	86-30 6	N-Nitrosodiphenylaai e (1)	770	U
98 95 3	Nitrobenzene	770	U	101 55 3	4-Bromophenyl-phenylether	770	U
3 59 1	Isophorone	770	U	118-74-1	Hexachlorobenzene	770	U
88 75 5	2-Nitrophenol	770	U	87 86 5	Pentachlorophenol	3700	U
105 67 9	2,4 Dimethylphenol	770	U	85-01-8	Phenanthrene	770	BU
65 85 0	Ben oic Acid	3700	U	120-12-7	Anthracene	770	U
111 91 1	bi 2 Chloroethoxy)Methane	770	U	84 74 2	Di-n-Butylphthalate	1200	B
120 83 2	2,4 Dichlorophenol	770	U	206 44-0	Fluoranthene	770	U
120-82 1	1 2 4-Trichlorobenzene	770	U	129-00-0	Pyrene	770	U
91 20-3	Naphthalene	770	U	85 68 7	Butylbenzylphthalate	770	U
106 47 8	4 Chloroaniline	770	U	91 94-1	3,3 -Dichlorobenzidine	1500	U
87 68 3	Hexachlorobutadiene	770	U	56-55-3	Benzo(a)Anthracene	770	U
59 50 7	4 Chloro-3-Methylphenol	770	U	117-81-7	bis(2-Ethylhexyl)Phthalate	770	BU
91 57 6	2-Methylnaphthalene	770	U	218-01 9	Chrysene	770	U
77-47 4	Hexachlorocyclopentadiene	770	U	117-84-0	Di-n-Octyl Phthalate	770	U
88 06 2	2,4 6 Trichlorophenol	770	U	205-99-2	Benzo(b)Fluoranthene	770	U
95 95 4	2,4 5-Trichlorophenol	3700	U	207-08-9	Benzo(k)Fluoranthene	770	U
91 58 7	2-Chloronaphthalene	770	U	50-32-8	Benzo(a)Pyrene	770	U
88- 4-4	2 Nitroaniline	3700	U	193-39 5	Indeno(1,2,3 cd)Pyrene	770	U
131 11 3	Dimethyl Phthalate	770	U	53 70-3	Diben (a h)Anthracene	770	U
208-96 8	Acenaphthylene	770	U	191-24-2	Benzo(g,h,i)Perylene	770	U
99 09 2	3-Nitroaniline	3700	U				

(1) Canno be eparated from diphenylamine

Form I

Laboratory Name WESTON

Case No 5445

Sample Number F2084 - S

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Organics Analysis Data Sheet (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted Prepared 1-14-86

Date Analyzed 1-30 86

Conc Dil Factor 1

Percent Moisture (decanted) 67% dry

GPC Cleanup ☑Yes ☐No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319 84 6	Alpha BHC	18 U
319 85 7	Beta BHC	18 U
319 86 8	Delta BHC	18 U
58 89 9	Gamma BHC (Lindane)	18 U
76 44 8	Heptachlor	18 U
309 00 2	Aldrin	18 U
1024 57 3	Heptachlor Epoxide	18 U
959 98 8	Endosulfan I	18 U
60 57 1	Dieldrin	36 U
72 55 9	4 4 DDE	36 U
72 20 8	Endrin	36 U
33213 65 9	Endosulfan II	36 U
72 54 8	4 4 DDD	36 U
1031 07 8	Endosulfan Sulfate	36 U
50 29 3	4 4 DDT	36 U
72 43 5	Methoxychlor	180 U
53494 70 5	Endrin Ketone	36 U
57 74 9	Chlordane	180 U
8001 35 2	Toxaphene	360 U
12674 11 2	Aroclor 1016	150 U
11104 28 2	Aroclor 1221	150 U
11141 16 5	Aroclor 1232	150 U
53469 21 9	Aroclor 1242	150 U
12672 29 6	Aroclor 1248	150 U
11097 69 1	Aroclor 1254	360 U
11096 82 5	Aroclor 1260	360 U

V_i Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s _____ or W_s 26.1 V_t 20,000 V_i 3 x

Environmental Protection Agency CLP Sample Management Office
P O Box 818 Alexandria Virginia 22313 703 557 2490

Sample Number
F20845

67J

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1	—	C9-HC	BNA	340	3,400JB
2	-	HC		352	3,300JB
3	-	Unknown		452	730J
4	—	Unknown		490	390JB
5	—	Unknown		534	5,400J
6	—	Unknown		563	2,700JB
7	—	"		2246	700J
8	—	HC		2311	640J
9	-	HC		2430	840J
10	—	Unknown		2544	430J
11					
12		None Found	VOA		
13					
14					
15					
16					
17		Could be Unknown Hydrocarbon			
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Pond #8

Sample Number
F2086

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Organics Analysis Data Sheet
(Page 1)

Laboratory Name WESTON
Case No 5445
Lab Sample ID No 8601-464-0080
QC Report No NA
Sample Matrix Water
Contract No 6801-6781
Data Release Authorized By
Date Sample Received Jan 11, 1986

Volatile Compounds

Concentration (Low) Medium (Circle One)
Date Extracted (Prepared) Jan 13, 1986
Date Analyzed Jan 13, 1986
Conc (Dil Factor) 1 pH 3.65
Percent Moisture (Not Decanted) NA

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	10U
74 83 9	Bromomethane	
75 01 4	Vinyl Chloride	
75 00 3	Chloroethane	
75-09 2	Methylene Chloride	1JB
67 64 1	Acetone	6J
75 15 0	Carbon Disulfide	5U
75 35 4	1 1 Dichloroethene	
75 34 3	1 1 Dichloroethane	
156 60 5	Trans 1 2 Dichloroethene	
67 66 3	Chloroform	
107 06 2	1 2 Dichloroethane	
78 93 3	2 Butanone	10U
71 55 6	1 1 1 Trichloroethane	5U
56 23 5	Carbon Tetrachloride	
108 05 4	Vinyl Acetate	10U
75 27 4	Bromodichloromethane	5U

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	5U
10061 02 6	Trans 1 3 Dichloropropene	
79 01 6	Trichloroethene	
124 48 1	Dibromochloromethane	
79 00 5	1 1 2 Trichloroethane	
71 43 2	Benzene	
10061 01 5	cis 1 3 Dichloropropene	
110 75 8	2 Chloroethylvinylether	10U
75 25 2	Bromoform	5U
591 78 6	4 Methyl 2 Pentanone	10U
108 10 1	2 Hexanone	
127 18 4	Tetrachloroethene	5U
79 34 5	1 1 2 2 Tetrachloroethane	
108 88 3	Toluene	
108 90 7	Chlorobenzene	
100 41 4	Ethylbenzene	
100 42 5	Styrene	
	Total Xylenes	

Data Report ng Qualifiers

For eport ng results to EPA the following results qual fiers are used Add tional flags or footnotes expla n ng esults are encouraged However the def nition of each flag must be explicit

Value If the result s a alue greate than or equal to the detection l m t report the alue

U Ind cates compound was analyzed fo but not detected Report the m n mum detect on l m t for the sample w th the U (e g 10U) based on necessary concentrat on d lut on act on (Th s s not necessar ly the nstrument detect on l m t) The footnote should ead U Compound was analyzed fo but not detected The number s the m n m m atta nable detect on l mit for the sample

J Ind cates an est mated value Th s flag s used e the when est mat ng a concent at on for tentat vely dent f ed compounds where a 1 1 esponse s assumed or when the mass spectral data nd cated the p esence of a compound that meets the dentif cation c te a but the esult s less than the spec f ed detect on l m t but le tha ze o (e g 10J) If l m t of detect on s 10 µg l and a ent at on of 3 µg l s calculated eport as 3J

C Th s flag appl es to pest c de paramete s where the dent f cat on has been conf rmed by GC MS S ngle component pesticides ≥10 ng ul n the f nal e tract should be conf med by GC MS

B Th s flag s used when the analyte s found n the blank as well as a sample It ndicates poss ble probable blank contam nat on and warns the data use to take approp ate act on

Other Other spec f c flags and footnotes may be equ ed to p ope ly def ne the esults If used they must be fully desc bed and such desc pt on attached to the data summa y eport

000432

Laboratory Name R F WESTON INC
Case No 5445

Sample Number F2086

POND #8

ORGANICS ANALYSIS DATA SHEET

(Page 2)

71

SEMIVOLATILE COMPOUNDS

Concentration LOW
Date Extracted/Prepared 01/13/86
Date Analyzed 01/17/86
Conc/Dil Factor 1
Percent Moisture (Decanted) _____

SPC Cleanup ___ Yes X No
Separatory Funnel Extraction X Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		UG/L		CAS Number		UG/L	
108-95 2	Phenol	10	U	83-32 9	Acenaphthene	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U	51-28 5	2,4-Dinitrophenol	50	U
95 57 8	2-Chlorophenol	10	U	100 02 7	4-Nitrophenol	50	U
541-73 1	1,3 Dichloroben ene	10	U	132-64-9	Diben ofuran	10	U
106-46 7	1,4 Dichlorobenzene	10	U	121 14-2	2,4-Dinitrotoluene	10	U
100 51 6	Benzyl Alcohol	10	U	606 20 2	2 6-Dinitrotoluene	10	U
95 50 1	Dichloroben ene	10	U	84 66 2	Diethylphthalate	10	U
95 48 7	2 Methylphenol	10	U	7005 72-3	4-Chlorophenyl phenylether	10	U
39638 32 9	bi (2 Chloroisopropyl)Ether	10	U	86 73-7	Fluorene	10	U
106 44 5	4 Methylphenol	10	U	100-10-6	4-Nitroaniline	50	U
621 64 7	N Nitroso Di n-Propylamine	10	U	534 52-1	4,6-Dinitro-2-Methylphenol	50	U
67 72 1	Hexachloroethane	10	U	86 30 6	N-Nitr sodiphenylamine (1)	1	6J
98-95 3	Nitroben ene	10	U	101 55 3	4-Bromophenyl-phenylether	10	U
78-59 1	I ophorone	10	U	118 74 1	Hexachloroben ene	10	U
88 75 5	2-Nitrophenol	10	U	87 86-5	Pentachlorophenol	2	6J
105 67 9	2,4-Dimethylphenol	10	U	85 1 8	Phenanthrene	4	2J
65-85 0	Benzoic Acid	50	U	120 12 7	Anthracene	10	U
111 91 1	bis(2 Chloroethoxy)Methane	10	U	84-74-2	Di-n-Butylphthalate	1	0J
120 83 2	2,4-Dichlorophenol	10	U	206 44 0	Fluoranthene	2	1J
120-82 1	1 2,4 Trichloroben ene	10	U	129 00 0	Pyrene	10	U
91-20 3	Naphthalene	10	U	85 68 7	Butylben ylphthalate	10	U
106-47 8	4-Chloroaniline	10	U	91-94 1	3,3 Dichloroben idine	20	U
87-68-3	Hexachlorobutadiene	10	U	56 55-3	Benzo(a)Anthracene	10	U
59 50-7	4-Chloro 3-Methylphenol	10	U	117 81-7	bis(2-Ethylhexyl)Phthalate	1	2J
91-57-6	2-Methylnaphthalene	10	U	218 01-9	Chrysene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U	117-84-0	Di-n-Octyl Phthalate	10	U
88-06 2	2,4,6 Trichlorophenol	10	U	205 99-2	Benzo(b)Fluoranthene	10	U
95-95 4	2,4,5 Trichlorophenol	50	U	207 08 9	Ben o(k)Fluoranthene	10	U
91-58 7	2 Chloronaphthalene	10	U	50 32 8	Benzo(a)Pyrene	10	U
88-74-4	2 Nitroaniline	50	U	193 39 5	Indeno(1,2,3 cd)Pyrene	10	U
131 11 3	Dimethyl Phthalate	10	U	53 70-3	Dibenz(a h)Anthracene	10	U
208 96 8	Acenaphthylene	10	U	191 24-2	Benzo(g,h,i)Perylene	10	U
99-09-2	3-Nitroaniline	50	U				

(1) - Cannot be separated from diphenylamine

Laboratory Name WESTON

Case No 5445

Sample Number F2086

Organics Analysis Data Sheet (Page 3)

71

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted Prepared 1-11-86

Date Analyzed 1-30-86

Conc Dil Factor 1

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☑Yes

CAS Number		(ug/L or ug/Kg (Circle One))
319 84 6	Alpha BHC	0.05 U
319 85 7	Beta BHC	0.05 U
319 86 8	Delta BHC	0.05 U
58 89 9	Gamma BHC (Lindane)	0.05 U
76 44 8	Heptachlor	0.05 U
309 00 2	Aldrin	0.05 U
1024 57 3	Heptachlor Epoxide	0.05 U
959 98 8	Endosulfan I	0.05 U
60 57 1	Dieldrin	0.1 U
72 55 9	4 4 DDE	0.1 U
72 20 8	Endrin	0.1 U
33213 65 9	Endosulfan II	0.1 U
72 54 8	4 4 DDD	0.1 U
1031 07 8	Endosulfan Sulfate	0.1 U
50 29 3	4 4 DDT	0.1 U
72 43 5	Methoxychlor	0.5 U
53494 70 5	Endrin Ketone	0.1 U
57 74 9	Chlordane	0.5 U
8001 35 2	Toxaphene	1.0 U
12674 11 2	Aroclor 1016	0.5 U
11104 28 2	Aroclor 1221	0.5 U
11141 16 5	Aroclor 1232	0.5 U
53469 21 9	Aroclor 1242	0.5 U
12672 29 6	Aroclor 1248	0.5 U
11097 69 1	Aroclor 1254	1.0 U
11096 82 5	Aroclor 1260	1.0 U

V_i Volume of extract injected (ul)

V_s Volume of water extracted (ml)

W_s Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s 1000 or W_s _____ V_t 10,000 V_i 32

Laboratory Name WESTON

Case No

Sample Number F2086

0117B1694 71

CASE 5445

6801-6781

Organics Analysis Data Sheet (Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1	—	Unknown HC	ABN	1454	6J
2	—	"		1543	7J
3	—	"		1628	5J
4					
5		None found	CF		
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Pond #7

Sample Number
F2087

Organics Analysis Data Sheet
(Page 1)

715

Laboratory Name WESTON
Case No 5445
Lab Sample ID No 8601-464-0090
QC Report No NA
Sample Matrix Water
Contract No 6801-6781
Data Release Authorized By [illegible]
Date Sample Received Jan 11, 1986

Volatile Compounds

Concentration (Low) Medium (Circle One)
Date Extracted/Prepared Jan 13, 1986
Date Analyzed Jan 13, 1986
Conc/(Dil Factor) 1 pH 4.20
Percent Moisture (Not Decanted) NA

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	10U
74 83 9	Bromomethane	1
75 01 4	Vinyl Chloride	1
75 00 3	Chloroethane	1
75 09 2	Methylene Chloride	1JB
67 64 1	Acetone	13
75 15 0	Carbon Disulfide	5U
75 35 4	1 1 Dichloroethene	1
75 34 3	1 1 Dichloroethane	1
156 60 5	Trans 1 2 Dichloroethene	1
67 66 3	Chloroform	1
107 06 2	1 2 Dichloroethane	1
78 93 3	2 Butanone	10U
71 55 6	1 1 1 Trichloroethane	5U
56 23 5	Carbon Tetrachloride	1
108 05 4	Vinyl Acetate	10U
75 27 4	Bromodichloromethane	5U

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	5U
10061 02 6	Trans 1 3 Dichloropropene	1
79 01 6	Trichloroethene	1
124 48 1	Dibromochloromethane	1
79 00 5	1 1 2 Trichloroethane	1
71 43 2	Benzene	1
10061 01 5	cis 1 3 Dichloropropene	1
110 75 8	2 Chloroethylvinylether	10U
75 25 2	Bromoform	5U
591 78 6	4 Methyl 2 Pentanone	10U
108 10 1	2 Hexanone	1
127 18 4	Tetrachloroethene	5U
79 34 5	1 1 2 2 Tetrachloroethane	1
108 88 3	Toluene	1
108 90 7	Chlorobenzene	1
100 41 4	Ethylbenzene	1
100 42 5	Styrene	1
	Total Xylenes	1

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used Additional flags or footnotes explaining results are encouraged However the definition of each flag must be explicit

Value If the result is a value greater than or equal to the detection limit report the value

U Indicates compound was analyzed for but not detected Report the minimum detection limit for the sample with the U (e g 10U) based on necessary concentration/dilution factor (This is not necessarily the instrument detection limit) The footnote should read U Compound was analyzed for but not detected The number is the minimum attainable detection limit for the sample

J Indicates an estimated value This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e g 10J) If limit of detection is 10 µg l and a concentration of 3 µg l is calculated report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC MS Single component pesticides ≥10 ng ul in the final extract should be confirmed by GC MS

B This flag is used when the analyte is found in the blank as well as a sample It indicates possible probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results If used they must be fully described and such description attached to the data summary report

000436

Form I

10/85

Laboratory Name R F WESTON INC
Case No 5445

Sample Number
F2087

ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration LOW
Date Extracted/Prepared 01/12/86
Date Analyzed 01/17/86
Conc/Dil Factor 1
Percent Moisture (Decanted) _____

GPC Cleanup __ Ye _X_ No
Separatory Funnel Extraction _X_ Ye
Continuous Liquid-Liquid Extraction __ Ye

CAS Number		UG/L		CAS Number		UG/L	
108-95-2	Phenol	10	U	83-32-9	Acenaphthene	1.7	J
111-44-4	bis(2-Chloroethyl)Ether	10	U	51-28-5	2,4-Dinitrophenol	50	U
95-57-8	2-Chlorophenol	10	U	100-02-7	4-Nitrophenol	50	U
541-73-1	1,3-Dichlorobenzene	10	U	132-64-9	Dibenzofuran	2.0	J
106-46-7	1,4-Dichlorobenzene	10	U	121-14-2	2,4-Dinitrotoluene	10	U
100-51-6	Benzyl Alcohol	10	U	606-20-2	2,6-Dinitrotoluene	0.9	J
95-50-1	1,2-Dichlorobenzene	10	U	84-66-2	Diethylphthalate	1	J
95-48-7	2-Methylphenol	10	U	7005-72-3	4-Chlorophenyl-phenylether	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U	86-73-7	Fluorene	1.6	J
106-44-5	4-Methylphenol	10	U	100-10-6	4-Nitroaniline	50	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U	534-52-1	4,6-Dinitro-2-Methylphenol	50	U
67-72-1	Hexachloroethane	10	U	86-30-6	N-Nitrosodiphenylamine (1)	10	U
98-95-3	Nitrobenzene	10	U	101-55-3	4-Bromophenyl-phenylether	10	U
78-59-1	Isophorone	10	U	118-74-1	Hexachlorobenzene	10	U
88-75-5	2-Nitrophenol	10	U	87-86-5	Pentachlorophenol	50	U
105-67-9	2,4-Dimethylphenol	10	U	85-01-8	Phenanthrene	3.1	J
65-85-0	Benzoic Acid	50	U	120-12-7	Anthracene	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U	84-74-2	Di-n-Butylphthalate	10	U
120-83-2	2,4-Dichlorophenol	10	U	206-44-0	Fluoranthene	2.2	J
120-82-1	1,2,4-Trichlorobenzene	10	U	129-00-0	Pyrene	10	U
91-20-3	Naphthalene	2	1J	85-68-7	Butylbenzylphthalate	10	U
106-47-8	4-Chloroaniline	10	U	91-94-1	3,3'-Dichlorobenzidine	20	U
87-68-3	Hexachlorobutadiene	10	U	56-55-3	Benzo(a)Anthracene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U	117-81-7	bis(2-Ethylhexyl)Phthalate	1.7	J
91-57-6	2-Methylnaphthalene	3.0	J	218-01-9	Chrysene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U	117-84-0	Di-n-Octyl Phthalate	10	U
88-06-2	2,4,6-Trichlorophenol	10	U	205-99-2	Benzo(b)Fluoranthene	10	U
95-95-4	2,4,5-Trichlorophenol	50	U	207-08-9	Benzo(k)Fluoranthene	10	U
91-58-7	2-Chloronaphthalene	10	U	50-32-8	Benzo(a)Pyrene	10	U
88-74-4	2-Nitroaniline	50	U	193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
131-11-3	Dimethyl Phthalate	10	U	53-70-3	Dibenz(a,h)Anthracene	10	U
208-96-8	Acenaphthylene	10	U	191-24-2	Benzo(g,h,i)Perylene	10	U
99-09-2	3-Nitroaniline	50	U				

(1) - Cannot be separated from diphenylamine

Laboratory Name WESTON

Case No 5445

Sample Number F3282

Organics Analysis Data Sheet
(Page 3)

7 J

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted Prepared 1-11-86

Date Analyzed 1-30 86

Conc Dil Factor 1

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☑Yes

CAS Number		(ug/l or ug/Kg (Circle One))
319 84 6	Alpha BHC	.07 U
319 85 7	Beta BHC	.07 U
319 86 8	Delta BHC	.07 U
58 89 9	Gamma BHC (Lindane)	.07 U
76 44 8	Heptachlor	.07 U
309 00 2	Aldrin	.07 U
1024 57 3	Heptachlor Epoxide	.07 U
959 98 8	Endosulfan I	.01 U
60 57 1	Dieldrin	.13 U
72 55 9	4 4 DDE	.13 U
72 20 8	Endrin	.13 U
33213 65 9	Endosulfan II	.13 U
72 54 8	4 4 DDD	.13 U
1031 07 8	Endosulfan Sulfate	.13 U
50 29 3	4 4 DDT	.13 U
72 43 5	Methoxychlor	.74 U
53494 70 5	Endrin Ketone	.13 U
57 74 9	Chlordane	.70 U
8001 35 2	Toxaphene	1.30 U
12674 11 2	Aroclor 1016	.74 U
11104 28 2	Aroclor 1221	.74 U
11141 16 5	Aroclor 1232	.74 U
53469 21 9	Aroclor 1242	.70 U
12672 29 6	Aroclor 1248	.70 U
11097 69 1	Aroclor 1254	1.30 U
11096 82 5	Aroclor 1260	1.30 U

V_t Volume of extract injected (ul)

V_s - Volume of water extracted (ml)

W_s Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s 750 or W_s _____ V_t 10,000 V_i 3 ul

Laboratory Name WESTON

Case No

Sample Number F2087

01178 1695 751

CASE 5445

6801-6781

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug kg)
1	—	Trichloro Phenol	ABN	1302	5J
2		None Other			
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
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29					
30					

POND #3

Sample Number
F208V

Organics Analysis Data Sheet
(Page 1)

TSC

Laboratory Name: WESTON
Case No: 5445
Lab Sample ID No: 8601-464-0050
QC Report No: NA
Sample Matrix: (Water)
Contract No: 6801-6781
Data Release Authorized By: (signature)
Date Sample Received: Jan 11, 1986

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: Jan 13, 1986
Date Analyzed: Jan 13, 1986
Conc/Dil Factor: 1 pH: 5.95
Percent Moisture (Not Decanted): NA

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	10U
74 83 9	Bromomethane	"
75 01 4	Vinyl Chloride	"
75 00 3	Chloroethane	"
75-09 2	Methylene Chloride	4JB
67 64 1	Acetone	56
75 15 0	Carbon Disulfide	5U
75 35 4	1 1 Dichloroethene	"
75 34 3	1 1 Dichloroethane	"
156 60 5	Trans 1 2 Dichloroethene	"
67 66 3	Chloroform	"
107 06 2	1 2 Dichloroethane	"
78 93 3	2 Butanone	11
71 55 6	1 1 1 Trichloroethane	5U
56 23 5	Carbon Tetrachloride	"
108 05 4	Vinyl Acetate	10U
75 27 4	Bromodichloromethane	5U

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	5U
10061 02 6	Trans 1 3 Dichloropropene	"
79 01 6	Trichloroethene	"
124 48 1	Dibromochloromethane	"
79 00 5	1 1 2 Trichloroethane	"
71 43 2	Benzene	"
10061 01 5	cis 1 3 Dichloropropene	"
110 75 8	2 Chloroethylvinylether	10U
75 25 2	Bromoform	5U
591 78 6	4 Methyl 2 Pentanone	10U
108 10 1	2 Hexanone	"
127 18 4	Tetrachloroethene	5U
79 34 5	1 1 2 2 Tetrachloroethane	"
108 88 3	Toluene	"
108 90 7	Chlorobenzene	"
100 41 4	Ethylbenzene	"
100 42 5	Styrene	"
	Total Xylenes	"

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used *Additional flags or footnotes explaining results are encouraged* However the definition of each flag must be explicit

Value If the result is a value greater than or equal to the detection limit report the value

U Indicates compound was analyzed for but not detected Report the minimum detection limit for the sample with the U (e g 10U) based on necessary concentration dilution factor (This is not necessarily the instrument detection limit) The footnote should read U Compound was analyzed for but not detected The number is the minimum attainable detection limit for the sample

J Indicates an *estimated* value This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e g 10J) If limit of detection is 10 µg l and a concentration of 3 µg l is calculated report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC MS Single component pesticides ≥10 ng ul in the final extract should be confirmed by GC MS

B This flag is used when the analyte is found in the blank as well as a sample It indicates possible probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results If used they must be fully described and such description attached to the data summary report

000440

Laboratory Name R F WESTON INC
Case No 5445

Sample Number
F2088

ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration LOW
Date Extracted Prepared 01/17/96
Date Analyzed 01/18/96
Dil Factor 10.00
Percent Moisture (Decanted)

GPC Cleanup ___ Yes _X_ No
Separatory Funnel Extraction _X_ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		UG/L		CAS Number		UG/L	
108-95-2	Phenol	100	U	83-32-9	Acenaphthene	16	J
111-44-4	bis(2 Chloroethyl)Ether	100	U	51 28-5	2,4-Dinitrophenol	500	U
95 57 8	2 Chlorophenol	100	U	100 02 7	4 Nitrophenol	500	U
541-73 1	1,3 Dichlorobenzene	100	U	132 64-9	Dibenzofuran	100	U
106 46 7	1,4 Dichlorobenzene	100	U	121-14 2	2,4-Dinitrotoluene	100	U
100-51 6	Benzyl Alcohol	100	U	606-20 2	2,6-Dinitrotoluene	100	U
9 1	1,2-Dichlorobenzene	10	U	84 66-	Diethylphthalate	100	U
95-48 7	2-Methylphenol	100	U	7005 72 3	4-Chlorophenyl-phenylether	100	U
39638-32-9	bis(2 Chloroisopropyl)Ether	100	U	86 73-7	Fluorene	17	J
106-44-5	4-Methylphenol	100	U	100 10-6	4-Nitroaniline	500	U
621-64-7	N Nitroso-Di-n-Propylamine	100	U	534-52-1	4,6-Dinitro 2-Methylphenol	500	U
67-72 1	Hexachloroethane	100	U	86 30 6	N-Nitrosodiphenylamine (1)	100	U
98 95 3	Nitrobenzene	100	U	101 55 3	4-Bromophenyl phenylether	100	U
78-59 1	Isophorone	100	U	118 74-1	Hexachlorobenzene	100	U
88 75 5	2 Nitrophenol	100	U	87 86-5	Pentachlorophenol	1400	
105-67-9	2,4-Dimethylphenol	100	U	85 01 8	Phenanthrene	56	J
65-85 0	Benzoic Acid	500	U	120 12 7	Anthracene	100	U
111 91-1	bis(2 Chloroethoxy)Methane	100	U	84 74-2	Di-n-Butylphthalate	100	U
120 83-2	2,4 Dichlorophenol	100	U	206 44-0	Fluoranthene	92	J
120-82 1	1,2,4-Trichlorobenzene	100	U	129 00-0	Pyrene	53	J
91-20 3	Naphthalene	100	U	85-68-7	Butylbenzylphthalate	100	U
106-47-8	4-Chloroaniline	100	U	91-94 1	3,3 Dichlorobenzidine	200	U
87-68 3	Hexachlorobutadiene	100	U	56 55 3	Benzo(a)Anthracene	100	U
59-50-7	4-Chloro-3-Methylphenol	100	U	117-81-7	bis(2-Ethylhexyl)Phthalate	100	U
91-57 6	2-Methylnaphthalene	100	U	218 01-9	Chrysene	16	J
77-47-4	Hexachlorocyclopentadiene	100	U	117-84-0	Di-n-Octyl Phthalate	100	U
88 06-2	2,4,6 Trichlorophenol	100	U	205-99 2	Benzo(b)Fluoranthene	100	U
95-95-4	2,4,5 Trichlorophenol	500	U	207-08-9	Benzo(k)Fluoranthene	100	U
91-58-7	2-Chloronaphthalene	100	U	50 32-8	Benzo(a)Pyrene	100	U
88 74-4	2-Nitroaniline	500	U	193 39-5	Indeno(1,2,3-cd)Pyrene	100	U
131 11-3	Dimethyl Phthalate	100	U	53 70-3	Dibenz(a,h)Anthracene	100	U
208-96 8	Acenaphthylene	100	U	191-24-2	Benzo(g,h,i)Perylene	100	U
99-09-2	3-Nitroaniline	500	U				

(1) - Cannot be separated from diphenylamine

Laboratory Name WESTON

Case No 5005

Sample Number F2088

Organics Analysis Data Sheet
(Page 3)

TS

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted Prepared 1-11-86

Date Analyzed 1-30-86

Conc (Dil Factor) 10

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☒Yes

CAS Number		ug/l or ug/Kg (Circle One)
319 84 6	Alpha BHC	50 U
319 85 7	Beta BHC	50 U
319 86 8	Delta BHC	50 U
58 89 9	Gamma BHC (Lindane)	50 U
76 44 8	Heptachlor	50 U
309 00 2	Aldrin	50 U
1024 57 3	Heptachlor Epoxide	50 U
959 98 8	Endosulfan I	50 U
60 57 1	Dieldrin	100 U
72 55 9	4 4 DDE	100 U
72 20 8	Endrin	100 U
33213 65 9	Endosulfan II	100 U
72 54 8	4 4 DDD	100 U
1031 07 8	Endosulfan Sulfate	100 U
50 29 3	4 4 DDT	100 U
72 43 5	Methoxychlor	500 U
53494 70 5	Endrin Ketone	100 U
57 74 9	Chlordane	500 U
8001 35 2	Toxaphene	1000 U
12674 11 2	Aroclor 1016	500 U
11104 28 2	Aroclor 1221	500 U
11141 16 5	Aroclor 1232	500 U
53469 21 9	Aroclor 1242	500 U
12672 29 6	Aroclor 1248	500 U
11097 69 1	Aroclor 1254	1000 U
11096 82 5	Aroclor 1260	1000 U

V_i Volume of extract injected (ul)

V_s Volume of water extracted (ml)

W_s Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s 1000 or W_s _____ V_t 10000 V_i 5

Laboratory Name WESTON

Case No

Sample Number F2088

0118B1698

Case 5445

6801 - 6781

Organics Analysis Data Sheet (Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug kg)
1		Unknown HC	ABN	1160	83J
2		Tetrachloro phenol		1203	100J
3		Unknown HC		1263	140J
4		Unknown		1272	120J
5		Unknown HC		1311	66J
6		Unknown HC		1362	180J
7		" "		1455	200J
8		" "		1463	66J
9		" "		1545	250J
10		Unknown		1598	86J
11		Unknown HC		1630	220J
12		"		1712	300J
13		Unknown		1745	91J
14		Unknown HC		1790	140J
15					
16		None found			
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Sample Number
F2089

Organics Analysis Data Sheet
(Page 1)

5 11

Laboratory Name WESTON
Case No 5445
Lab Sample ID No 8601-464-0020
QC Report No NA
Sample Matrix Water
Contract No 6801-6781
Data Release Authorized By
Date Sample Received Jan 11, 1986

Volatile Compounds

Concentration (Low) Medium (Circle One)
Date Extracted/(Prepared) Jan 13, 1986
Date Analyzed Jan 13, 1986
Conc/(Dil Factor) 1 pH 6.25
Percent Moisture (Not Decanted) NA

CAS Number		(ug/l) or ug/Kg (Circle One)
74 87 3	Chloromethane	10U
74 83 9	Bromomethane	"
75 01 4	Vinyl Chloride	"
75 00 3	Chloroethane	"
75-09 2	Methylene Chloride	1JB
67 64 1	Acetone	10U
75 15 0	Carbon Disulfide	5U
75 35 4	1 1 Dichloroethene	"
75 34 3	1 1 Dichloroethane	"
156 60 5	Trans 1 2 Dichloroethene	"
67 66 3	Chloroform	"
107 06 2	1 2 Dichloroethane	"
78 93 3	2 Butanone	10U
71 55 6	1 1 1 Trichloroethane	5U
56 23 5	Carbon Tetrachloride	"
108 05 4	Vinyl Acetate	10U
75 27 4	Bromodichloromethane	5U

CAS Number		(ug/l) or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	5U
10061-02 6	Trans 1 3 Dichloropropene	"
79-01 6	Trichloroethene	"
124 48 1	Dibromochloromethane	"
79 00 5	1 1 2 Trichloroethane	"
71 43 2	Benzene	"
10061 01 5	cis 1 3 Dichloropropene	"
110 75 8	2 Chloroethylvinylether	10U
75 25 2	Bromoform	5U
591 78 6	4 Methyl 2 Pentanone	10U
108 10 1	2 Hexanone	"
127 18 4	Tetrachloroethene	5U
79 34 5	1 1 2 2 Tetrachloroethane	"
108 88 3	Toluene	"
108 90 7	Chlorobenzene	"
100 41 4	Ethylbenzene	"
100 42 5	Styrene	"
	Total Xylenes	"

Data Reporting Qualifiers

For reporting esults to EPA the following results qualifiers are used
Additional flags or footnotes explaining esults are encouraged However the def nition of each flag must be explicit

Value — If the esult s a alue greater than or equal to the detection l mit report the alue

U — Ind cates compound was analyzed for but not detected Report the m n mum detect on l m t for the sample w th the U (e g 10U) based on necessary concentrat on dilution act on (Th s s not necessar ly the nstrument detect on l m t) The footnote should read U Compound was analyzed for but not detected The number s the m n mum atta nable detect on l m t for the sample

J — Ind cates an est mated alue Th s flag s used either when est mat ng a concentrat on for tentat vely dentif ed compounds whe e a 1 1 esponse s assumed or when the mass spectral data nd cated the p esence of a compound that meets the dent f cat on c te a but the esult s less than the spec f ed detect on l m t but g eate than ze o (e g 10J) If l m t of detect on s 10 µg l and a t at on of 3 µg l s calculated eport as 3J

C — Th s flag appl es to pest c de parameters where the dent f cat on has been conf rmed by GC MS S ngle component pestic des ≥10 ng ul n the f nal e tract should be conf med by GC MS

B — Th s flag s sed when the analyte s found n the blank as well as a sample It nd cates possible probable blank conta n nat on and warns the data use to take app op ate act on

Other — Other specif c flags and footnotes may be equ ed to p operly def ne the esults If used they must be fully descr bed and such desc pt on attached to the data summary eport

000445

Laboratory Name R F WESTON INC
Case No 5445

Sample Number F2089

MARCUM WELL

S1

ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration LOW
Date Extracted Prepared 01 13/86
Date Analyzed 01/17/86
Conc/Dil Factor 1
Percent Moisture (Decanted)

GPC Cleanup __ Yes X No
Separatory Funnel Extraction X Ye
Continuous Liquid Liquid Extraction __ e

CAS Number		UG/L		CAS Number		UG/L	
108 95 2	Phenol	10	U	83 32 9	Acenaphthene	10	U
111-44-4	bis (2-Chloroethyl)Ether	10	U	51 28 5	2,4 Dinitrophenol	50	U
95 57 8	2 Chlorophenol	10	U	100 02 7	4-Nitrophenol	50	U
541 73-1	1 3 Dichloroben ene	10	U	132-64-9	Dibenzofuran	10	U
1 6 46 7	1 4 Dichlorobenzene	10	U	121 14 2	2 4-Dinitrotoluene	10	U
100 51 6	B yl Alcohol	10	U	606 20 2	2 6-Dinitrotoluene	10	U
95 50 1	1 Dichloroben ene	10	U	84 66 2	iethylphthalate	10	U
95 48 7	2 Methylphenol	10	U	7005 72-3	4 Chlorophenyl phenylether	10	U
39638 32-9	bis (2-Chloroisopropyl)Ether	10	U	86-73 7	Fluorene	10	U
106 44-5	4 Methylphenol	10	U	100 10 6	4-Nitroaniline	50	U
621 64-7	N Nitroso-Di n-Propylamine	10	U	534 52 1	4 6 Dinitro 2 Methylphenol	50	U
67 72-1	Hexachloroethane	10	U	86 30 6	N Nitro sodiphenylami (1)	10	U
98 95 3	N tr ben ene	10	U	101 55 3	4-Bromophenyl phenylethe	10	U
78 59-1	Isophorone	10	U	118 74-1	He achlorobenzene	10	U
88-75 5	o Nitrophenol	10	U	87 86 5	Pentachlorophenol	50	U
105 67-9	2 4 Dimethylphenol	10	U	85-01 8	Phenanthrene	10	U
65 85 0	Be oic Acid	50	U	120 12 7	Anthracene	10	U
111 91 1	bis (2-Chloroethoxy)Methane	10	U	84-74 2	Di-n Butylphthalate	10	U
120 83 2	2,4-Dichlorophenol	10	U	206 44 0	Fluoranthene	10	U
120-82-1	1,2,4 Trichlorobenzene	10	U	129 00 0	P rene	10	U
91 20 3	Naphthalene	10	U	85 68-7	Butylbenzylphthalate	10	U
106 47-8	4 Chloroaniline	10	U	91 94-1	3,3 -Dichloroben dine	20	U
87 68 3	Hexachlorobutadiene	10	U	56 55 3	Benzo(a)Anthracene	10	U
59 50-7	4 Chloro 3 Methylphenol	10	U	117 81-7	bis(2-Ethylhexyl)Phthalate	10	U
91-57-6	2-Methylnaphthalene	10	U	218 01-9	Chrysene	10	U
77 47-4	Hexachlorocyclopentadiene	10	U	117 84 0	Di-n-Octyl Phthalate	10	U
88-06 2	2,4,6-Trichlorophenol	10	U	205 99-2	Ben o(b)Fluoranthene	10	U
95 95 4	2,4,5-Trichlorophenol	50	U	207 08 9	Benzo(k)Fluoranthene	10	U
91 58 7	2-Chloronaphthalene	10	U	50-32 8	Benzo(a)Pyrene	10	U
88 74-4	2 Nitroaniline	50	U	193 39-5	Indeno(1 2,3 cd)Pyrene	10	U
131 11 3	Dimethyl Phthalate	10	U	53 70-3	Diben (a h)Anthrace e	10	U
208 96 8	Ace aphthylene	10	U	191 24-2	Ben o(g,h,i)Perylene	10	U
99 09 2	3-Nitroaniline	50	U				

(1) Cannot be separated from diphenylamine

Form I

Laboratory Name R F WESTON INC
Case No 5445

Sample Number
F2089RE

ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration LOW
Date Extracted/Prepared 01 30/86
Date Analyzed 02/04/86
Conc/Dil Factor 1
Percent Moisture (Decanted) _____

GPC Cleanup ___ Yes _X_ No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		UG/L		CAS Number		UG/L	
108-95-2	Phenol	10	U	83-32-9	Acenaphthene	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U	51-28-5	2,4-Dinitrophenol	50	U
95-57-8	2-Chlorophenol	10	U	100-02-7	4-Nitrophenol	50	U
541-73-1	1,3-Dichlorobenzene	10	U	132-64-9	Dibenzofuran	10	U
106-46	1,4-Dichlorobenzene	10	U	121-14-2	2,4-Dinitrotoluene	10	U
100-51-6	Benzyl Alcohol	10	U	606-20-2	2,6-Dinitrotoluene	10	U
95-50-1	1,2-Dichlorobenzene	10	U	84-66-2	Diethylphthalate	10	U
95-48-7	2-Methylphenol	10	U	7005-72-3	4-Chlorophenyl-phenylether	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U	86-73-7	Fluorene	10	U
106-44-5	4-Methylphenol	10	U	100-01-6	4-Nitroaniline	50	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U	534-52-1	4,6-Dinitro-2-Methylphenol	50	U
67-72-1	Hexachloroethane	10	U	86-30-6	N-Nitrosodiphenylamine (1)	10	U
98-95-3	Nitrobenzene	10	U	101-55-3	4-Bromophenyl-phenylether	10	U
78-59-1	Isophorone	10	U	118-74-1	Hexachlorobenzene	10	U
88-75-5	2-Nitrophenol	10	U	87-86-5	Pentachlorophenol	50	U
105-67-9	2,4-Dimethylphenol	10	U	85-01-8	Phenanthrene	10	U
65-85-0	Benzoic Acid	50	U	120-12-7	Anthracene	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U	84-74-2	Di-n-Butylphthalate	10	U
120-83-2	2,4-Dichlorophenol	10	U	206-44-0	Fluoranthene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U	129-00-0	Pyrene	10	U
91-20-3	Naphthalene	10	U	85-68-7	Butylbenzylphthalate	10	U
106-47-8	4-Chloroaniline	10	U	91-94-1	3,3'-Dichlorobenzidine	20	U
87-68-3	Hexachlorobutadiene	10	U	56-55-3	Benzo(a)Anthracene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U	117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
91-57-6	2-Methylnaphthalene	10	U	218-01-9	Chrysene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U	117-84-0	Di-n-Octyl Phthalate	10	U
88-06-2	2,4,6-Trichlorophenol	10	U	205-99-2	Benzo(b)Fluoranthene	10	U
95-95-4	2,4,5-Trichlorophenol	50	U	207-08-9	Benzo(k)Fluoranthene	10	U
91-58-7	2-Chloronaphthalene	10	U	50-32-8	Benzo(a)Pyrene	10	U
88-74-4	2-Nitroaniline	50	U	193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
131-11-3	Dimethyl Phthalate	10	U	53-70-3	Dibenz(a,h)Anthracene	10	U
208-96-8	Acenaphthylene	10	U	191-24-2	Benzo(g,h,i)Perylene	10	U
99-09-2	3-Nitroaniline	50	U				

(1) Cannot be separated from diphenylamine

Laboratory Name WESTON

Case No 5445

Sample Number F 2089

Organics Analysis Data Sheet (Page 3)

51

Pesticide / PCBs

Concentration (Low) Medium (Circle One)

Date Extracted Prepared 1-11-86

Date Analyzed 1-31-86

Conc Dil Factor 1

Percent Moisture (decanted) _____

GPC Cleanup ☐ Yes ☑ No

Separatory Funnel Extraction ☐ Yes

Continuous Liquid Liquid Extraction ☑ Yes

CAS Number		ug/l or ug/Kg (Circle One)
3 9 84 6	Alpha BHC	0.05 U
319 85 7	Beta BHC	0.05 U
319 86 8	Delta BHC	0.05 U
58 89 9	Gamma BHC (Lindane)	0.05 U
76 44 8	Heptachlor	0.05 U
309 00 2	Aldrin	0.05 U
1024 57 3	Heptachlor Epoxide	0.05 U
959 98 8	Endosulfan I	0.05 U
60 57 1	Dieldrin	0.10 U
72 55 9	4 4 DDE	0.10 U
72 20 8	Endrin	0.1 U
33213 65 9	Endosulfan II	0.1 U
72 54 8	4 4 DDD	0.1 U
1031 07 8	Endosulfan Sulfate	0.1 U
50 29 3	4 4 DDT	0.1 U
72 43 5	Methoxychlor	0.5 U
53494 70 5	Endrin Ketone	0.1 U
57 74 9	Chlordane	0.5 U
8001 35 2	Toxaphene	1.0 U
12674 11 2	Aroclor 1016	0.5 U
11104 28 2	Aroclor 1221	0.5 U
11141 16 5	Aroclor 1232	0.5 U
53469 21 9	Aroclor 1242	0.5 U
12672 29 6	Aroclor 1248	0.5 U
11097 69 1	Aroclor 1254	1.0 U
11096 82 5	Aroclor 1260	1.0 U

V_i Volume of extract injected (ul)

V_s Volume of water extracted (ml)

W_s Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s 1000 or W_s _____ V_t 10,000 V_i 3.2

Laboratory Name WESTON

Case No

Sample Number F2089

0117 31690

CASE 5445

6801-6781

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug kg)
1	—	Unknown	ABN	312	4J
2	—	Unknown	↓	800	15J
3		[illegible]	[illegible]		
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
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22					
23					
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25					
26					
27					
28					
29					
30					

Laboratory Name WESTON

Case No 5445

Sample Number F2C89RE

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug kg)
1	—	Unknown	BNA	437	7J
2	—	"	"	441	6J
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
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21					
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26					
27					
28					
29					
30					

Sample Number
0113W0024081/Blank VC

LAB BLANK - P1.5
MBI Blank - Bna

Organics Analysis Data Sheet
(Page 1)

Laboratory Name WESTON
Lab Sample ID No 8601-454-Blank
Sample Matrix Water
Data Release Authorized By Contract

Case No 5445
QC Report No NA
Contract No 6801-6781
Date Sample Received NA

Volatile Compounds

Concentration (Low) Medium (Circle One)
Date Extracted/(Prepared) Jan 13, 1986
Date Analyzed Jan 13, 1986
Conc/(Dil Factor) 1 pH 7.0
Percent Moisture (Not Decanted) NA

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	10U
74 83 9	Bromomethane	"
75 01 4	Vinyl Chloride	"
75 00 3	Chloroethane	"
75 09 2	Methylene Chloride	2J
67 64 1	Acetone	10U
75 15 0	Carbon Disulfide	5U
75 35 4	1 1 Dichloroethene	"
75 34 3	1 1 Dichloroethane	"
156 60 5	Trans 1 2 Dichloroethene	"
67 66 3	Chloroform	"
107 06 2	1 2 Dichloroethane	"
78 93 3	2 Butanone	10U
71 55 6	1 1 1 Trichloroethane	5U
56 23 5	Carbon Tetrachloride	"
108 05 4	Vinyl Acetate	10U
75 27 4	Bromodichloromethane	5U

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	5U
10061 02 6	Trans 1 3 Dichloropropene	"
79 01 6	Trichloroethene	"
124 48 1	Dibromochloromethane	"
79 00 5	1 1 2 Trichloroethane	"
71 43 2	Benzene	"
10061 01 5	cis 1 3 Dichloropropene	"
110 75 8	2 Chloroethylvinylether	10U
75 25 2	Bromoform	5U
591 78 6	4 Methyl 2 Pentanone	10U
108 10 1	2 Hexanone	"
127 18 4	Tetrachloroethene	5U
79 34 5	1 1 2 2 Tetrachloroethane	"
108 88 3	Toluene	"
108 90 7	Chlorobenzene	"
100 41 4	Ethylbenzene	"
100 42 5	Styrene	"
	Total Xylenes	"

Data Report ng Qual f ers

For report ng results to EPA the following results qual f ers are sed Additional flags or footnotes explaining results are encouraged However the def n tion of each flag must be expl c t

Value If the es lt s a al e g eate than or equal to the detection l m t epo t the alue

U Ind cates compo nd was analyzed for but not detected Report the m mum detect o l m t for the sample w th the U (e g 10U) based on necessa y concentrat on d l t on act on (Th s s not necessa ly the nst ument detect on l m t) The footnote should ead U Compo nd was analyzed fo but not detected The number s the m n mum atta nable detect on l m t for the sample

J Ind cates a est mated al e Th s flag s sed e the when est mat ng a concent at on for tentat ely dent f ed compounds whe e a 1 1 esponse s assumed or when the mass spectral data d cated the p esence of a compound that meets the de t f cat on c te a but the esult s less than the spec f ed detect on l m t b t greate tha ze o (e g 10J) If l m t of detect on s 10 µg l and a ntrat on of 3 µg l s calculated report as 3J

C Th s flag appl es to pest c de pa ameters whe e the de t f cat on has been conf med by GC MS S ngle component pest c des ≥10 ng l n the f nal e t act should be conf med by GC MS

B Th s flag s used when the a alyte s fo nd the bla k as well as a sample It nd cates poss ble p obable blank conta n at on and wa ns the data ser to take approp ate act on

Other Other spec f c flags and footnotes may be eq ed to p ope ly def ne the esults If sed they must be f lly desc bed and s ch desc pt on attached to the data summary epo t

000451

Lab ratory Name R dESTUN INC
Ca e No 44

Sample Number
MB1

ORGANICS ANALYSIS DATA SHEET

SEMIVOLATILE COMPOUNDS

r tration LOW
Dat E t acted P par d 1 13 8o
Lat m a ed 1/17 8o
Cc c D i F tor 1
Pe nt Mo ture Decant d

GPC Cleanup ___ Yes ___ No
epa atory Funnel E tr t on Y Ye
Continuous L quid iquid E traction ___ /e

CAS Number		UG/L		CAS Number		UG/L	
108 95 2	Phenol	10	U	83-32-9	Acenaphthene	10	U
1 1 44 4	bi 2 Chl ro th l)Ether	10	U	51 28 5	2 4-Dinitrophenol	50	U
95 57 8	2 Chlorophenol	10	U	100 02-7	4 Nitrophenol	50	U
541 73 1	1 ichloroben ene	10	U	132 64-9	Dibenzofuran	1	U
106 46-	1 4 Di hloroben ene	10	U	121-14-2	2 4 Dinitrotoluene	10	U
1	1 o	Ben l Alcohol	10	U	606 20-2	2,6-Dinitrotoluene	10	U
95 50 1	1 2 C hloroben ene	10	U	84 66-2	Diethylphthalate	10	U
9 48 7	2 Methylphenol	10	U	005-72-3	4-Chlorophenyl phenylether	10	U
39 8 32 9	bis 2 Chlor opropyl)Ether	10	U	86 73-7	Fluorene	10	U
106 44 5	4 Methylphenol	10	U	100 10-6	4 Nitroaniline	50	U
621 64 7	N Nitroso Di n Propylamine	10	U	534 52-1	4 6 Dinitro 2 Methylphenol	50	U
67 2 1	Hexachloroethane	10	U	86-30 6	N Nitro odiphenylamine (1)	10	U
98 95 3	Nitroben ere	10	U	101 55-3	4 Bromophenyl phenylethe	1	J
8 30 1	I h ne	10	U	118 74 1	He achloroben ene	10	U
88 75 5	2 Nitrophenol	10	U	87 86 5	Pentachlorophenol	50	U
1 05 67 9	2 4 Dimethylphenol	10	U	85 01 8	Phenanthrene	10	U
65 85 0	B n oi c d	50	U	120 12-7	Anthracene	10	U
111 91 1	bis 2 Chloroetho y)Methane	10	U	84-74-2	Di-n Butylphthalate	10	U
120 83 2	2 4 Di hlorophenol	10	U	206 44 0	Fluoranthene	10	U
1 3 22 1	2 4 richloroben ene	10	U	129 00-0	Pyrene	10	U
91 20 3	Naphthalene	10	U	85 68-7	Butylben ylphthalate	10	U
1 4/ 8	4 Chloroan line	10	U	91 94 1	3 3 -Dichlorobe dine	20	U
87 68 3	Hexachlorobutadiene	10	U	6-55 3	Ben o a Anthra ene	1	U
59 50	4 Chloro 3 Methylphenol	10	U	117 81 7	bi (2 Ethylhex l Phthalate	10	U
91 57 6	M thylnaphthalene	10	U	218 01 9	Chrysene	1	U
77 47 4	H achlorocyclopentad ene	10	U	117 84-0	Di n Octyl Phthalate	1	U
88 06 2	c 4 6 r chlorophenol	10	U	205-99 2	Ben o(b)Fluoranthene	10	U
95 95	2,4 5 Trichlorophenol	50	U	207 08 9	Ben o(k)Fluoranthene	10	U
91 58 7	2 Chlor naphthalene	10	U	50 32 8	Ben o(a)Py ene	10	U
88 74 4	2 Nitroanil ne	50	U	193 39-5	Indeno(1 2 3 d Pyrene	10	U
1 1 11 3	Dimethyl Phthalate	10	U	53- 0 3	Diben (a h nanthracene	10	U
208 96 8	A eraphthylene	10	U	191 24-2	Ben o(g h i P r,l ne	10	U
99 09 2	3 Nitroaniline	50	U				

1 C ct he e rated from diphenylam ne

Laboratory Name WESTON

Case No 5445

Sample Number
LAB BLANK - W

Organics Analysis Data Sheet
(Page 3)

1100

Pesticide / PCBs

Concentration (Low) Medium (Circle One)

Date Extracted Prepared 1-11 86

Date Analyzed 1-24-86

Conc Dil Factor 1

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☑Yes

CAS Number		ug/l or ug/Kg (Circle One)
3 9 84 6	Alpha BHC	0.05 U
319 85 7	Beta BHC	0.05 U
319 86 8	Delta BHC	0.05U
58 89 9	Gamma BHC (Lindane)	0.05 U
76 44 8	Heptachlor	0.05 U
309 00 2	Aldrin	0.05 U
1024 57 3	Heptachlor Epoxide	0.05 U
959 98 8	Endosulfan I	0.05 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
57 74 9	Chlordane	0.50 U
8001 35 2	Toxaphene	1.0 U
12674 11 2	Aroclor 1016	0.5 U
11104 28 2	Aroclor 1221	0.5 U
11141 16 5	Aroclor 1232	0.5 U
53469 21 9	Aroclor 1242	0.5 U
12672 29 6	Aroclor 1248	0.5 U
11097 69 1	Aroclor 1254	1.0 U
11096 82 5	Aroclor 1260	1.0 U

V_i Volume of extract injected (ul)

V_s Volume of water extracted (ml)

W_s Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s 1000 or W_s _____ V_t 10,000 V_i 3

Laboratory Name WESTON

Case No 5404-

Sample Number MB-1

0117B1686

Contract # 6801-67

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1		NONE FOUND	ABN	—	—
2		None found	VOA	—	—
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Laboratory Name WESTON

Case No 5445

Sample Number F2L E25 MS 3-0

Organics Analysis Data Sheet
(Page 2)

1250

Semivolatile Compounds

Concentration Low (Medium) (Circle One)

Date Extracted Prepared 1/24/86

Date Analyzed 1/27 86

Conc/Dil Factor 1.00

Percent Moisture (~~Decanted~~) 31.4

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
108 95 2	Phenol	3.6E6 U
111 44 4	bis(2 Chloroethyl)Ether	3.6E6 U
95 57 8	2 Chlorophenol	"
541 73 1	1 3 Dichlorobenzene	"
106 46 7	1 4 Dichlorobenzene	"
100 51 6	Benzyl Alcohol	"
95 50 1	1 2 Dichlorobenzene	
95 48 7	2 Methylphenol	"
39638 32 9	bis(2 chloroisopropyl)Ether	
106 44 5	4 Methylphenol	
621 64 7	N Nitroso Di n Propylamine	"
67 72 1	Hexachloroethane	
98 95 3	Nitrobenzene	
78 59 1	Isophorone	
88 75 5	2 Nitrophenol	
105 67 9	2 4 D methylphenol	✓
65 85 0	Benzoic Acid	1.8E7 U
111 91 1	bis(2 Chloroethoxy)Methane	3.6E6 U
120 83 2	2 4 Dichlorophenol	↓
120 82 1	1 2 4 Trichlorobenzene	↓
91 20 3	Naphthalene	2.1E6 J
106 47 8	4 Chloroaniline	3.6E6 U
87 68 3	Hexachlorobutadiene	↓
59 50 7	4 Chloro 3 Methylphenol	↓
91 57 6	2 Methylnaphthalene	3.6E6 ✓
77 47 4	Hexachlorocyclopentadiene	3.6E6 U
88 06 2	2 4 6 Trichlorophenol	↓
95 95 4	2 4 5 Trichlorophenol	1.8E7 U
91 58 7	2 Chloronaphthalene	3.6E6 U
88 74 4	2 Nitroaniline	1.8E7 U
131 11 3	Dimethyl Phthalate	3.6E6 U
208 96 8	Acenaphthylene	↓
99 09 2	3 Nitroaniline	1.8E7 U

CAS Number		ug/l or (ug/Kg) (Circle One)
83 32 9	Acenaphthene	1.9E7 ✓
51 28 5	2 4 Dinitrophenol	1.8E7 U
100 02 7	4 Nitrophenol	3.6E6 U
132 64 9	Dibenzofuran	1.9E7 ✓
121 14 2	2 4 Dinitrotoluene	3.6E6 U
606 20 2	2 6 Dinitrotoluene	↓
84 66 2	Diethylphthalate	↓
7005 72 3	4 Chlorophenyl phenylether	↓
86 73 7	Fluorene	2.2E7
100 01 6	4 Nitroaniline	1.8E7 U
534 52 1	4 6 Dinitro 2 Methylphenol	↓
86 30 6	N Nitrosodiphenylamine (1)	760000 J
101 55 3	4 Bromophenyl phenylether	3.6E6 U
118 74 1	Hexachlorobenzene	↓
87 86 5	Pentachlorophenol	1.4E7 J
85 01 8	Phenanthrene	7.3E7 ✓
120 12 7	Anthracene	9.2E6 ✓
84 74 2	Di n Butylphthalate	3.6E6 U
206 44 0	Fluoranthene	5.4E7 ✓
129 00 0	Pyrene	2.6E7 ✓
85 68 7	Butylbenzylphthalate	3.6E6 U
91 94 1	3 3 Dichlorobenzidine	7.3E6 U
56 55 3	Benzo(a)Anthracene	7.7E6 ✓
117 81 7	bis(2 Ethylhexyl)Phthalate	3.6E6 U
218 01 9	Chrysene	7.2E6 J
117 84 0	Di n Octyl Phthalate	3.6E6 U
205 99 2	Benzo(b)Fluoranthene	↓
207 08 9	Benzo(k)Fluoranthene	↓
50 32 8	Benzo(a)Pyrene	1.8E6 J
193 39 5	Indeno(1 2 3 cd)Pyrene	530,000 J
53 70 3	Dibenz(a h)Anthracene	7.6E6 U
191 24 2	Benzo(g h i)Perylene	410,000 J

(1) Cannot be separated from diphenylamine

137.04 Ele

137,040,000 ppm

Total DNA

Sample Number
F2082-S Matrix Spike

125

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: WESTON
Case No: 5445
Lab Sample ID No: 8601-454-0160MS
QC Report No: NA
Sample Matrix: Soil
Contract No: 6801-6781
Data Release Authorized By: Carter Mc
Date Sample Received: Jan 11, 1986

Volatile Compounds

Concentration: Low (Medium) (Circle One)
Date Extracted/Prepared: Jan 14, 1986
Date Analyzed: Jan 14, 1986
Conc/Dil Factor: 349 pH: 5.05
Percent Moisture (Not Decanted): 38.4

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	3,500 U
74 83 9	Bromomethane	1
75 01-4	Vinyl Chloride	1
75 00 3	Chloroethane	1
75 09 2	Methylene Chloride	18,000 B
67 64-1	Acetone	710 J
75 15-0	Carbon Disulfide	1,800 U
75 35 4	1 1 Dichloroethene	spiked
75 34 3	1 1 Dichloroethane	1,800 U
156 60 5	Trans 1 2 Dichloroethene	1
67 66 3	Chloroform	1,100 J
107 06 2	1 2 Dichloroethane	1,800 U
78 93 3	2 Butanone	39,000 B
71 55 6	1 1 1 Trichloroethane	1,800 U
56 23 5	Carbon Tetrachloride	1
108 05 4	Vinyl Acetate	3,500 U
75 27 4	Bromodichloromethane	1,800 U

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	1,800 U
10061 02 6	Trans 1 3 Dichloropropene	1
79-01 6	Trichloroethene	spiked
124 48 1	Dibromochloromethane	1,800 U
79 00 5	1 1 2 Trichloroethane	1
71 43 2	Benzene	spiked
10061 01 5	cis 1 3 Dichloropropene	1,800 U
110 75 8	2 Chloroethylvinylether	3,500 U
75 25 2	Bromoform	1,800 U
591 78 6	4 Methyl 2 Pentanone	3,500 U
108 10 1	2 Hexanone	1
127 18 4	Tetrachloroethene	1,800 U
79 34 5	1 1 2 2 Tetrachloroethane	1
108 88 3	Toluene	spiked
108 90 7	Chlorobenzene	spiked
100 41 4	Ethylbenzene	3,000
100 42 5	Styrene	1,800 U
	Total Xylenes	1,800

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used Additional flags or footnotes explaining results are encouraged However the definition of each flag must be explicit

Value: If the result is a value greater than or equal to the detection limit report the value

U: Indicates compound was analyzed for but not detected Report the minimum detection limit for the sample with the U (e g 10U) based on necessary concentration dilution action (This is not necessarily the instrument detection limit) The footnote should read U Compound was analyzed for but not detected The number is the minimum attainable detection limit for the sample

J: Indicates an estimated value This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e g 10J) If limit of detection is 10 µg l and a concentration of 3 µg is calculated report as 3J

C: This flag applies to pesticide parameters where the identification has been confirmed by GC MS Single component pesticides ≥10 ng ul in the final extract should be confirmed by GC MS

B: This flag is used when the analyte is found in the blank as well as a sample It indicates possible probable blank contamination and warns the data user to take appropriate action

Other: Other specific flags and footnotes may be required to properly define the results If used they must be fully described and such description attached to the data summary report

Environmental Protection Agency CLP Sample Management Office.
P O Box 818 Alexandria Virginia 22313 703/557 2490

Sample Number
FQ054 11SD

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared _____

Date Analyzed _____

Conc/Dil Factor _____

not required

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha BHC	
319-85-7	Beta-BHC	
319-86-8	Delta-BHC	
58-89-9	Gamma BHC (Lindane)	
76-44-8	Heptachlor	
309-00-2	Aldrin	
1024-57 3	Heptachlor Epoxide	
959-98-8	Endosulfan I	
60-57 1	Dieldrin	
72 55 9	4 4 -DDE	
72 20-8	Endrin	
33213-65 9	Endosulfan II	
72 54-8	4 4 -DDD	
7421 93-4	Endrin Aldehyde	
1031-07-8	Endosulfan Sulfate	
50-29-3	4 4 -DDT	
72-43-5	Methoxychlor	
53494-70-5	Endrin Ketone	
57 74-9	Chlordane	
8001 35-2	Toxaphene	
12674-11 2	Aroclor 1016	
11104-28-2	Aroclor 1221	
11141 16-5	Aroclor 1232	
53469-21 9	Aroclor 1242	
12672 29-6	Aroclor 1248	
11097-69-1	Aroclor 1254	
11096-82 5	Aroclor 1260	

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s _____ V_t _____ V_i _____

000457

Laboratory Name WESTON

Case No 5445

Sample Number
F2C54 ULSD

must 25... required

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration (Low) Medium (Circle One)

Date Extracted Prepared _____

Date Analyzed _____

Conc Dil Factor _____

Percent Moisture (Decanted) _____

GPC Cleanup ☐Yes ☐No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108 95 2	Phenol	
111 44 4	bis(2 Chloroethyl)Ether	
9- 57 8	2 Chlorophenol	
541 73 1	1 3 D chlorobenzene	
106 46 7	1 4 D chlorobenzene	
100 51 6	Benzyl Alcohol	
95 50 1	1 2 Dichlorobenzene	
95 48 7	2 Methylphenol	
39638 32 9	bis(2 chloroisopropyl)Ether	
106 44 5	4 Methylpheno	
621 64 7	N Nitroso Di n Propylamine	
67 72 1	Hexachloroethane	
98 95 3	N trobenzene	
78 59 1	Isophorone	
88 75 5	2 Nitrophenol	
105 67 9	2 4 D methylphenol	
65 85 0	Benzoic Ac d	
111 91 1	b s(2 Chloroethoxyl)Methane	
120 83 2	2 4 Dichlorophenol	
120 82 1	1 2 4 Trichlorobenzene	
91 20 3	Naphthalene	
106 47 8	4 Chloroaniline	
87 68 3	Hexachlorobutadiene	
59 50 7	4 Chloro 3 Methylphenol	
91 57 6	2 Me hylnaphthalene	
77 47 4	Hexachlorocyclopentadiene	
88 06 2	2 4 6 Trichlorophenol	
95 95 4	2 4 5 Trichlorophenol	
91 58 7	2 Chloronaphthalene	
88 74 4	2 N troaniline	
131 11 3	Dimethyl Phthalate	
208 96 8	Acenaphthylene	
99 09 2	3 Nitroaniline	

CAS Number		ug l or ug Kg (Circle One)
83 32 9	Acenaphthene	
51 28 5	2 4 Dinitrophenol	
100 02 7	4 Nitrophenol	
132 64 9	Dibenzofuran	
121 14 2	2 4 Dinitrotoluene	
606 20 2	2 6 Dinitrotoluene	
84 66 2	Diethylphthalate	
7005 72 3	4 Chlorophenyl phenylether	
86 73 7	Fluorene	
100 01 6	4 Nitroaniline	
534 52 1	4 6 Dinitro 2 Methylphenol	
86 30 6	N Nitrosodiphenylamine (1)	
101 55 3	4 Bromophenyl phenylether	
118 74 1	Hexachlorobenzene	
87 86 5	Pentachlorophenol	
85 01 8	Phenanthrene	
120 12 7	Anthracene	
84 74 2	D n Butylphthalate	
206 44 0	Fluoranthene	
129 00 0	Pyrene	
85 68 7	Butylbenzylphthalate	
91 94 1	3 3 Dichlorobenzidine	
56 55 3	Benzo(a)Anthracene	
117 81 7	bis(2 Ethylhexyl)Phthalate	
218 01 9	Chrysene	
117 84 0	D n Octyl Phthalate	
205 99 2	Benzo(b)Fluoranthene	
207 08 9	Benzo(k)Fluoranthene	
50 32 8	Benzo(a)Pyrene	
193 39 5	Indeno(1 2 3 cd)Pyrene	
53 70 3	D benz(a h)Anthracene	
191 24 2	Benzo(g h i)Perylene	

(1) Cannot be separated from d phenylam ne

Sample Number
F2054 Matrix Spike Dup

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: WESTON
Case No: 5445
Lab Sample ID No: 8601-464-0040MSD
QC Report No: NA
Sample Matrix: Water
Contract No: 6801-6781
Data Release Authorized By: [signature]
Date Sample Received: Jan 11, 1986

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: Jan 13, 1986
Date Analyzed: Jan 13, 1986
Conc/Dil Factor: 1 pH: 4 15
Percent Moisture (Not Decanted): NA

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	10U
74 83 9	Bromomethane	"
75 01 4	Vinyl Chloride	"
75 00 3	Chloroethane	"
75-09 2	Methylene Chloride	2JB
67 64 1	Acetone	24
75 15 0	Carbon Disulfide	5U
75 35 4	1 1 Dichloroethene	Spiked
75 34 3	1 1 Dichloroethane	5U
156 60 5	Trans 1 2 Dichloroethene	"
67 66 3	Chloroform	"
107 06 2	1 2 Dichloroethane	"
78 93 3	2 Butanone	10U
71 55 6	1 1 1 Trichloroethane	5U
56 23 5	Carbon Tetrachloride	"
108 05 4	Vinyl Acetate	10U
75 27 4	Bromodichloromethane	5U

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	5U
10061 02 6	Trans 1 3 Dichloropropene	"
79 01 6	Trichloroethene	Spiked
124 48 1	Dibromochloromethane	5U
79 00 5	1 1 2 Trichloroethane	"
71 43 2	Benzene	Spiked
10061 01 5	cis 1 3 Dichloropropene	5U
110 75 8	2 Chloroethylvinylether	10U
75 25 2	Bromoform	5U
591 78 6	4 Methyl 2 Pentanone	10U
108 10 1	2 Hexanone	"
127 18 4	Tetrachloroethene	5U
79 34 5	1 1 2 2 Tetrachloroethane	"
108 88 3	Toluene	Spiked
108 90 7	Chlorobenzene	Spiked
100 41 4	Ethylbenzene	5U
100 42 5	Styrene	"
	Total Xylenes	"

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used
Additional flags or footnotes explaining results are encouraged However the definition of each flag must be explicit

Value: If the result is a value greater than or equal to the detection limit report the value

U: Indicates compound was analyzed for but not detected Report the minimum detection limit for the sample with the U (e g 10U) based on necessary concentration dilution factor (This is not necessarily the instrument detection limit) The footnote should read U Compound was analyzed for but not detected The number is the minimum attainable detection limit for the sample

J: Indicates an estimated value This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e g 10J) If limit of detection is 10 µg l and a concentration of 3 µg l is calculated report as 3J

C: This flag applies to pesticide parameters where the identification has been confirmed by GC MS Single component pesticides ≥10 ng ul in the final extract should be confirmed by GC MS

B: This flag is used when the analyte is found in the blank as well as a sample It indicates possible probable blank contamination and warns the data user to take appropriate action

Other: Other specific flags and footnotes may be required to properly define the results If used they must be fully described and such description attached to the data summary report

000460

Environmental Protection Agency CLP Sample Management Office
P O Box 818 Alexandria Virginia 22313 703/557 2490

Sample Number
F2654 11S

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared _____

Date Analyzed _____

Conc/Dil Factor _____

not required

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha BHC	
319-85 7	Beta BHC	
319-86-8	Delta BHC	
58-89 9	Gamma BHC (Lindane)	
76-44-8	Heptachlor	
309-00-2	Aldrin	
1024-57 3	Heptachlor Epoxide	
959 98-8	Endosulfan I	
60-57 1	Dieldrin	
72 55 9	4 4 DDE	
72 20-8	Endrin	
33213-65 9	Endosulfan II	
72 54-8	4 4 DDD	
7421 93-4	Endrin Aldehyde	
1031-07-8	Endosulfan Sulfate	
50-29-3	4 4 DDT	
72-43-5	Methoxychlor	
53494-70-5	Endrin Ketone	
57 74-9	Chlordane	
8001 35 2	Toxaphene	
12674-11 2	Aroclor 1016	
11104-28-2	Aroclor 1221	
11141 16-5	Aroclor 1232	
53469-21 9	Aroclor 1242	
12672 29-6	Aroclor 1248	
11097-69-1	Aroclor 1254	
11096-82 5	Aroclor 1260	

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s _____ V_t _____ V_i _____

Laboratory Name WESTON

Case No 5445

Sample Number
FQL 54 L1S

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration Low Medium (Circle One)

Date Extracted Prepared _____

Date Analyzed _____

Conc Dil Factor _____

Percent Moisture (Decanted) _____

GPC Cleanup ☐Yes ☐No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☐Yes

CAS Number		ug / l or ug / Kg (Circle One)
108 95 2	Phenol	
111 44 4	bis(2 Chloroethyl)Ether	
95 57 8	2 Chlorophenol	
541 73 1	1 3 D chlorobenzene	
106 46 7	1 4 Dichlorobenzene	
100 51 6	Benzyl Alcohol	
95 50 1	1 2 Dichlorobenzene	
95 48 7	2 Methylphenol	
39638 32 9	bis(2 chloroisopropyl)Ether	
106 44 5	4 Methylpheno	
621 64 7	N Nitroso Di n Propylamine	
67 72 1	Hexachloroethane	
98 95 3	N t obenzene	
78 59 1	Isophorone	
88 75 5	2 Nitrophenol	
105 67 9	2 4 D methylphenol	
65 85 0	Benzoic Ac d	
111 91 1	bis(2 Chloroethoxy)Methane	
120 83 2	2 4 Dichlorophenol	
120 82 1	1 2 4 Trichlorobenzene	
91 20 3	Naphthalene	
106 47 8	4 Chloroaniline	
87 68 3	Hexachlorobutadiene	
59 50 7	4 Chloro 3 Methylphenol	
91 57 6	2 Methylnaphthalene	
77 47 4	Hexachlorocyclopentadiene	
88 06 2	2 4 6 Trichlorophenol	
95 95 4	2 4 5 Trichlorophenol	
91 58 7	2 Chloronaphthalene	
88 74 4	2 Nitroan line	
131 11 3	Dimethyl Phthalate	
208 96 8	Acenaphthylene	
99 09 2	3 Nitroaniline	

CAS Number		ug l or ug Kg (Circle One)
83 32 9	Acenaphthene	
51 28 5	2 4 Dinitrophenol	
100 02 7	4 Nitrophenol	
132 64 9	Dibenzofuran	
121 14 2	2 4 Dinitrotoluene	
606 20 2	2 6 Dinitrotoluene	
84 66 2	Diethylphthalate	
7005 72 3	4 Chlorophenyl phenylether	
86 73 7	Fluorene	
100 01 6	4 Nitroaniline	
534 52 1	4 6 Dinitro 2 Methylphenol	
86 30 6	N Nitrosodiphenylamine (1)	
101 55 3	4 Bromophenyl phenylether	
118 74 1	Hexachlorobenzene	
87 86 5	Pentachlorophenol	
85 01 8	Phenanthrene	
120 12 7	Anthracene	
84 74 2	D n Butylphthalate	
206 44 0	Fluoranthene	
129 00 0	Pyrene	
85 68 7	Butylbenzylphtha ate	
91 94 1	3 3 Dichlorobenzidine	
56 55 3	Benzo(a)Anthracene	
117 81 7	bis(2 Ethylhexyl)Phthalate	
218 01 9	Chrysene	
117 84 0	D n Octyl Phthalate	
205 99 2	Benzo(b)Fluoranthene	
207 08 9	Benzo(k)Fluoranthene	
50 32 8	Benzo(a)Pyrene	
193 39 5	Indeno(1 2 3 cd)Py ene	
53 70 3	Dibenzia h)Anthracene	
191 24 2	Benzo(g h)Perylene	

(1) Cannot be separated from diphenylam ne

Sample Number
F7054 Matrix Spike

Organics Analysis Data Sheet
(Page 1)

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Laboratory Name WESTON
Case No 5445
Lab Sample ID No 8601-454-0040MS
QC Report No NA
Sample Matrix Water
Contract No 6801-6781
Data Release Authorized By
Date Sample Received Jan 11, 1986

Volatile Compounds

Concentration (Low) Medium (Circle One)
Date Extracted/Prepared Jan 13, 1986
Date Analyzed Jan 13, 1986
Conc/(Dil Factor) 1 pH 4.15
Percent Moisture (Not Decanted) NA

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	10 U
74 83 9	Bromomethane	"
75 01 4	Vinyl Chloride	"
75 00 3	Chloroethane	"
75 09 2	Methylene Chloride	2 JB
67 64 1	Acetone	76
75 15 0	Carbon Disulfide	5 U
75 35 4	1 1 Dichloroethene	Spiked
75 34 3	1 1 Dichloroethane	5 U
156 60 5	Trans 1 2 Dichloroethene	"
67 66 3	Chloroform	"
107 06 2	1 2 Dichloroethane	"
78 93 3	2 Butanone	10 U
71 55 6	1 1 1 Trichloroethane	5 U
56 23 5	Carbon Tetrachloride	"
108 05 4	Vinyl Acetate	10 U
75 27 4	Bromodichloromethane	5 U

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	5 U
10061 02 6	Trans 1 3 Dichloropropene	"
79 01 6	Trichloroethene	Spiked
124 48 1	Dibromochloromethane	5 U
79 00 5	1 1 2 Trichloroethane	"
71 43 2	Benzene	Spiked
10061 01 5	cis 1 3 Dichloropropene	5 U
110 75 8	2 Chloroethylvinylether	10 U
75 25 2	Bromoform	5 U
591 78 6	4 Methyl 2 Pentanone	10 U
108 10 1	2 Hexanone	"
127 18 4	Tetrachloroethene	5 U
79 34 5	1 1 2 2 Tetrachloroethane	"
108 88 3	Toluene	Spiked
108 90 7	Chlorobenzene	Spiked
100 41 4	Ethylbenzene	5 U
100 42 5	Styrene	"
	Total Xylenes	—

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used Additional flags or footnotes explaining results are encouraged However the definition of each flag must be explicit

Value If the result is a value greater than or equal to the detection limit report the value

U Indicates compound was analyzed for but not detected Report the minimum detection limit for the sample with the U (e g 10U) based on necessary concentration dilution action (This is not necessarily the instrument detection limit) The footnote should read U Compound was analyzed for but not detected The number is the minimum attainable detection limit for the sample

J Indicates an estimated value This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e g 10J) If limit of detection is 10 µg l and a concentration of 3 µg l is calculated report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC MS Single component pesticides ≥10 ng l in the final extract should be confirmed by GC MS

B This flag is used when the analyte is found in the blank as well as a sample It indicates possible probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be equired to properly define the results if used they must be fully described and such description attached to the data summary report

Environmental Protection Agency CLP Sample Management Office
P O Box 818 Alexandria Virginia 22313 703 557 2490

Sample Number
MB 1

Organics Analysis Data Sheet
(Page 4)

1230

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1	—	Unknown	VOA	2210	25
2		Not required	VOA		
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Laboratory Name WESTON

Case No 5445

Sample Number
-4B BLANK

Organics Analysis Data Sheet
(Page 3)

123

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted Prepared 1-31-86

Date Analyzed 2-5-86

Conc Dil Factor 1

Percent Moisture (decanted) -

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319 84 6	Alpha BHC	0.05 U
319 85 7	Beta BHC	0.05 U
319 86 8	Delta BHC	0.05 U
58 89 9	Gamma BHC (Lindane)	0.05 U
76 44 8	Heptachlor	0.05 U
309 00 2	Aldrin	0.05 U
1024 57 3	Heptachlor Epoxide	0.05 U
959 98 8	Endosulfan I	0.05 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	0.5 U
53494 70 5	Endrin Ketone	0.10 U
57 74 9	Chlordane	0.5 U
8001 35 2	Toxaphene	1.0 U
12674 11 2	Aroclor 1016	0.5 U
11104 28 2	Aroclor 1221	0.5 U
11141 16 5	Aroclor 1232	0.5 U
53469 21 9	Aroclor 1242	0.5 U
12672 29 6	Aroclor 1248	0.5 U
11097 69 1	Aroclor 1254	1.0 U
11096 82 5	Aroclor 1260	1.0 U

V_t - Volume of extract injected (ul)

V_s Volume of water extracted (ml)

W_s Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s 1000 or W_s ~~1 gal~~ 2636 V_t 10,000 V_t 3.2

Laboratory Name R E WE TON INC
Case No 544E

Sample Number
MB4

1231

ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration LOW
Date Extracted/Prepared 11/30/86
Date Analyzed 12/04/86
Dilution Factor 1
Percent Moisture (Decanted) _____

GPC Cleanup ___ Yes X No
Separatory Funnel Extraction X Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		UG/L		CAS Number		UG/L	
108-95-2	Phenol	10	U	83-32-9	Acenaphthene	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U	51-28-5	2,4-Dinitrophenol	50	U
95-57-8	2-Chlorophenol	10	U	100-02-7	4-Nitrophenol	50	U
541-73-1	1,3-Dichlorobenzene	10	U	132-64-9	Dibenzofuran	10	U
106-46-7	1,4-Dichlorobenzene	10	U	121-14-2	2,4-Dinitrotoluene	10	U
100-51-6	Benzyl Alcohol	10	U	606-20-2	2,6-Dinitrotoluene	10	U
95-50-1	1,2-Dichlorobenzene	10	U	84-66-2	Diethylphthalate	10	U
95-48-7	2-Methylphenol	10	U	7005-72-3	4-Chlorophenyl-phenylether	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U	86-73-7	Fluorene	10	U
106-44-5	4-Methylphenol	10	U	100-01-6	4-Nitroaniline	50	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U	534-52-1	4,6-Dinitro-2-Methylphenol	50	U
67-72-1	Hexachloroethane	10	U	86-30-6	N-Nitrosodiphenylamine (1)	10	U
98-95-3	Nitrobenzene	10	U	101-55-3	4-Bromophenyl-phenylether	10	U
78-59-1	Isophorone	10	U	118-74-1	Hexachlorobenzene	10	U
88-75-5	2-Nitrophenol	10	U	87-86-5	Pentachlorophenol	50	U
105-67-9	2,4-Dimethylphenol	10	U	85-01-8	Phenanthrene	10	U
65-85-0	Benzoic Acid	50	U	120-12-7	Anthracene	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U	84-74-2	Di-n-Butylphthalate	10	U
120-83-2	2,4-Dichlorophenol	10	U	206-44-0	Fluoranthene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U	129-00-0	Pyrene	10	U
91-20-3	Naphthalene	10	U	85-68-7	Butylbenzylphthalate	10	U
106-47-8	4-Chloroaniline	10	U	91-94-1	3,3'-Dichlorobenzidine	20	U
87-68-3	Hexachlorobutadiene	10	U	56-55-3	Benzo(a)Anthracene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U	117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
91-57-6	2-Methylnaphthalene	10	U	218-01-9	Chrysene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U	117-84-0	Di-n-Octyl Phthalate	10	U
88-06-2	2,4,6-Trichlorophenol	10	U	205-99-2	Benzo(b)Fluoranthene	10	U
95-95-4	2,4,5-Trichlorophenol	50	U	207-08-9	Benzo(k)Fluoranthene	10	U
91-58-7	2-Chloronaphthalene	10	U	50-32-8	Benzo(a)Pyrene	10	U
88-74-4	2-Nitroaniline	50	U	193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
131-11-3	Dimethyl Phthalate	10	U	53-70-3	Dibenz(a,h)Anthracene	10	U
208-96-8	Acenaphthylene	10	U	191-24-2	Benzo(g,h,i)Perylene	10	U
99-09-2	3-Nitroaniline	50	U				

(1) Cannot be separated from diphenylamine

Form I

Environmental Protection Agency CLP Sample Management Office
P O Box 818 Alexandria Virginia 22313 703/557 2490

Sample Number
Blank

MB4-Blank BN4
Blank-Pest

Organics Analysis Data Sheet
(Page 1)

12

Laboratory Name ROY F WESTON, INC
Case No 5445
Lab Sample ID No 8601-454 Blank
QC Report No N/A
Sample Matrix water
Contract No 6801-6781
Data Release Authorized By Cathy Lui
Date Sample Received N/A

Volatile Compounds

Concentration (Low) Medium (Circle One)
Date Extracted/Prepared
Date Analyzed
Conc/Dil Factor pH
Percent Moisture
Percent Moisture (Decanted)

1:1 ? required

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	
74 83 9	Bromomethane	
75 01 4	Vinyl Chloride	
75 00 3	Chloroethane	
75-09 2	Methylene Chloride	
67 64 1	Acetone	
75 15 0	Carbon Disulfide	
75 35 4	1 1 Dichloroethene	
75 34 3	1 1 Dichloroethane	
156 60 5	Trans 1 2 Dichloroethene	
67 66 3	Chloroform	
107 06 2	1 2 Dichloroethane	
78 93 3	2 Butanone	
71 55 6	1 1 1 Trichloroethane	
56 23 5	Carbon Tetrachloride	
108 05 4	Vinyl Acetate	
75 27 4	Bromodichloromethane	

CAS Number		ug l or ug Kg (Circle One)
79 34 5	1 1 2 2 Tetrachloroethane	
78 87 5	1 2 Dichloropropane	
10061 02 6	Trans 1 3 Dichloropropene	
79 01 6	Trichloroethene	
124 48 1	Dibromochloromethane	
79 00 5	1 1 2 Trichloroethane	
71 43 2	Benzene	
10061 01 5	cis 1 3 Dichloropropene	
110 75 8	2 Chloroethylvinylether	
75 25 2	Bromoform	
591 78 6	2 Hexanone	
108 10 1	4 Methyl 2 Pentanone	
127 18 4	Tetrachloroethene	
108 88 3	Toluene	
108 90 7	Chlorobenzene	
100 41 4	Ethylbenzene	
100 42 5	Styrene	
	Total Xylenes	

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used Additional flags or footnotes explaining results are encouraged However the definition of each flag must be explicit

Value If the result is a value greater than or equal to the detection limit report the value

U Indicates compound was analyzed for but not detected Report the minimum detection limit for the sample with the U (e g 10U) based on necessary concentration dilution actions (This is not necessarily the instrument detection limit) The footnote should read U Compound was analyzed for but not detected The number is the minimum attainable detection limit for the sample

J Indicates an estimated value This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but

C This flag applies to pesticide parameters where the identification has been confirmed by GC MS Single component pesticides ≥10 ng ul in the final extract should be confirmed by GC MS

B This flag is used when the analyte is found in the blank as well as a sample It indicates possible probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results If used they must be fully described and such description attached to the data summary report

Laboratory Name WESTON

Case No 5445

Sample Number 1163

01-9B176

12_

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1	-	None Found	BNA	-	-
2		none found	VOA	-	-
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
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19					
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26					
27					
28					
29					
30					

Laboratory Name WESTON

Case No 5495

Sample Number
SOIL BLANK ~2

121

Organics Analysis Data Sheet
(Page 3)

Pesticide / PCBs

Concentration Low (Medium) (Circle One)

Date Extracted Prepared 1-24 86

Date Analyzed 1-30 86

Conc Dil Factor 1

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319 84 6	Alpha BHC	20 U
319 85 7	Beta BHC	120 U
319 86 8	Delta BHC	120 U
58 89 9	Gamma BHC (Lindane)	120 U
76 44 8	Heptachlor	20 U
309 00 2	Aldrin	120 U
1024 57 3	Heptachlor Epoxide	120 U
959 98 8	Endosulfan I	120 U
60 57 1	Dieldrin	240 U
72 55 9	4 4 DDE	240 U
72 20 8	Endrin	240 U
33213 65 9	Endosulfan II	240 U
72 54 8	4 4 DDD	240 U
1031 07 8	Endosulfan Sulfate	240 U
50 29 3	4 4 DDT	240 U
72 43 5	Methoxychlor	1200 U
53494 70 5	Endrin Ketone	240 U
57 74 9	Chlordane	1200 U
8001 35 2	Toxaphene	2400 U
12674 11 2	Aroclor 1016	1200 U
11104 28 2	Aroclor 1221	1200 U
11141 16 5	Aroclor 1232	1200 U
53469 21 9	Aroclor 1242	1200 U
12672 29 6	Aroclor 1248	1200 U
11097 69 1	Aroclor 1254	2400 U
11096 82 5	Aroclor 1260	2400 U

V_i Volume of extract injected (ul)

V_s Volume of water extracted (ml)

W_s - Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s _____ or W_s 10 V_t 10000 V_i 3

For calculation purposes only

Labc atcry Name: R F WESTON INC
La e N: 44F

Sample Number
MB3

121c

ORGANICS ANALYSIS DATA SHEET

SEMIVOLATILE COMPOUNDS

C ncentr tion: MEDIUM
r te F t s ted Prepared: 11 86
ate nal / ed: 12 29 86
C n Fa t: 2 . 00000
Percent M ture: ~~Decanted:~~ 0 0

GPC Cle nup ___ Yes X No
Separator Funnel E traction ___ Ye
Contruou quid Liquid E traction ___ Ye

JW 2/7/89

CAS Number		UG/KG		CAS Number		UG/KG	
108 95 2	Phenol	9900	U	83 32 9	Acenaphthene	99 0	U
111 44 4	bi (2-Chloroethyl Ether	9900	U	51 28 5	2 4 Din trophenol	4800	U
95 57 8	2 Chlorophenol	9900	U	100 02 7	4 Nitrophenol	48000	U
541 73 1	1 3 Dichloroben ene	9900	U	132 64-9	Diben cfuran	99	U
106 46	1 4 Dichloroben ene	9900	U	121 14 2	2 4 Dinitrotoluene	9900	U
95 51 6	2 n yl Alcohol	9900	U	606 20 2	2 6 Dinitrotoluene	9900	U
95 50 1	1,2 Dichloroben ene	9900	U	84 66-2	D ethylphthalate	99 0	U
95 48 7	2 Methylphenol	9900	U	7005 72-3	4 Chlorophenyl phenylether	9900	U
39638 32 9	bi (2 chloroisopropyl)Ether	9900	U	86 73 7	Flucrene	9900	U
106 44 5	4 Methylphenol	9900	U	100 10 6	4 Nitroaniline	48000	U
621 64 7	N-Nit oso-Di-n-Propylamine	9900	U	534 52 1	4 6 Dinitro-2 Methylphenol	4800	U
67 72 1	He achloroethane	9900	U	86 30 6	N Nitrosodiphen lamine (1)	99	U
98 95 3	Nit oben ene	9900	U	101 55 3	4 Bromophenyl phenylether	9900	U
78 59 1	I ophorone	9900	U	118 74 1	He achloroben ene	9900	U
88 75 5	2 Nitrophenol	9900	U	87 86-5	Pentachlorophenol	4800	U
10 67-9	2 4 D methylphenol	9900	U	85 01 8	Phenanthrere	990	U
65 85 0	Ben oic Acid	48000	U	120 12 7	Anthracene	9900	U
111 91 1	bi (2 Chloroethoxy)Methane	9900	U	84 74 2	Di n Butylphthalate	99	J
120 83 2	2 4 Dichlorophenol	9900	U	206 44 0	Fluoranthene	99	U
120 82 1	1 2 4-Trichlroben ene	9900	U	129 00 0	P rene	99	U
91-20 3	N phthalene	9900	U	85 68-7	Butylben lphthalate	9900	U
106 47-8	4 Chloroanil ne	9900	U	91-94 1	3 3 D chloroben idine	990	U
87 68-3	Hexachlorobutadiene	990	U	56-55-3	Ben o a nthracene	990	U
59 50-7	4 Chloro 3 Methylphenol	9910	U	117 81-7	bi 2 Ethylhexyl)Phthalate	9910	U
91 57 6	2 Methylnaphthalene	990	U	218 01-9	Chr ene	99	U
77 47-4	He achlorocyclopentadiene	9900	U	117 84 0	Di n Octyl Phthalate	990	U
88-06 2	2 4 6 Trichlorophenol	9900	U	205 99-2	Ben o b)Fluoranthene	9900	J
95 95 4	2 4 5 Trichlorophenol	48000	U	207 08 9	Benzo k Fluoranthene	990	U
91 58 7	2 Chloronaphthalene	990	U	50 32 8	Ben o a)Pyrene	990	U
88 74 4	2 Nitroaniline	48000	U	193 39-5	Indeno 1 2 3 cd r rene	990	U
131 11 3	Dimethyl Phthalate	991	U	53-70 3	Diben a h)Anthracene	990	J
208 96 8	Acenaphthy ene	9900	U	191 24 2	Be o g h i Perylene	990	U
99 09 2	3 Nitroaniline	4800	U				

(1) Cannot be eparated from diphenylamine

Sample Number
D1144W0002436/MBlank-V-

SOIL BLANK #2-P-5
133 Blank - BNA

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: WESTON
Case No: 5445
Lab Sample ID No: 8601-454-MBlank
QC Report No: NA
Sample Matrix: Soil
Contract No: 6801-6781
Data Release Authorized By:
Date Sample Received: NA

Volatile Compounds

Concentration: Low (Medium) (Circle One)
Date Extracted/Prepared: Jan 14, 1986
Date Analyzed: Jan 14, 1986
Conc/Dil Factor: 125 pH: 7.00
Percent Moisture (Not Decanted): 0.0

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	1,200 U
74 83 9	Bromomethane	"
75 01 4	Vinyl Chloride	"
75 00 3	Chloroethane	"
75 09 2	Methylene Chloride	560 J
67 64 1	Acetone	1,200 U
75 15 0	Carbon Disulfide	620 U
75 35 4	1 1 Dichloroethene	"
75 34 3	1 1 Dichloroethane	"
156 60 5	Trans 1 2 Dichloroethene	"
67 66 3	Chloroform	"
107 06 2	1 2 Dichloroethane	"
78 93 3	2 Butanone	10,000
71 55 6	1 1 1 Trichloroethane	620 U
56 23 5	Carbon Tetrachloride	"
108 05 4	Vinyl Acetate	1,200 U
75 27 4	Bromodichloromethane	620 U

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	620 U
10061 02 6	Trans 1 3 Dichloropropene	"
79 01 6	Trichloroethene	"
124 48 1	Dibromochloromethane	"
79 00 5	1 1 2 Trichloroethane	"
71 43 2	Benzene	"
10061 01 5	cis 1 3 Dichloropropene	"
110 75 8	2 Chloroethylvinylether	1,200 U
75 25 2	Bromoform	620 U
591 78 6	4 Methyl 2 Pentanone	1,200 U
108 10 1	2 Hexanone	"
127 18 4	Tetrachloroethene	620 U
79 34 5	1 1 2 2 Tetrachloroethane	"
108 88 3	Toluene	"
108 90 7	Chlorobenzene	"
100 41 4	Ethylbenzene	"
100 42 5	Styrene	"
	Total Xylenes	"

Data Report ng Qualifiers

For report ng results to EPA the following results qual f ers are used
Add tional flags or footnotes explain ng results are encouraged However the def n t on of each flag must be explicit

Value: If the esult s a alue greate than o eq al to the detection l m t eport the alue

U: Ind cates compound was analyzed fo but not detected Report the m n m m detect on l m t fo the sample w th the U (e g 10U) based on necessary concentrat on d lut on act on (Th s s not necessar ly the st me t detect on l m t) The footnote should ead U Compo d was analyzed fo b t ot detected The umbe s the m m m atta nable detect o l m t fo the sample

J: Ind cates an est mated al e Th s flag s sed e ther when est mat ng a concentrat on for tentat ely dent f ed compounds whe e a 1 1 esponse s assumed or when the mass spectral data nd cated the presence of a compo nd that meets the dent f cat on - 'a but the esult s less tha the spec f ed detect on l m t but ate than ze o (e g 10J) If l m t of detect on s 10 µg l and a ce t at on of 3 µg l s calc lated eport as 3J

C: Th s flag appl es to pest c de paramete s where the de t f cat on has been conf med by GC MS S ngle component pest c des ≥10 ng l n the f nal e t act should be conf med by GC MS

B: Th s flag s used whe the analyte s found n the blank as well as a sample It nd cates poss ble p obable blank contam nat on and wa ns the data se to take app op ate act on

Other: Othe spec f c flags a d foot otes may be equ ed to ope l def e the es lts If sed t ey m st be f lly desc bed and suc desc pt on attached to the data s mma y eport

Case 5445

Environmental Protection Agency CLP Sample Management Office
P O Box 818 Alexandria Virginia 22313 703 557 490

Sample Number
MB2
01290756

Organics Analysis Data Sheet
(Page 4)

117

Tentatively Identified Compounds

	CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1	-	C9 Hydrocarbon	BNA	339	1,700 J
2	-	C9- "		354	3,700 J
3	-	HC		366	3,500 J
4	-	Unknown		497	950 J
5	100-52-7	Benzaldehyde		502	430 J
6	-	Unknown		567	710 J
7	-	"		598	150 J
8	-	" , mw 192	↓	772	270 J
9					
10	-	None found	VOA	-	-
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
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26					
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28					
29					
30					

Laboratory Name WESTON

Case No 5445

Sample Number SOIL BLANK #1

Organics Analysis Data Sheet
(Page 3)

1177

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted Prepared 1-14 86

Date Analyzed 1-31 86

Conc Dil Factor 1

Percent Moisture (decanted) _____

GPC Cleanup ☑Yes ☐No

Separatory Funnel Extraction ☐Yes

Continuous Liquid Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
3 9 84 6	Alpha BHC	120 U
319 85 7	Beta BHC	12 C U
319 86 8	Delta BHC	12 C U
58 89 9	Gamma BHC (Lindane)	12 C U
76 44 8	Heptachlor	12 C U
309 00 2	Aldrin	12 C U
1024 57 3	Heptachlor Epoxide	12 C U
959 98 8	Endosulfan I	12 C U
60 57 1	Dieldrin	24 C U
72 55 9	4 4 DDE	24 C U
72 20 8	Endrin	24 C U
33213 65 9	Endosulfan II	24 C U
72 54 8	4 4 DDD	24 C U
1031 07 8	Endosulfan Sulfate	24 C U
50 29 3	4 4 DDT	24 C U
72 43 5	Methoxychlor	60 C U
53494 70 5	Endrin Ketone	24 C U
57 74 9	Chlordane	60 C U
8001 35 2	Toxaphene	120 U
12674 11 2	Aroclor 1016	60 U
11104 28 2	Aroclor 1221	60 U
11141 16 5	Aroclor 1232	60 U
53469 21 9	Aroclor 1242	60 U
12672 29 6	Aroclor 1248	60 U
11097 69 1	Aroclor 1254	120 U
11096 82 5	Aroclor 1260	120 U

V_t Volume of extract injected (ul)

V_s Volume of water extracted (ml)

W_s Weight of sample extracted (g)

V_t Volume of total extract (ul)

V_s _____ or W_s 20 C (For calculation purposes only) V_t 2,000 V_t 32

L h tory Name r F PE TON INC
Ca e No 5 4

Sample Number
MB2

117t

ORGANICS ANALYSIS DATA SHEET

SEMIVOLATILE COMPOUNDS

c c nt at n 10W
Date E tra ted r e ared 11 14 85
Date nal ed 01/29 86
Dil ractor 1 00
Pe cent Moisture (~~Decanted~~) 0 0

SDG Cleanup _X_ Ye ___ No
Separatory Funnel E traction ___ e
Continuou Liquid-Liquid E traction ___ e

JL 4/7/86

CAS Number		UG/KG		CAS Number		UG/KG	
1 8 0 2	Phenol	350	U	33 32 0	Acenaphthene	350	U
111 44 4	h s(2-Chloroethyl)Ether	3 0	U	51 28 5	2 4 Dinitrophenol	1700	U
9 0 8	2-Chlorophenol	350	U	100 02 7	4 Nitrophenol	1700	U
541 3 1	1 3 Dichloroben ene	350	U	132-64 9	Dibenzofuran	350	U
106 46	1 4-Dichloroben ene	300	U	121 14 2	2 4-Dinitrotoluene	350	U
100 51 6	Ben yl Alcohol	350	U	6 6 20-2	2 6-Dinitrotoluene	350	U
9 0 1	1 -Dichlcroben ene	350	U	84 66-2	Diethylphthalate	350	U
9 8 7	2 Methylphenol	350	U	7005 72-3	4 Chlorophenyl-phenylether	350	U
39638 32 9	bis(2-Chloroisopropyl)Ether	350	U	86 73 7	Fluorene	350	U
106-44 5	4 Methylphenol	350	U	100 10-6	4 Nitroaniline	1700	U
621 64 7	N Nitroso Di n Propylamine	350	U	534 52-1	4 6-Dinitro-2 Methylphenol	1700	U
67 72 1	He achloroethane	350	U	86 30-6	N-Nitro odiphenylamine (1)	350	U
98 95 3	Nitr ben ene	350	U	101 55-3	4 Bromophenyl phenylether	350	U
8 59 1	I ophorone	350	U	118 74 1	Hexachlorobenzene	350	U
88 75 5	2 Nitrophenol	300	U	87 86 5	Pentachlorophenol	1700	U
105 6 7	2 4 Dimethylphenol	300	U	85-01 8	Phenanthrene	47	J
65 85 0	Benzoic Ac d	1700	U	120 12 7	Anthracene	350	U
111 91 1	bi (2 Chloroetho)Methane	300	U	84 74 2	D n But lphthal te	310	J
120 83 2	2 4 Dichlorophenol	350	U	206 44-0	Fluoranthene	350	U
120 82 1	1 2 4 Trichlorcben ene	350	U	129-00-0	Pyrene	350	J
91 2 0	Naphthalene	300	U	85 68-7	Butylben ylphthalate	350	U
106 47 8	4 Chloroanil ne	350	U	91 94-1	3 3 Dichlo ben id ne	690	J
87 68 3	He a chlorobutadiene	300	U	56 55 3	Ben o a)Anthracene	50	U
59 50 7	4 Chloro 3 Methylpher l	300	U	117 81 7	bis(2 Ethylhe yl)Phthalate	67	J
91 57 6	2 Meth lnaphthalene	50	U	218-01 9	Chrysene	350	U
77 47 4	He achlorocy lopentadiene	3 0	U	117 84 0	Di-n Octyl Phthalate	3 0	U
88 06 2	2 4 6 Trichlorophenol	350	U	205 99 2	Ben o(b)Fluoranthene	350	U
95 95 4	2 4 5 Trichlorophenol	1700	U	207 08 9	Ben o(k)Fluoranthene	350	U
91 58 7	2 Chloronaphthal ne	350	U	50 32 8	Ben o(a)Pyr ne	350	U
88 74 4	2 Nitr aniline	1 00	U	193-39-5	Indeno(1 2 3 d Pyrene	350	U
1	D methyl phthalate	350	U	53 70 3	Diben a h)Anthrac ne	350	U
208 96 8	Acenaphth lene	350	U	191 24 2	Ben o(g h i)P rylene	300	J
99 09	3 Nitroaniline	1 00	U				

' Cannot be eparated from diphenylamine

Sample Number
8611HW0002428/Blank VC.

SOW DLM1F #1 PEST
MB2 - Blank - Bnc

Organics Analysis Data Sheet
(Page 1)

Laboratory Name WESTON
Case No 5445
Lab Sample ID No 8601-454-Blank
QC Report No NA
Sample Matrix Soil
Contract No 6801-6781
Data Release Authorized By
Date Sample Received NA

Volatile Compounds

Concentration (Low) Medium (Circle One)
Date Extracted/Prepared Jan 14, 1986
Date Analyzed Jan 14, 1986
Conc/Dil Factor 1 pH 7.00
Percent Moisture (Not Decanted) NA

CAS Number		ug/l or ug/Kg (Circle One)
74 87 3	Chloromethane	10U
74 83 9	Bromomethane	"
75 01 4	Vinyl Chloride	"
75 00 3	Chloroethane	"
75 09 2	Methylene Chloride	2J
67 64 1	Acetone	2J
75 15 0	Carbon Disulfide	5U
75 35 4	1 1 Dichloroethene	"
75 34 3	1 1 Dichloroethane	"
156 60 5	Trans 1 2 Dichloroethene	"
67 66 3	Chloroform	"
107 06 2	1 2 Dichloroethane	"
78 93 3	2 Butanone	2J
71 55 6	1 1 1 Trichloroethane	5U
56 23 5	Carbon Tetrachloride	"
108 05 4	Vinyl Acetate	10U
75 27 4	Bromodichloromethane	5U

CAS Number		ug/l or ug/Kg (Circle One)
78 87 5	1 2 Dichloropropane	5U
10061 02 6	Trans 1 3 Dichloropropene	"
79-01 6	Trichloroethene	"
124 48 1	Dibromochloromethane	"
79 00 5	1 1 2 Trichloroethane	"
71 43 2	Benzene	"
10061 01 5	cis 1 3 Dichloropropene	"
110 75 8	2 Chloroethylvinylether	10U
75 25 2	Bromoform	5U
591 78 6	4 Methyl 2 Pentanone	10U
108 10 1	2 Hexanone	"
127 18 4	Tetrachloroethene	5U
79 34 5	1 1 2 2 Tetrachloroethane	"
108 88 3	Toluene	"
108 90 7	Chlorobenzene	"
100 41 4	Ethylbenzene	"
100 42 5	Styrene	"
	Total Xylenes	"

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used
Additional flags or footnotes explaining results are encouraged However the definition of each flag must be explicit

Value	If the result is a value greater than or equal to the detection limit report the value
U	Indicates compound was analyzed for but not detected Report the minimum detection limit for the sample with the U (eg 10U) based on necessary concentration dilution action (This is not necessarily the instrument detection limit) The footnote should read U Compound was analyzed for but not detected The number is the minimum attainable detection limit for the sample
J	Indicates an estimated value This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (eg 10J) If limit of detection is 10 µg l and amount of 3 µg l is calculated report as 3J
C	This flag applies to pesticide parameters where the identification has been confirmed by GC MS Single component pesticides ≥10 ng ul in the final extract should be confirmed by GC MS
B	This flag is used when the analyte is found in the blank as well as a sample It indicates possible probable blank contamination and warns the data user to take appropriate action
Other	Other specific flags and footnotes may be required to properly define the results If used they must be fully described and such description attached to the data summary report

Case 5421

DOC# 5445-6-50-85

5421-6-50

00
04
76

CLP AAS BENCH SHEET

ELEMENT Tl INSTRUMENT 30305 CRDL 10 ANALYST mr²

DATE 1-17-86 SOP # IDL 17 NOTE Use proper data flags for final concentration

CUP #	SAMPLE #	Avg Peak Height	RPD	Calc Conc	Dilution Factor	Digestion Factor	Recovery	MSA Data	Final Conc mg/L
1	ICCS-WP591 (25) µg/l		40	25			100%		25µg/l
2	calblank		—	<1.7					17 µg/l U
3	prepblank (case 5445)		—	<1.7					17µg/l U
4	LCS(50) µg/l		0.2	45			90%		45 µg/l
5	8601048-01	NF0009	—	<17	105			see dilution	1.8µg/l U
6	" Analyt Spike		17	78			39%		
7	PD dup 01		—	<1.7	105			see dilution	18 µg/l U
8	" Analyt Spike		17	71			36%		
9	PDspk 01		12	19			38%	spikeadded = 50 µg/l	19µg/l
10	CCCS-WP584 (25) µg/l		14	24			96%		24 µg/l
11	calblank		—	<1.7					1.7 µg/l U
12	-01		—	<17	105	MSA's		con 998	
13	+10		—	39	"	unnecessary		slope 0.48	
14	+20	data not used	9.5	RB				runt 0.61	
15	+30		—	14	"	mr		MSA result →	1.8 µg/l U S
16	dup 01		—	<1.7	105	see dilution³		con .998	
17	+10		—	36	"			slope .4 runt 29	
18	+20		—	8.4	"			MSA result →	1.8 µg/l U S

I hereby certify that all analyses and quality control procedures were followed according to current SOP's for this procedure except as follows

Comments Analyt Spike 1.9ml sample + 0.100ml 400 ppb Tl

weights listed are dry weights, final volume = 500ml

Mary Riddle
Signature of Analyst

00
04
77

CLP AAS BENCH SHEET

ELEMENT Tl INSTRUMENT 30305 CRDL 10 ANALYST mjr 2

DATE 1-17-86 SOP # IDI 17 NOTE Use proper data flags for final concentration

CUP #	SAMPLE #	Avg Peak Height	RID	Calc Conc	Dilution Factor	Digestion Factor	Recovery	MSA Data	Final Conc mg/L	
19	T30	data not used RB		12	105	↓				
20	CCCS-WP581-1(25) ug/l		40	25			100%		25 ug/l	
21	cal blank		—	<1.7					17 ug/l U	
22	8601041-01	MF0004	—	<1.7	110(105)			RB	18 ug/l U	E Q
23	" A spike		22	15			75%			
24	PDdup01		—	<17	110(105)			RB	18 ug/l U	E Q
25	" A spike		04	16			80%			
26	prep blank (case 5421)		—	<1.7		15		RB 85u ug/l	002 mg/kg	U
27	LCS(50) 250 ug/l RB		54	47		15	94%		235 ug/l	
28	sludge		—	<1.7		1008/100 5 ml			09 mg/kg U	* ↓
29	CCCS-WP581-1(25) ug/l		38	25			100%		25 ug/l	
30	cal blank		—	<1.7				RD 1.7u ug/l	002 mg/kg	U
31	8601047-01	MFC020	—	<1.7	105	1039/100 5 ml		RB 0.87u	0.9 mg/kg U	
32	" Analyst Spike		13	19			95%			
33	8601047-02	MFC038	—	<17	105	1029/100 5 ml		RB 0.88u	09 mg/kg U	
34	" Analyst Spike		16	19			95%			
35	8601047-02(PDdup)		—	<17	105	1009/100 5 ml		RB 0.89u	09 mg/kg U	
1	" A spike		22	21			106%			

I hereby certify that all analyses and quality control procedures were followed according to current SOP's for this procedure except as follows

Comments * 15 digestion dilution included in results

Mary Riddle
Signature of Analyst

SE 0015

0015 (CONTINUED)

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 102	0 056	0 052
PEAK AREA (ABS-SECONDS)	0 176	0 017	0 090

2 8 MF0004 PD spk 01 (10 ug/L) 0% recovery

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 097	0 049	0 050
PEAK AREA (ABS-SECONDS)	0 095	0 013	0 083

1 6

MEAN= 2 2 STD DEV = 0 9 COEF VAR = 37 96 %

SE 0016

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE	0 385	0 362	0 023
PEAK AREA (ABS-SECONDS)	0 148	0 23	0 025

39 1 CCCS - SRM2126-3 (40) 98% recovery

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 380	0 378	0 022
PEAK AREA (ABS-SECONDS)	0 148	0 125	0 023

39 7

MEAN= 39 4 STD DEV = 0 4 COEF VAR = 1 02

SE 0017

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 023	0 015	0 020
PEAK AREA (ABS-SECONDS)	0 026	0 006	0 020

-0 8 cal blank

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 020	0 012	0 0 8
PEAK AREA (ABS-SECONDS)	0 022	0 002	0 020

-2 1

MEAN= -1 4 STD DEV = 0 8 COEF VAR = 62 43

1:2 dup01 1:05F

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0 047	0 013	0 051
PEAK AREA (ABS-SECONDS)	0 075	-0 006	0 081

-4 9

MEAN= -4 4 STD DEV = 0 8 COEF VAR = 18 83 %

****

SE 0012 MF0004

spk PDdup01

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0 113	0 065	0 052
PEAK AREA (ABS-SECONDS)	0 098	0 016	0 082

2 6 1.9ml sample + 0.100ml 200ppb Se 0% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0 104	0 062	0 059
PEAK AREA (ABS-SECONDS)	0 093	0.017	0 082

3 1

MEAN= 2 3 STD DEV = 0 3 COEF VAR = 10 8 %

****

SE 0013 MF0004

PDdup01

1:10

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0 025	0 013	0 022
PEAK AREA (ABS-SECONDS)	0 038	0 008	0 030

-1 9 1:050F

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0 026	0 016	0 025
PEAK AREA (ABS-SECONDS)	0 030	0 002	0 028

-2 1

MEAN= -2 0 STD DEV = 0 2 COEF VAR = 9 55 %

****

SE 0014 MF0004

PDdup01

1:10

spk

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0 128	0 113	0 020
PEAK AREA (ABS-SECONDS)	0 052	0.032	0 020

8 2 1.9mlsample + 0.100ml 200ppb Se 88% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0 133	0 113	0 020
PEAK AREA (ABS-SECONDS)	0 054	0 036	0 018

9 4

MEAN= 8 8 STD DEV = 0 8 COEF VAR = 9 45

****

SE 0015

0015 (CONTINUED)

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0 102	0 056	0 053
PEAK AREA (ABS-SECONDS)	0 106	0 017	0 090

MF0004

-2 8

MEAN= -2 8 STD DEV = 0 0 COEF VAR = 0 06 %

****

SE 0008 MF 0004

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE) spk 01	0 124	0 116	0 023
PEAK AREA (ABS-SECONDS) 110	0 054	0 033	0 021

8 6 1.9 mL sample + 0.100 mL 200 ppb Se 83% recovery

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 116	0 05	0 020
PEAK AREA (ABS-SECONDS)	0 049	0 032	0 018

8 0

MEAN= 8 3 STD DEV = 0 4 COEF VAR = 4 34 %

****

SE 0009

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 [illegible]	0 [illegible]	0 023
PEAK AREA (ABS-SECONDS)	0 156	0 128	0 028

40 6 CCCS - SRM2126-3(40) 103% recovery

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 [illegible]	0 [illegible]	0 022
PEAK AREA (ABS-SECONDS)	0 155	0 129	0 026

40 9

MEAN= 40 [illegible] STD DEV = 0 2 COEF VAR = 0 60 %

****

SE 0010

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 022	0 012	0 022
PEAK AREA (ABS-SECONDS)	0 024	0 002	0 023

-2 4 cal blank

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 022	0 014	0 020
PEAK AREA (ABS-SECONDS)	0 022	0 002	0 020

-2 1

MEAN= -2 3 STD DEV = 0 2 COEF VAR = 8 37 %

****

SE 0011

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 038	0 015	0 052
PEAK AREA (ABS-SECONDS) MF 0004	0 068	-0 002	0 070

-3 8 PD dup 01 105DF

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 04[illegible]	0 013	0 051
PEAK AREA (ABS-SECONDS)	0 075	-0 006	0 081

000481

MEAN= -4 4 STD DEV = 0 8 COEF VAR = 18 83 %

SE 0004

	AA	AA-EC	BG
PEAK HEIGHT (ABSORBANCE)	0 112	0 107	0 018
PEAK AREA (ABS-SECONDS)	0 047	0 034	0 012

9 0 LCS(10) 88% recovery

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 113	0 103	0 019
PEAK AREA (ABS-SECONDS)	0 047	0 033	0 014

8 6

MEAN= 8 8 STD DEV = 0 2 COEF VAR = 2 75 %

****

SE 0005

	AA	AA-EC	BG
PEAK HEIGHT (ABSORBANCE)	0 047	0 014	0 059
PEAK AREA (ABS-SECONDS)	0 073	-0 005	0 078

-4 8 8601048-01 MF0004 105DF

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 060	0 015	0 062
PEAK AREA (ABS-SECONDS)	0 048	-0 001	0 048

-3 1

MEAN= -4 0 STD DEV = 1 2 COEF VAR = 30 33 %

****

SE 0006 MF0004 spk01

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 087	0 053	0 050
PEAK AREA (ABS-SECONDS)	0 035	0 014	0 081

1 9 1.9ml sample + 0.100ml 200ppb Se 0% recovery

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 105	0 068	0 043
PEAK AREA (ABS-SECONDS)	0 098	0 018	0 08

3 2

MEAN= 2 5 STD DEV = 0 3 COEF VAR = 35 26 %

****

SE 0007

	AA	AA-EC	BG
PEAK HEIGHT (ABSORBANCE)	0 027	0 013	0 023
PEAK AREA (ABS-SECONDS)	0 021	0 000	0 030

MF0004 01

-2 8 1.10 1.050F

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 018	0 017	0 022
PEAK AREA (ABS-SECONDS)	0 023	0 000	0 022

-2 8

MEAN= -2 8 STD DEV = 0 0 COEF VAR = 0 06 %

****

SE 0008 MF0004 spk01 1.10

	AA	AA-EC	BG
PEAK HEIGHT (ABSORBANCE)	0 124	0 116	0 023
PEAK AREA (ABS-SECONDS)	0 054	0 033	0 021

-4 4 — source shot tube contamination

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0 431	0 430	0 021
PEAK AREA (ABS-SECONDS)	0 158	0 141	0 017

void data on file

45 0

MEAN= 44 7 STD DEV = 0 4 COEF VAR = 0 99 %

****

SE 0001

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0 414	0 406	0 019
PEAK AREA (ABS-SECONDS)	0 152	0 136	0 016

43 2 — ICCS NBS SRM 2126-3(40) 4% 108% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0 428	0 420	0 020
PEAK AREA (ABS-SECONDS)	0 152	0 134	0 018

42 6

MEAN= 42 9 STD DEV = 0 5 COEF VAR = 1 07 %

****

SE 0002

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE	0 020	0 013	0 018
PEAK AREA (ABS-SECONDS)	0 009	0 002	0 007

-2 2 — cal blank

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE	0 021	0 020	0 020
PEAK AREA (ABS-SECONDS)	0 023	0 009	0 014

0 1

MEAN= -1 1 STD DEV = 1 7 COEF VAR = 99 99 %

****

SE 0003

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0 020	0 014	0 017
PEAK AREA (ABS-SECONDS)	0 018	0 006	0 012

-0 8 — prep blank

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0 018	0 018	0 017
PEAK AREA (ABS-SECONDS)	0 013	0 003	0 010

-1 3

MEAN= -1 3 STD DEV = 0 8 COEF VAR = 57 90 %

****

SE 0004

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0 112	0 107	0 018
PEAK AREA (ABS-SECONDS)	0 047	0 034	0 012

9 0 — LCS(10) 4% 88% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0 113	0 108	0 019
PEAK AREA (ABS-SECONDS)	0 047	0 033	0.014

****
44 2 E-25 READING GREATER THAN HIGHEST STANDARD
****
40 0 STANDARD 2
****
SE

(CONTINUED)

	AA	AA-EC	BC
PEAK HEIGHT (ABSORBANCE)	0 600	0 599	0 019
PEAK AREA (ABS-SECONDS)	0 205	0 188	0 017

54 8

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 582	0 578	0 020
PEAK AREA (ABS-SECONDS)	0 207	0 184	0 023

53 8

MEAN= 54 3 STD DEV = 0 4 COEF VAR = 0 75 %

****
54 3 E-25 READING GREATER THAN HIGHEST STANDARD
****
59 6 STANDARD 5
****
SE

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 428	0 420	0 026
PEAK AREA (ABS-SECONDS)	0 153	0 133	0 020

42 3

✓ X void data sampler pump malfunction 9ml²

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 328	0 159	0 269
PEAK AREA (ABS-SECONDS)	0 906	0 091	0 815

28 2

MEAN= 35 3 STD DEV = 9 7 COEF VAR = 27 65 %

****
SE 0001

	AA	AA-EC	BC
PEAK HEIGHT (ABSORBANCE	0 413	0 407	0 021
PEAK AREA (ABS-SECONDS)	0 154	0 139	0 014

44 4

double shot tube contamination

---

void data 9ml²

	AA	AA-EC	EC
PEAK HEIGHT (ABSORBANCE)	0 431	0 430	0 021
PEAK AREA (ABS-SECONDS)	0 158	0 141	0 017

45 0

MEAN= 44 7 STD DEV = 0 4 COEF VAR = 0 99 %

000484 ********
SE 0001

	AA	AA-EC	BC

```
SE
                                          AA              AA-BC             BC
PEAK HEIGHT (ABSORBANCE)                0 025           0 019           0 022
PEAK AREA (ABS-SECONDS)                 0.027           0 010           0 017

   0 003
-------------------------------------------------------------------------------
                                          AA              AA-BC             BC
PEAK HEIGHT (ABSORBANCE)                0 022           0 016           0 019
PEAK AREA (ABS-SECONDS)                 0 023           0 007           0 016

   0 000
-------------------------------------------------------------------------------
MEAN=      0 001      STD DEV =      0 002      COEF VAR =  99 99 %
*******************************************************************************
   0 000           AUTOZERO
*******************************************************************************
SE
                                          AA              AA-BC             BC
PEAK HEIGHT (ABSORBANCE)                0 208           0 201           0 022
PEAK AREA (ABS-SECONDS)                 0 084           0 065           0 019

   0 056
-------------------------------------------------------------------------------
                                          AA              AA-BC             BC
PEAK HEIGHT (ABSORBANCE)                0 205           0 197           0 022
PEAK AREA (ABS-SECONDS)                 0 087           0 062           0 025

   0 053
-------------------------------------------------------------------------------
MEAN=      0 055      STD DEV =      0 002      COEF VAR =  3 82  %
*******************************************************************************
    20 0           STANDARD    1
*******************************************************************************
SE
                                          AA              AA-BC             BC
PEAK HEIGHT (ABSORBANCE)                0 426           0 414           0 020
PEAK AREA (ABS-SECONDS)                 0 147           0 128           0 019

    43 *
-------------------------------------------------------------------------------
                                          AA              AA-BC             BC
PEAK HEIGHT (ABSORBANCE)                0 380           0 362           0 023
PEAK AREA (ABS-SECONDS)                 0 151           0 131           0 020

    44 *
-------------------------------------------------------------------------------
MEAN=      44 2      STD DEV =      0 7      COEF VAR =  1 63  %
*******************************************************************************
    44 2           E-25  READING GREATER THAN HIGHEST STANDARD
*******************************************************************************
    40 0           STANDARD    2
*******************************************************************************
* *
```

000485

(CONTINUED)

```
                                          AA              AA-BC             BC
PEAK HEIGHT (ABSORBANCE)                0 600           0 599           0 019
```

RADIAN
CORPORATION

Element Se

Date 1-21-86

Daily Run Log

List all standards, samples, etc in the order run

1		Blank	commercial std					1
2		20	prep blank					2
3		40	8601064-01F					3
4		60	dup01					4
5	ICCS		spk01					5
6		Blank	old ~~01F~~					6
7		20	spk01 dil					7
8		40	02					8
9		60	PD spk02					9
10		ICCS	03					10
11		Blank	CCCS					11
12		20	cal blank					12
13		40	04					13
14		60	05					14
15		ICCS	06					15
16	cal blank		07					16
17	prep blank		QC					17
18	LCS		cal blank					18
19	8601048-01		~~QC~~ 2					19
20		spk						20
21	01 dil							21
22	spk dil							22
23	CCCS							23
24	cal blank							24
25	PD dup 01							25
26		spk						26
27	dil dup 01							27
28		spk						28
29	PD spk							29
30	CCCS							30
31	cal blank							31

000486

TNTTT I

CASE 5445

3030S IDL=3.3 ppb CRDL=50 ppb

EDL - PE #2468

Banco lot # H1-17, 20, 40, 60 ppb pur 1-21-86

corr 999

slope 003

int 008

analyt spike. 19 ml sample + 0.100 ml ~~Se~~ HNO_3^2 200 ppb Se sol.

= 10 ppb spike added

(all samples diluted to match spike dilution

Mary Riddle

cal verification = NBS SRM 2126-3 = 40 µg/l

RADIAN CORPORATION

Element Se SOP # _____

Date 1-21-86 Time On 8 30 AM Time Off 4 30 pm

Instrument Setup

Wavelength 196 nm Lamp EDL ☑ Vendor PE 2466 Power 6

Slit 2.0 Bkg Corr ☑ Y ☐ N HCL ☐ Serial # _____

☐ Flame, Fuel _____ Oxid _____ ☐ Hydride ☐ Cold Vapor

☑ HGA Program

Step	1	2	3	4	5
Temp °C	150	600	2300	2600	20
Ramp	1	1	0	1	1
Hold	30	30	5	3	10
Read			✓		
Int Flow			5		

Sample Vol (ul) 25

Gas Flow 5-300

Matrix Mod Vol (ul) 5

Type $NH_4(NO_3)_2$

Conc 0.4%

Platform Used ☑ Y ☐ N

Standard Prep

Source Baker Lot # ~~00-09~~ HJ-17 mg²

Conc 20 Abs 064 Exp Date NL

40 (Pk Ht) 130 QC Source SRM2126-3

60 186 Corr Coef .999

Slope .003

Intercept .008

Blank 009

Preventative Maintenance

clean system / new tube / platform

Consummables (Approx)

Sampler Cups 40 Pipet Tips small 40

Graphite Tubes 1 med _____

Platforms 1 large 40

Other _____

Remarks _____

Analyst Name Mary Riddle

000489

Case 5445

Doc # 5445-6-40-11

CLP AAS BENCH SHEET

ELEMENT Se INSTRUMENT 30305 CRDL 5.0 ANALYST MR²

DATE 1-21-86 SOP # IDL 33 NOTE Use proper data flags for final concentration

CUP #	SAMPLE #	Avg Peak Height	RPD	Calc Conc	Dilution Factor	Digestion Factor	Recovery	MSA Data	Final Conc mg/L	
1	ICCS-SRM2126-3(40) ug/l		11	43			108%		43 ug/l	
2	cal blank		—	<33					3.3 ug/l	U
3	prep blank		—	<3.3					3.3 ug/l	U
4	LCS(10) ug/l		23	88			88%		88 ug/l	
5	8601048-01	MF0004	—	<3.3	105			see dilution	3.5 ug/l	U
6	" Analyst spike		—	<33			0%			
7	-01		—	<33	110(1.05)				35 ug/l	U E
8	" Analyst Spike		4.9	83			83%			ICB
9	CCCS-SRM2126-3(40) ug/l		06	41			103%		41 ug/l	
10	cal blank		—	<33					33 ug/l	U
11	8601048-01 PDdup		—	<3.3	105				35 ug/l	U
12	" Analyst Spike		—	<3.3			0%			
13	PDdup01		—	<3.3	110(105)				35 ug/l	U E ICB
14	" Analyst Spike		95	88			88%			
15	PDspk01		—	<3.3			0%	10 ug/l spike added	<3.3 ug/l	U
16	CCCS-SRM2126-3(40) ug/l		11	39			98%		39 ug/l	
17	cal blank		—	<33					33 ug/l	U

I hereby certify that all analyses and quality control procedures were followed according to current SOP's for this procedure except as follows

Comments Analyst Spike 19ml sample + 0.100ml 200ppb Se

Mary Riddle
Signature of Analyst

READ -1 3

MEAN= -1.9 STD DEV = 0 1 COEF.VAR.= 3.30 %

****

JGRAMMING MODE INSTRUMENT USER METH # 09 - AS DATE 86/01/24

ELEMENT AS WAVELENGTH (NM) 193.7 SLIT (NM) 0.7
PYRO COATED TUBE WITH PLATFORM - MAX POWER HEATING - GAS STOP - MATPIX MOD.
PRETREAT TEMP 1300 ATOMIZE TEMP 2300 CHAPACT. MASS (PG) 17.0

1. TECHNIQUE ZEEMAN	2 LAMP CURRENT (MA) 5
3. SIGNAL PROCESSING PEAK AREA	4. CALIBRATION AUTO SELECT
5. TIME (SECONDS) 5.0	6. READ DELAY (SECONDS) 0.0
7. SCREEN FOPMAT 1.0 GRAPHICS	8 PRINTER MAIN SUPPL
9. RECORDER SIGNAL 0.2 CONT ABS	10. PECOPDER EXP 1000
11. STATISTICS 2 AVG. & SD & CV	12. NOMINAL WEIGHT 1.0
13. POLLOVER(ABS) 1 300	14 BG SCALE 1.0

15. S1 20.0	16 S2 40 0	17. S3 60.0
18. S4	19 S5	20. S6
21. S7	22. S8	23 PSLP

TIME 17 00

PROGRAMMING MODE HGA 600 USEP METH # 09 - AS DATE 86/01/24

ELEMENT AS WAVELENGTH (NM) 193.7 SLIT (NM) 0.7
PYPO COATED TUPE WITH PLATFOPM - MAX POWEP HEATING - GAS STOP - MATRIX MOD.
PRETREAT TEMP 1300 ATOMIZE TEMP 2300 CHARACT MASS (PG) 17 0

STEP NUMBER	FUPNACE TEMPEPATURE	TIME RAMP	TIME HOLD	INTEPNAL GASFLOW	PEAD	RECORDER
1	150	1	35	300	-	-
2	800	1	45	300	-	-
3	2300	0	5	0	*	-
4	2E00	1	3	300	-	-
5	20	1	10	300	-	-
6	----	1	--	300	-	-
7	----	1	--	300	-	-
8	----	1	--	300	-	-
9	----	1	--	300	-	-

TIME 17 00

CCCS 96 % rec.

AS 0044

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 100	0 097	0.016
PEAK AREA (ABS-SECONDS)	0.077	0.065	0.012

EAD 25.0

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 104	0 096	0.015
PEAK AREA (ABS-SECONDS)	0.080	0.068	0.012

READ 26 1

MEAN= 25.5 STD.DEV.= 0.8 COEF.VAR.= 3.15 %

****

AS 0045 cal blank

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 018	0 017	0.014
PEAK AREA (ABS-SECONDS)	0.009	-0 004	0 013

READ -2 0

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 021	0 018	0 019
PEAK AREA (ABS-SECONDS)	0.014	-0 004	0.017

READ -1.9

MEAN= -1 9 STD DEV = 0 1 COEF VAR = 3 30 %

****

PROGRAMMING MODE INSTRUMENT USER METH # 09 - AS DATE 86/01/24

ELEMENT AS WAVELENGTH (NM) 193 7 SLIT (NM) 0 7
PYRO COATED TUBE WITH PLATFORM - MAX POWER HEATING - GAS STOP - MATRIX MOD
PRETREAT TEMP 1300 ATOMIZE TEMP 2300 CHARACT MASS (PG) 17 0

1. TECHNIQUE ZEEMAN		2	LAMP CURRENT (MA) 5
3 SIGNAL PROCESSING PEAK AREA		4	CALIBRATION AUTO SELECT
5. TIME (SECONDS) 5 0		6	READ DELAY (SECONDS) 0.0
7. SCREEN FORMAT 1 0 GRAPHICS		8.	PRINTER MAIN SUPPL
9 RECORDER SIGNAL 0 2 CONT ABS		10	RECORDER EXP 1000
11 STATISTICS 2 AVG & SD & CV		12	NOMINAL WEIGHT 1.0
13 ROLLOVER(ABS) 1 000		14	BG SCALE 1.0

15	S1 20.0	16	S2 40 0	17	S3 60.0
18	S4	19	S5	20	S6
21	S7	22	S8	23	PSLP

TIME 17 00

PEAK HEIGHT (ABSORBANCE)	0 039	0 01	0 039
PEAK AREA (ABS-SECONDS)	0 068	-0.005	0.073

READ -2.5

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.037	0.028	0.035
PEAK AREA (ABS-SECONDS)	0.075	0.005	0.070

READ 1.7

MEAN= -0.4 STD DEV.= 3.0 COEF.VAR.= 99 99 %

****

AS 0042 8601048-01 dig dup anal4 spike

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 088	0.077	0 031
PEAK AREA (ABS-SECONDS)	0.125	0 050	0 074

100%

READ 19.3

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.110	0.092	0.036
PEAK AREA (ABS-SECONDS)	0.134	0.056	0 078

READ 21.6

MEAN= 20.4 STD DEV = 1.6 COEF VAR = 7.84 %

****

AS 0043 8601048-01 pre-dig Spike 85% rec.

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 102	0.084	0 044
PEAK AREA (ABS-SECONDS)	0 131	0 043	0 087

READ 16 4

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 100	0 077	0 040
PEAK AREA (ABS-SECONDS)	0 131	0 048	0.083

READ 18.4

MEAN= 17 4 STD DEV = 1 4 COEF.VAR = 7 94 %

****

AS 0044 AVOID wrong sample -JLD 1-24-86

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 088	0 016	0.022
PEAK AREA (ABS-SECONDS)	0 011	0 004	0 014

READ -1 8

CCS 96% rec.

AS 0044

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 100	0 097	0 016
PEAK AREA (ABS-SECONDS)	0 077	0.065	0.012

F000493 0

PEAK AREA (ABS-SECONDS) 0 064 0.052 0 012

READ 19.8

MEAN= 18.9 STD.DEV.= 1.2 COEF.VAR = 6.58 %

****

AS 0039 8601048-01 MF0004 1.05 df

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 034	0 020	0 036
PEAK AREA (ABS-SECONDS)	0 069	0.005	0 064

READ 1 6

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.036	0.018	0.036
PEAK AREA (ABS-SECONDS)	0.067	0.003	0.064

READ 0 8

MEAN= 1.2 STD DEV.= 0.5 COEF.VAR.= 43.20 %

****

AS 0040 8601048-01 analy spike ~~95%~~

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 095	0 082	0 035
PEAK AREA (ABS-SECONDS)	0 115	0 042	0 073

READ 16.1

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.093	0 077	0.032
PEAK AREA (ABS-SECONDS)	0 127	0 057	0 070

READ 21 7 rerun again

MEAN= 18 9 STD DEV = 4.0 COEF.VAR = 21 04 % SD 1-24-

****

AS 0040 8601048-01 analy spike

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 094	0.072	0 032
PEAK AREA (ABS-SECONDS)	0 123	0 047	0.077

95

READ 17 8

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 100	0 084	0 034
PEAK AREA (ABS-SECONDS)	0 128	0 054	0.075

READ 20 5

MEAN= 19 2 STD DEV = 1.9 COEF.VAR = 10 01 %

****

AS 0041 8601048-01 dig dup 1.05 df

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 039	0 017	0.039
PEAK AREA (ABS-SECONDS)	0.068	-0.005	0.073

READ -2 5

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 037	0.028	0.035
PEAK AREA (ABS-SECONDS)	0.075	0.005	0.070

000494 1 7

MEAN= -0.4 STD.DEV.= 3 0 COEF VAR = 99 99 %

READ 28 3

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.112	0.108	0 021
PEAK AREA (ABS-SECONDS)	0.088	0.069	0.019

READ 26 6

MEAN= 27.5 STD DEV.= 1.2 COEF.VAR.= 4.34 %

****

AS 0036 cal blank

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 018	0.017	0.021
PEAK AREA (ABS-SECONDS)	0.018	0.002	0.015

READ 0 5

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 018	0.018	0 017
PEAK AREA (ABS-SECONDS)	0.012	0.008	0.004

READ 2 5

MEAN= 1.5 STD DEV.= 1.4 COEF.VAR.= 95 24 %

****

AS 0037 prep blank

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 020	0 017	0.015
PEAK AREA (ABS-SECONDS)	0 014	0 001	0 013

EAD 0 0

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 019	0.020	0 012
PEAK AREA (ABS-SECONDS)	0 010	-0 003	0.013

READ -1 5

MEAN= -0.8 STD DEV = 1 0 COEF VAR = 99.99 %

****

LCS (4 reor - 20 ppb) 95% rec.

AS 0038

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 075	0 070	0.016
PEAK AREA (ABS-SECONDS)	0.065	0.047	0.018

READ 18 1

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 075	0.070	0 018
PEAK AREA (ABS-SECONDS)	0 064	0.052	0 012

PEAD 19 8

MEAN= 18 9 STD DEV = 1.2 COEF.VAR = 6 58 %

****

AS 0039 8601048-01 MF0004 1.05 df

000495

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 034	0 020	0 036
PEAK AREA (ABS-SECONDS)	0.069	0 005	0 064

READ 51 5

MEAN= 51.3 STD.DEV.= 0 3 COEF.VAR.= 0.50 %

AS 0033 8601106-06 MAC885 105df

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.045	0.033	0 023
PEAK AREA (ABS-SECONDS)	0 045	0 018	0.027

READ 6.7

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 042	0 032	0 019
PEAK AREA (ABS-SECONDS)	0.040	0.019	0.021

READ 6 8

MEAN= 6 8 STD.DEV.= 0.1 COEF VAR = 1.58 %

AS 0034 8601106-06 analy spike

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 107	0 098	0 018
PEAK AREA (ABS-SECONDS)	0.074	0 052	0 023

READ 19 7

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 105	0 092	0 020
PEAK AREA (ABS-SECONDS)	0 090	0 071	0 019

READ 27 3 rerun again

MEAN= 23 5 STD DEV.= 5 4 COEF.VAR = 22 92 % bad RPD

AS 0034 8601106-06 analy spike

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 111	0 100 101% rec.	0 024
PEAK AREA (ABS-SECONDS)	0 089	0 064	0 025

READ 24 6

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.102	0 094	0.022
PEAK AREA (ABS-SECONDS)	0.097	0.076	0.021

READ 29 1

MEAN= 26 9 STD DEV = 3 2 COEF VAR.= 12 03 %

AS 0035 CCCS 104% rec.

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 114	0 104	0 013
PEAK AREA (ABS-SECONDS)	0 088	0.074	0.015

READ 23 3

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 112	0 108	0 021
PEAK AREA (ABS-SECONDS)	0 088	0.069	0.019

READ 26 6

000496 7 5 STD DEV.= 1 2 COEF.VAR = 4.34 %

AS 0036 cal blank

READ 23

MEAN= 24.0 STD.DEV.= 0.4 COEF.VAR.= 1.81 %

****

AS 0030 8601106-04 MAC 883

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.083	0 057	0.033
PEAK AREA (ABS-SECONDS)	0 072	0.035	0.037

READ 13 2 1.05 df

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.081	0.055	0.040
PEAK AREA (ABS-SECONDS)	0.077	0.035	0.042

READ 13.4

MEAN= 13.3 STD DEV.= 0 2 COEF VAR = 1.13 %

****

8601106-04 analy spike
100% rec

AS 0031

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.151	0.115	0.043
PEAK AREA (ABS-SECONDS)	0 142	0.090	0.052

READ 34 7

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 145	0 116	0 037
PEAK AREA (ABS-SECONDS)	0.125	0.080	0 045

READ 30 9

MEAN= 32 8 STD DEV = 2 6 COEF.VAR.= 8 00 %

****

8601106-04 pre deg spike
92% rec.

AS 0032

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 219	0 183	0.042
PEAK AREA (ABS-SECONDS)	0 189	0.133	0 056

READ 51 1

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.219	0 187	0 043
PEAK AREA (ABS-SECONDS)	0 185	0 134	0 051

READ 51 5

MEAN= 51.3 STD DEV = 0.3 COEF.VAR.= 0 50 %

****

AS 0033 8601106-06 MAC 885 105 df

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 045	0.033	0.023
-SECONDS)	0.045	0.018	0.027

000497

READ: 6.7

PEAK HEIGHT (ABSORBANCE)	0 038	0.024	0.025
PEAK AREA (ABS-SECONDS)	0.044	0 013	0 032

READ 4.5

MEAN= 3 8 STD.DEV.= 1.0 COEF.VAR.= 27 52 %

8601106-02 analy spike

10626 rec
125% R

AS 0027

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.112	0.094	0.032
PEAK AREA (ABS-SECONDS)	0.102	0 065	0.038

READ 24.7

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 106	0 087	0 026
PEAK AREA (ABS-SECONDS)	0 090	0 063	0.027

READ 24 2

MEAN= 24 5 STD.DEV.= 0.4 COEF.VAR = 1 66 %

AS 0028

8601106-02 dig dup

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 042	0.027	0 024
PEAK AREA (ABS-SECONDS)	0 042	0 014	0.028

1.05 df

READ 5 0

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 044	0 026	0 026
PEAK AREA (ABS-SECONDS)	0 051	0 014	0.037

READ 5 0

MEAN= 5.0 STD DEV.= 0.0 COEF.VAR = 0.48 %

AS 0029

8601106-02 dig dup analy spike 95%

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 108	0 088	0 034
PEAK AREA (ABS-SECONDS)	0 098	0 063	0.035

READ 24 3

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 111	0.096	0 025
PEAK AREA (ABS-SECONDS)	0 104	0 062	0.042

READ 23 7

MEAN= 24 0 STD DEV = 0.4 COEF.VAR.= 1.81 %

AS 0030

8601106-04 MAC 883

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.083	0.057	0 033
PEAK AREA (ABS-SECONDS)	0 072	0.035	0.037

000498

13 2

1.05 df

MEAN= 16 6 STD DE - 3 4 COEF VAR - 99 99

****

AS 0023 LCS (4heor - 40ppb)

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.136	0.134	0 016
PEAK AREA (ABS-SECONDS)	0 105	0.094	0.011

88% rec

READ 36.2

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 122	0.120	0 016
PEAK AREA (ABS-SECONDS)	0 102	0.087	0 015

READ 33.6

MEAN= 34 9 STD.DEV = 1.8 COEF.VAR.= 5.13 %

****

AS 0024 CCCS 96% rec.

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.114	0.107	0.018
PEAK AREA (ABS-SECONDS)	0.090	0.071	0 018

READ 27.5

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 111	Q 106	0.022
PEAK AREA (ABS-SECONDS)	0.079	0.062	0 018

READ 23.6

MEAN= 25 5 STD DEV.= 2 7 COEF VAR.= 10 59 %

****

AS 0025 cal blank

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.018	0.018	0 013
PEAK AREA (ABS-SECONDS)	0 015	0.007	0 008

READ 2 2

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 022	0 022	0 012
PEAK AREA (ABS-SECONDS)	0 013	0 001	0 012

READ -0 2

MEAN= 1.0 STD DEV = 1.7 COEF VAR.= 99 99 %

****

AS 0026 8601106-02 MAC881 1.05dF

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 036	0.019	0 022
PEAK AREA (ABS-SECONDS)	0 035	0.009	0 026

READ 3 0

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 038	0.024	0 025
PEAK AREA (ABS-SECONDS)	0.044	0.013	0 032

READ 4 5

MEAN= 3 8 STD DEV = 1.0 COEF.VAR.= 27 52 %

****

000499

8601106-02 analy spike

PEAK AREA (ABS-SECONDS)	0.013	0 002	0 010

READ 0.5

MEAN= 0.6 STD.DEV.= 0 1 COEF.VAR.= 19.04 %

****

AS 0021 8601106-07 analy spike

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 083	0 078	0 018
PEAK AREA (ABS-SECONDS)	0 070	0 055	0.015

READ 21.0 100% rec

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 076	0.073	0 014
PEAK AREA (ABS-SECONDS)	0.064	0 050	0.014

READ 19.3

MEAN= 20 1 STD.DEV = 1.2 COEF.VAR.= 6 05 %

****

AS 0022 prep blank

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 016	0 014	0 011
PEAK AREA (ABS-SECONDS)	0 011	0 004	0.007

READ 1.1

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 016	0.012	0.014
PEAK AREA (ABS-SECONDS)	0.009	-0 004	0 013

READ -2 0

MEAN= -0 4 STD DEV = 2.2 COEF VAR = 99 99 %

****

LCS (4leor- 40ppb)

~~88 lorec~~

AS 0023

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	-0 388	0 074	-0 458
PEAK AREA (ABS-SECONDS)	-2 514	-0 172	-2 342

READ -68 9 VOID - missed sampler cup

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 133	0 125	0 022
PEAK AREA (ABS-SECONDS)	0.106	0 090	0 016

READ 34 7

MEAN= -16 6 STD DEV = 73 4 COEF VAR = 99 99 %

****

AS 0023 LCS (4leor-40ppb)

	AA		ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.136	88 lorec	0.134	0 016
PEAK AREA (ABS-SECONDS)	0.105		0 094	0.011

000500 36 2

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)			

READ 18 9

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.088	0.074	0 020
PEAK AREA (ABS-SECONDS)	0.092	0.058	0.034

READ 22.2

MEAN= 20 5 STD.DEV = 2 3 COEF VAR = 11 18 %

****

AS 0018 8601106-05 mAC884

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.021	0.018	0.017
PEAK AREA (ABS-SECONDS)	0.030	0.005	0.025

READ 1.5 1.05 df

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.022	0.017	0 019
PEAK AREA (ABS-SECONDS)	0 037	0.011	0.027

READ 3 7

MEAN= 2 6 STD DEV = 1 6 COEF VAR.= 60.57 %

****

8601106-05 analy spike
105% rec

AS 0019

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 07	0.069	0.018
PEAK AREA (ABS-SECONDS)	0 065	0.055	0 031

READ 20 9

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.078	0 066	0.016
PEAK AREA (ABS-SECONDS)	0 079	0 056	0 023

READ 21 6

MEAN= 21 2 STD DEV = 0.5 COEF.VAR = 2.13 %

****

AS 0020 8601106-07 mAC886 1.05 df

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 018	0 014	0 013
PEAK AREA (ABS-SECONDS)	0 018	0 003	0 015

READ 0 7

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 014	0.011	0 018
PEAK AREA (ABS-SECONDS)	0 013	0 002	0 010

READ 0.5

MEAN= 0.6 STD DEV = 0 1 COEF.VAR.= 19.04 %

****

AS 0021 8601106-07 analy spike

000501

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.083	0.078	0 018
PEAK AREA (ABS-SECONDS)	0 070	0.055	0 015

AS 0014 CCCS 100% rec.

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 102	0.097	0.014
PEAK AREA (ABS-SECONDS)	0 086	0.072	0.014

READ 27.6

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 108	0 101	0.015
PEAK AREA (ABS-SECONDS)	0.088	0.070	0.019

READ 26.7

MEAN= 27.2 STD DEV = 0.6 COEF.VAR.= 2.31 %

cal blank

AS 0015

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 019	0 014	0 016
PEAK AREA (ABS-SECONDS)	0.014	0 000	0 014

READ -0 6

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 014	0 012	0 012
PEAK AREA (ABS-SECONDS)	0 010	0 001	0 009

READ -0 1

MEAN= -0 3 STD DEV = 0 3 COEF VAR = 96 7 %

AS 0016 8601106 03 analy spike 100% rec

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 088	0.080	0 023
PEAK AREA (ABS-SECONDS)	0 088	0 057	0 031

READ 21.8

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 078	0 068	0 016
PEAK AREA (ABS-SECONDS)	0.080	0 050	0.030

READ 19 1

MEAN= 20 4 STD DEV = 1 9 COEF.VAR = 9.53 %

AS 0017 8601106-03 pre-dig spike 105% rec.

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 085	0.072	0 024
PEAK AREA (ABS-SECONDS)	0 090	0.049	0 040

READ 18 9

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.088	0.074	0.020
PEAK AREA (ABS-SECONDS)	0.092	0.058	0.034

000502

READ 22 2

PEAK AREA (ABS-SECONDS)	0.084	0.053	0 031

PEAD 20.4

MEAN= 21.1 STD.DEV = 0 9 COEF VAR.= 4 33 %

****

8601106-01 dig dup 1.05 df

AS 0011

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.020	0.013	0 015
PEAK AREA (ABS-SECONDS)	0.034	0.004	0.029

PEAD 1.3

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 022	0.012	0 016
PEAK AREA (ABS-SECONDS)	0 033	0.002	0 030

PEAD 0 5

MEAN= 0 9 STD DEV = 0 5 COEF.VAR = 59 48 %

****

AS 0012 8601106-01 dig dup analy spike 100%

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 080	0.069	0 019
PEAK AREA (ABS-SECONDS)	0 087	0 053	0 034

PEAD 20 3

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 081	0 072	0 020
PEAK AREA (ABS-SECONDS)	0 082	0 054	0 029

READ 20 6

MEAN= 20 4 STD DEV = 0 2 COEF.VAR = 1.21 %

****

AS 0013 8601106-03 MAC882

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 019	0 013	0 018
PEAK AREA (ABS-SECONDS)	0 035	0.006	0 028

1.05 df

READ 2 0

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 024	0.014	0.021
PEAK AREA (ABS-SECONDS)	0 038	0.006	0 032

READ 2 0

MEAN= 2 0 STD.DEV.= 0.0 COEF.VAR.= 0 47 %

****

AS 0014 CCCS 100% rec.

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.102	0.097	0 014
PEAK AREA (ABS-SECONDS)	0 086	0.072	0 014

000503 6

	AA	ZAA	BG

MEAN= -0 5 STD DEV = 0 5 COEF VAR = 99 99 %

****

AS 0007 prep blank

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.013	0 008	0 016
PEAK AREA (ABS-SECONDS)	0 010	-0 001	0.011

EAD -0.9

	AA	ZAA	BG
PEAK HEIGHT (ABSOPBANCE)	0 015	0 011	0 012
PEAK AREA (ABS-SECONDS)	0.014	0.003	0 011

READ 0.7

MEAN= -0.1 STD DEV = 1.1 COEF.VAR = 99 99 %

****

AS 0008 LCS (4 eor 20ppb)

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.069	0.066	0 014
PEAK AREA (ABS-SECONDS)	0.066	0 050	0 016

90% rec.

READ 19 0

	AA	ZAA	BG
PEAK HEIGHT (ABSOPBANCE)	0.067	0.063	0 020
PEAK AREA (ABS-SECONDS)	0 062	0 047	0 015

READ 17 8

MEAN= 18 4 STD DEV = 0 8 COEF VAR = 4.63 %

****

AS 0009 8601106-01 MHC879 105 df

	AA	ZAA	BG
PEAK HEIGHT (ABSOPBANCE)	0 020	0 012	0 016
PEAK AREA (ABS-SECONDS)	0 032	0 003	0 029

READ 0 7

	AA	ZAA	BG
PEAK HEIGHT (ABSOPBANCE)	0 017	0 009	0 016
PEAK AREA (ABS-SECONDS)	0.030	0.001	0 028

READ 0 0

MEAN= 0 3 STD DEV.= 0 5 COEF.VAR = 99 99 %

****

AS 0010 8601106-01 analy spike 105% rec.

	AA	ZAA	BG
PEAK HEIGHT (ABSOPBANCE)	0.082	0 071	0 018
PEAK AREA (ABS-SECONDS)	0 088	0 057	0 031

READ 21 7

	AA	ZAA	BG
PEAK HEIGHT (ABSOPBANCE)	0 080	0 071	0 019
PEAK AREA (ABS-SECONDS)	0.084	0 053	0 031

EAD 20 4

MEAN= 21 1 STD DEV.= 0 9 COEF.VAR.= 4 33 %

****

000504

8601106-01 dig dup 105 df

PEAD 65 7

(CONTINUED)

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 226	0 213	0 018
PEAK AREA (ABS-SECONDS)	0.171	0.157	0 014

READ 66.3

MEAN= 66.0 STD.DEV.= 0.5 COEF.VAR.= 0.78 %

66.0

E-50 PEADING GPEATER THAN HIGHEST STANDAPD

60.3 STANDARD 3

AS 0001 ICCS (WP284 conc #1)

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 108	0.102	0 014
PEAK AREA (ABS-SECONDS)	0 078	0 069	0 008

4heor-27ppb 96%

READ 26 6

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 116	0 10	0 020
PEAK AREA (ABS-SECONDS)	0 085	0 067	0.018

READ 25 8

MEAN= 26 2 STD DEV = 0 6 COEF VAR = 2 12 %

AS 0002 cal blank

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.019	0.012	0 01
PEAK AREA (ABS-SECONDS)	0 014	0.001	0 014

PEAD -0 1

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0 014	0 010	0 013
PEAK AREA (ABS-SECONDS)	0 005	-0.001	0 006

PEAD -0 8

EAN= -0 5 STD DEV = 0 5 COEF VAR = 99 99 %

AS 0007 prep blank

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.013	0 008	0 016
PEAK AREA (ABS-SECONDS)	0.010	-0.001	0.011

000505

READ -0.9

```
PEAK AREA (ABS-SECONDS)                    0 007          0 002          0 004

READ      -0 001
-------------------------------------------------------------------------------
                                            AA             ZAA            BG
PEAK HEIGHT (ABSORBANCE)                  0.020          0.013          0.020
PEAK AREA (ABS-SECONDS)                   0.001          0.000          0 001

READ      -0.003
-------------------------------------------------------------------------------
MEAN=     -0.002     STD.DEV =      0.002     COEF VAR.=  72.11 %
*******************************************************************************
   0 000          AUTOZERO
*******************************************************************************
AS
                                            AA             ZAA            BG
PEAK HEIGHT (ABSORBANCE)                  0 083          0 080          0.021
PEAK AREA (ABS-SECONDS)                   0.056          0.053          0 003

READ       0.052
-------------------------------------------------------------------------------
                                            AA             ZAA            BG
PEAK HEIGHT (ABSORBANCE)                  0.089          0 085          0 018
PEAK AREA (ABS-SECONDS)                   0.063          0 055          0 007

READ       0 054
-------------------------------------------------------------------------------
MEAN=      0.053     STD DEV =      0 002     COEF VAR =  3 01  %
*******************************************************************************
   20 0           STANDARD    1
*******************************************************************************
AS
                                            AA             ZAA            BG
 EAK HEIGHT (ABSORBANCE)                  0 155          0 145          0 016
PEAK AREA (ABS-SECONDS)                   0 116          0.103          0 013

READ       32 3
-------------------------------------------------------------------------------
                                            AA             ZAA            BG
PEAK HEIGHT (ABSORBANCE)                  0 151          0 141          0 014
PEAK AREA (ABS-SECONDS)                   0 113          0 101          0 012

READ       37 5
-------------------------------------------------------------------------------
MEAN=      37 9     STD DEV =       0 5     COEF VAR =  1.43  %
*******************************************************************************
   37.9
        E-50  READING GREATER THAN HIGHEST STANDARD
*******************************************************************************
   40 0           STANDARD    2
*******************************************************************************
AS
                                            AA             ZAA            BG
PEAK HEIGHT (ABSORBANCE)                  0 228          0.218          0 016
PEAK AREA (ABS-SECONDS)                   0 170          0 156          0 014

READ       65 7
-------------------------------------------------------------------------------
```

000506

(CONTINUED)

corr coeff 0 999
slope 0 0026
intercept C 0003

Cases 5453
5445

As - 3030Z PE Lamp EDL current-8
JCD-analyst
1-24-86 - Date
100ul 400 ppb spike to 2000 ul sample - 20ppb analytical spike
standards from Fisher made 1-24-86 - 20ppb, 40ppb, 60ppb
IDL- 45 ug/L
CRDL- 10ug/L
lot # 855087-24

Cal verification = WP 284 #1 - 27ug/l theo
LCS = 80ug/l theo

AS

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.027	0 008	0.021
PEAK AREA (ABS-SECONDS)	0.007	0 002	0.004

READ -0.001

	AA	ZAA	BG
PEAK HEIGHT (ABSORBANCE)	0.020	0.013	0.020
-SECONDS)	0 001	0.000	0.001

000507

READ: -0 003

RADIAN
CORPORATION

Element GS

Date 1-24-86

Daily Run Log

List all standards, samples, etc in the order run

1	Blank			106-06 MAC885					1
2	20ppb STD			106-06 spk					2
3	40 "			CCCS 1					3
4	60 " "			cal blank					4
5	ICCS (WP284 conc #1)			prep blank					5
6	cal blank			LCS					6
7	prep blank			8601048-01 MFD004					7
8	LCS			048-01 spk					8
9	8601106-01 ~~spike~~ MAC879			048-01 dig dup					9
10	106-01 spk			048-01 dig dup spike					10
11	106-01 dig dup			048-01 pre dig spk					11
12	106-01 spk			CCCS					12
13	106-03 MAC882			cal blank					13
14	CCCS								14
15	cal blank								15
16	106-03 spike								16
17	106-03 pre dig spk								17
18	106-05 MAC884								18
19	106-05 spk								19
20	106-07 MAC886								20
21	106-07 spike								21
22	prep blank								22
23	LCS								23
24	CCCS								24
25	cal blank								25
26	106-02 MAC881								26
27	106-02 spike								27
28	106-02 dig dup								28
29	106-02 dig dup spk								29
30	106-04 MAC883								30
31	106-04 spike							HDebS	31

RADIAN
CORPORATION

Element As SOP # _____

Date 1-24-86 Time On _____ Time Off _____

Instrument Setup #5730

Wavelength 1968 nm Lamp EDL ☑ Vendor PE Power 8

Slit 1 Bkg Corr ☑ Y ☐ N HCL ☐ Serial # _____

Zeeman

☐ Flame, Fuel _____ Oxid _____ ☐ Hydride ☐ Cold Vapor

☐ HGA Program

Step	1	2	3	4	5
Temp °C	150	800	2300	2600	20
Ramp	1	1	0	1	1
Hold	35	45	5	3	10
Read			*		
Int Flow					

Sample Vol (ul) 20 ul

Gas Flow _____

Matrix Mod Vol (ul) 5 ul

Type N.NO3

Conc .4%

Platform Used ☑ Y ☐ N

Standard Prep

Source Fisher Lot # 855087-24 Exp Date 6-87

Conc	Abs	
20	052	QC Source WP 284 Conc #1
40	.102	Corr Coef .999
60	157	Slope .0026
		Intercept .0004 0.0003 RB
Blank	0.001	

Preventative Maintenance

_____

_____

_____

Consummables (Approx)

Sampler Cups 50 Pipet Tips small 60

Graphite Tubes 1 med 60

Platforms 1 large _____

Other _____

Remarks _____

_____

_____

Analyst Name JC Debs

CLP AAS BENCH SHEET

ELEMENT As INSTRUMENT 3030Z CRDL 10ug/L ANALYST JCDebs

DATE 1-24-86 SOP # _____ IDL 45 ug/L NOTE Use proper data flags for final concentration

CUP #	SAMPLE #	Avg Peak Height	RID	Calc Conc	Dilution Factor	Digestion Factor	Recovery	MSA Data	Final Conc mg/L
37	prepblank		NC	-08					45U ug/L
38	LCS-1 (theor-20ppb)		66	19			95%		19 ug/L
39	8601048-01 MF0004		NC	12	105			RB 47u	45U ug/L
40	04801 ~~dig~~ analysis		10	19			95%		—
41	04801 digdup		NC	-04	105			RB 47u	45U ug/L
42	04801 analysis		78	20			100%		—
43	04801 predig spk		79	17			85%	20ug/L spike added	17 ug/L
44	CCS		32	26			96%		26 ug/L
45	Calblank		NC	-19					45U ug/L

I hereby certify that all analyses and quality control procedures were followed according to current SOP's for this procedure except as follows

Comments _____

JCDebs
Signature of Analyst

CLP AAS BENCH SHEET Case 5453 Case-5421 5445 RB

ELEMENT As INSTRUMENT 30307 CRDL 10 ug/L ANALYST JCDebs

DATE 1-24-86 SOP # _____ IDL 4.5 ug/L NOTE Use proper data flags for final concentration

CUP #	SAMPLE #	Avg Peak Height	RPD	Calc Conc	Dilution Factor	Digestion Factor	Recovery	MSA Data	Final Conc mg/L
19	106-05 analy spk		21	21			105%		—
20	10607 MAC886		NC	0.5	1.05				4.7U
21	10607 analy spike		61	20			100%		—
22	prep blank		NC	-0.4					4.5U
23	ICS (Heor-40ppb)		51	35			88%		35 ug/L
24	CCCS		11	26			96%		26 ug/L
25	cal blank		NC	10					4.5U
26	8601106-02 MAC881		NC	38	1.5 1.05	89/100		RB 27ug/L 1.25 mL/50 mL	[2.2 mg/kg] U
27	02 analy spk		17	25			106%	RB 125%	—
28	02 dig dup		NC	50	1.5 1.05	87/100			[30 mg/kg]
29	02 dig dup analy spk		18	24			95%		
30	04 MAC883		11	13	1.5 1.05	88/100		78 mg/kg	~~38 mg/kg~~ 26+24=50
31	04 analy spk		80	33			100%		
32	04 pre dig spk		05	51	1.5	88/100	92%	Heor → 23 mg/kg added	29 mg/kg
33	06 MAC885		16	68	1.5 1.05	96/100			[37] mg/kg
34	06 analy spike		12	27			101%		—
35	CCCS1		43	28			104%		28 ug/L
36	cal blank		NC	1.5					4.5U ug/L

I hereby certify that all analyses and quality control procedures were followed according to current SOP's for this procedure except as follows

Comments _____

JCDebs
Signature of Analyst

5453-1-30
Doc# 5445-6-30-22
case 5453
5421 RB
5445

Pag 1 of ____

CLP AAS BENCH SHEET

ELEMENT CS INSTRUMENT 3030Z CRDL 10ug/L ANALYST JeDebs

DATE 1-24-86 SOP # ____ IDL 45 ug/L NOTE Use proper data flags for final concentration

CUP #	SAMPLE #	Avg Peak Height	RPD	Calc Conc	Dilution Factor	Digestion Factor	Recovery	MSA Data	Final Conc mg/L
1	Blank	corr coeff 0.999							/ug/L
2	20ppb STD.	slope 0.0026							
3	40	int 0.0003							
4	60 (4Acor-27ppb)								
5	ICCS(WP284 conc #1)		21	26			96%		26ug/L
6	cal blank		NC	-.05					45U
7	prep blank		NC	-0.1					45U
8	LCS-(4Acor-20)		46	18			90%		18ug/L
9	8601106-01 MAC	879	NC	03	105				47U
10	106-01 anal spk		43	21			105%		—
11	106-01 dig dup		NC	09	105				47U
12	106-01 " anal spk		12	20			100%		—
13	106-03 MAC	882	NC	20	105				47U
14	CCCS WP 284 #1 27ppb		23	27			100%		27ug/L
15	cal blank		NC	-03					45U
16	106-03 anal spk		95	20			100%		—
17	106 03 pre dig spk		11	21	20 ug/L spiked		105%		—
18	10605 MAC	884	NC	26	1.05				47U

I hereby certify that all analyses and quality control procedures were followed according to current SOP's for this procedure except as follows

Comments 400ppb spike solution used in analytical spike 100ul spiking solution in sample -> 20ppb spk

JeDebs
Signature of Analyst

weights listed are dry weights, final volume is 50ml

000512

DOC# 5445-6-25-2

ANALYTICAL CALCULATIONS

Date 2/8/86 Element As, Pb, Se, Zn, Sn Instrument graphite furnace

Example calculations for RAS order #'s CASE 5445, MF 0004

LIQUIDS

Analytical spikes 100 ul of an appropriate spike sol'n is added to 1900 ul of sample The final concentration in the 2000 ul volume is equal to 2x the CRDL

Sample results 100 ul of DI H_2O is added to 1900 ul of sample to compensate for the volume change of the spiked samples The dilution ratio = 1900 2000 ul or 1 1 05 Each sample result must be multipled by 1 05 to determine the concentration in the original 1900 ul

---

SOLIDS

$$\frac{\left(\frac{5.0\ ug}{L}\right)\left(1.05\right)\left[\left(\frac{1L}{1000\ mls}\right)\left(\frac{500mls}{1}\right)\right]}{1.01\ g\ (dry\ wt.)} \quad \text{or} \quad \frac{5.0 \times 1.05 \times .5}{1.01} = 2.6\ mg/kg$$

sample result; dilution factor of analysis spike; final vol

Concentration of "pre-digestion spike added" is calculated in the same manner

---

Analyst _____

ANALYTICAL CALCULATIONS

Date 2-8-86 Element Hg Instrument 403 Perkin

Example calculations for ~~RAS order~~ #'s CASE 5445, sample MF000

LIQUIDS

$$\left(\frac{0.03\,\mu g}{50\,\text{mls}}\right)\left(\frac{1000\,\text{mls}}{1\,l}\right) = \frac{0.60\,\mu g}{l}$$

SOLIDS

(dry weight = %solids x wet wt in grams
92 x 22g = 0.20g)

$$\frac{0.03\,\mu g}{0.20\,g} = 0.15\,\mu g/g$$ or

Analyst David Carruthers

[illegible]	9.17	U-0.013	U-0.013	NC	0.094
TL	10.86	U 0.030	U 0.030	NC	0.030
SN	8.17	U 0.015	U 0.015	NC	0.263
V	10.79	U-0.007	U-0.007	NC	0.030
ZN	16.68	* 0.016	* 0.016	3.2	

[illegible] NO. 29 CCCS-3
[illegible] 1 GRAMS VOLUME 1 ML

11:43:54 3-21-86 29 CCCS-3

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
[illegible]	23.76	* 0.162	* 0.162	10.6	
[illegible]	20.52	U 0.004	U 0.004	NC	0.041
[illegible]	8.13	U 0.016	U 0.016	NC	0.074
BH	8.78	U 0.012	U 0.012	NC	0.023
BE	11.41	U-0.000	U-0.000	NC	0.001
CD	7.26	U 0.001	U 0.001	NC	0.003
CA	336.27	43.16	43.16	0.3	
CR	9.02	U 0.001	U 0.001	NC	0.007
CO	9.11	U 0.002	U 0.002	NC	0.011
CU	17.12	U-0.001	U-0.001	NC	0.006
FE	5.91	U-0.001	U-0.001	NC	0.025
PB	15.85	U 0.003	U 0.003	NC	0.041
MG	35.50	8.437	8.437	0.3	
MN	10.21	* 0.001	* 0.001	13.6	
NI	11.82	* 0.030	* 0.030	2.1	
K	13.48	9.925	9.925	0.3	
SE	22.11	U 0.038	U 0.038	NC	0.087
AG	27.59	U-0.001	U-0.001	NC	0.005
NA	153.23	47.75	47.75	0.3	
TL	10.68	U 0.015	U 0.015	NC	0.030
SN	8.28	U 0.205	U 0.205	NC	0.263
V	10.71	U 0.003	U 0.003	NC	0.030
ZN	15.51	U-0.003	U-0.003	NC	0.007

[illegible] NO. 30 CAL BLANK
[illegible] 1 GRAMS VOLUME 1 ML

11:44:17 3-21-86 30 CAL BLANK

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]	7.19	U-0.015	U-0.015	NC	0.094
TL	10.86	U 0.030	U 0.030	NC	0.030
SN	8.17	U 0.015	U 0.015	NC	0.263
V	10.79	U-0.007	U-0.007	NC	0.030
ZN	16.68	* 0.016	* 0.016	3.2	

[illegible] NO. 29 CCCS-3
[illegible] 1 GRAMS VOLUME 1 ML

11:43:54 3-21-86 29 CCCS-3

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	23.76	* 0.162	* 0.162	10.6	
AS	20.52	U 0.004	U 0.004	NC	0.041
BA	8.13	U 0.016	U 0.016	NC	0.074
BE	8.78	U 0.012	U 0.012	NC	0.023
BI	11.41	U-0.000	U-0.000	NC	0.001
CD	7.26	U 0.001	U 0.001	NC	0.003
CA	336.27	43.16	43.16	0.3	
CR	9.02	U 0.001	U 0.001	NC	0.007
CO	9.11	U 0.002	U 0.002	NC	0.011
CU	17.12	U-0.001	U-0.001	NC	0.006
FE	5.91	U-0.001	U-0.001	NC	0.025
PB	15.85	U 0.003	U 0.003	NC	0.041
MG	36.80	8.437	8.437	0.3	
MN	10.21	* 0.001	* 0.001	15.8	
NI	11.82	* 0.030	* 0.030	2.1	
K	13.48	9.925	9.925	0.3	
SE	22.11	U 0.038	U 0.038	NC	0.087
AG	27.59	U-0.001	U-0.001	NC	0.005
NA	153.23	47.75	47.75	0.3	
TL	10.68	U 0.015	U 0.015	NC	0.030
SN	8.28	U 0.205	U 0.205	NC	0.263
V	10.92	U 0.003	U 0.003	NC	0.030
ZN	15.51	U-0.003	U-0.003	NC	0.007

SAMPLE NO. 30 CAL BLANK
WEIGHT 1 GRAMS VOLUME 1 ML

11:46:17 3-21-86 30 CAL BLANK

	/ INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	22	U-0.004	U-0.004	NC	

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ZN	15.61	U-0.003	U-0.003	NC	0.007

SAMPLE NO. 30 CAL BLANK
WEIGHT 1 GRAMS VOLUME 1 ML

11:46:17 3-21-86 30 CAL BLANK

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	22.21	U-0.004	U-0.004	NC	0.122
SB	20.30	U-0.012	U-0.012	NC	0.041
AS	8.00	U-0.033	U-0.033	NC	0.074
BA	7.65	U-0.001	U-0.001	NC	0.023
BE	11.21	U-0.001	U-0.001	NC	0.001
CD	7.17	U-0.001	U-0.001	NC	0.003
CA	10.70	U-0.008	U-0.008	NC	0.032
CR	8.25	U-0.004	U-0.004	NC	0.007
CO	8.94	U-0.002	U-0.002	NC	0.011
CU	17.02	U-0.003	U-0.003	NC	0.006
FE	3.62	U-0.003	U-0.003	NC	0.026
PB	15.67	U-0.015	U-0.015	NC	0.041
MG	2.13	U-0.027	U-0.027	NC	0.122
MN	5.94	U-0.000	U-0.000	NC	0.001
NI	10.83	U 0.000	U 0.000	NC	0.012
K	6.46	U-0.221	U-0.221	NC	0.232
SE	21.84	U 0.006	U 0.006	NC	0.087
AG	27.37	U-0.005	U-0.005	NC	0.005
NA	9.18	U-0.018	U-0.018	NC	0.099
TL	10.01	U 0.001	U 0.001	NC	0.030
SN	8.01	U-0.023	U-0.023	NC	0.263
V	10.73	U-0.012	U-0.012	NC	0.030
ZN	15.01	U-0.001	U-0.001	NC	0.007

SAMPLE NO. [illegible] 047-03 MFC039
WEIGHT [illegible] VOLUME 500 ML

11:48:47 [illegible] 047-03 MFC039

000517

	[illegible]	[illegible]	[illegible]	RSD	IDL CORR
AL	[illegible]	[illegible]	[illegible]	0.1	

SAMPLE NO. 28 CCCS-2
WEIGHT 1 GRAMS VOLUME 1 ML

11:41:30 3-21-86 28 CCCS-2

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	23.20	U 0.102	U 0.102	NC	0.122
SB	49.37	2.130	2.130	0.4	
AS	8.11	U 0.010	U 0.010	NC	0.074
BA	7.95	U 0.002	U 0.002	NC	0.023
BE	11.57	U-0.000	U-0.000	NC	0.001
CD	7.28	U-0.002	U-0.002	NC	0.003
CA	10.66	U-0.014	U-0.014	NC	0.032
CR	8.97	U-0.000	U-0.000	NC	0.007
CO	9.21	U 0.005	U 0.005	NC	0.011
CU	17.03	U-0.003	U-0.003	NC	0.006
FE	8.02	* 0.046	* 0.046	6.6	
PB	15.95	U 0.015	U 0.015	NC	0.041
MG	9.24	U-0.024	U-0.024	NC	0.122
MN	10.21	U 0.001	U 0.001	NC	0.001
MI	11.98	* 0.026	* 0.026	5.2	
K	6.41	U-0.296	U-0.296	NC	0.252
SE	23.06	* 0.155	* 0.155	11.3	
AG	135.13	1.906	1.906	0.4	
NA	9.19	U-0.015	U-0.015	NC	0.099
TL	10.86	U 0.030	U 0.030	NC	0.030
SN	8.17	U 0.015	U 0.015	NC	0.265
V	10.79	U-0.007	U-0.007	NC	0.030
ZN	16.68	* 0.016	* 0.016	3.2	

SAMPLE NO. 29 CCCS-3
WEIGHT 1 GRAMS VOLUME 1 ML

11:43:54 3-21-86 29 CCCS-3

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	23.76	* 0.162	* 0.162	10.6	
SB	20.02	U 0.004	U 0.004	NC	0.041
AS	8.13	U 0.016	U 0.016	NC	0.074
BA	8.76	U 0.012	U 0.012	NC	0.023
BE	11.41	U-0.000	U-0.000	NC	0.001
CD	7.36	U 0.001	U 0.001	NC	0.003
CA	338.97	43.16	43.16	0.3	
	2	U 0.001	U 0.001	NC	0.007
CO	9.11	U 0.002	U 0.002	NC	0.011
CU	17.12	U-0.001	U-0.001	NC	0.006

SAMPLE NO. 27 CCCS-1
WEIGHT 1 GRAMS VOLUME 1 ML

11:39:8 3-21-86 27 CCCS-1

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	36.03	1.480	1.480	1.4	
SB	20.33	U-0.010	U-0.010	NC	0.041
AS	9.34	0.485	0.485	1.6	
BA	94.14	0.975	0.975	0.1	
BE	234.67	0.454	0.454	0.1	
CD	11.40	0.079	0.079	1.9	
CA	10.72	U-0.006	U-0.006	NC	0.032
CR	23.78	0.508	0.508	0.4	
CO	29.57	0.510	0.510	0.5	
CU	47.79	0.671	0.671	0.3	
FE	83.23	1.698	1.698	0.1	
PB	23.33	0.866	0.866	2.8	
MG	9.24	U-0.031	U-0.031	NC	0.122
MN	140.38	0.697	0.697	0.0	
NI	24.61	0.409	0.409	0.5	
K	6.50	U-0.145	U-0.145	NC	0.232
SE	22.89	* 0.130	* 0.130	10.7	
AG	27.29	U-0.007	U-0.007	NC	0.005
NA	12.06	0.938	0.938	0.8	
TL	10.71	U 0.016	U 0.016	NC	0.030
SN	8.10	U-0.197	U-0.197	NC	0.263
V	32.72	1.656	1.656	0.4	
ZN	101.80	0.866	0.866	0.4	

SAMPLE NO. 28 CCCS-2
WEIGHT 1 GRAMS VOLUME 1 ML

11:41:30 3-21-86 28 CCCS-2

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	13.20	U 0.102	U 0.102	NC	0.122
SB	49.37	2.130	2.130	0.4	
AS	8.11	U 0.010	U 0.010	NC	0.074
BA	7.95	U 0.002	U 0.002	NC	0.023
BE	11.57	U-0.000	U-0.000	NC	0.001
CD	7.32	U-0.002	U-0.002	NC	0.003
CA	10.66	U-0.014	U-0.014	NC	0.032
CR	8.97	U-0.000	U-0.000	NC	0.007
CO	9.21	U 0.005	U 0.005	NC	0.011
CU	17.05	U-0.003	U-0.003	NC	0.006
	02	* 0.046	* 0.046	5.6	
PB	15.95	U 0.015	U 0.015	NC	0.041
MG	9.26	U-0.024	U-0.024	NC	0.122

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SE	22.10	U-0.005	U-1.177	NC	
AG	27.20	U-0.008	U-4.159	NC	2.500
NA	11.08	0.613	306.7	1.2	
TL	10.65	U 0.003	U 1.564	NC	15.00
SN	8.51	U-0.328	U-163.8	NC	131.5
V	10.85	U-0.003	U-1.391	NC	15.00
ZN	16.84	* 0.013	* 6.670	3.8	

SAMPLE NO. 26 047-02 DUP
WEIGHT 1 GRAMS VOLUME 500 ML

11:36:42 3-21-86 26 047-02 DUP

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	150.18	13.74	6865	0.2	
SB	20.52	U 0.004	U 2.038	NC	20.50
AS	8.17	U-0.036	U-18.00	NC	37.00
BA	13.67	* 0.067	* 33.43	0.2	
BE	11.62	U-0.001	U-0.695	NC	0.500
CD	7.20	U-0.000	U-0.066	NC	1.000
CA	39.38	3.794	1897	0.1	
CR	9.27	* 0.010	* 4.977	8.7	
CO	9.02	U-0.000	U-0.041	NC	5.500
CU	17.03	U-0.003	U-1.460	NC	5.000
FE	316.57	6.825	3412	0.1	
PB	15.82	U-0.000	U-0.192	NC	20.50
MG	15.35	2.006	1003	0.1	
MN	15.96	0.032	15.86	0.3	
NI	11.02	U-0.001	U-0.520	NC	6.000
K	7.29	* 0.545	* 272.7	4.9	
SE	22.14	U-0.000	U-0.101	NC	43.50
AG	27.11	U-0.010	U-4.996	NC	2.500
NA	11.22	0.658	328.8	1.9	
TL	10.65	U 0.002	U 1.092	NC	15.00
SN	8.42	U-0.413	U-206.5	NC	131.5
V	10.79	U-0.007	U-3.413	NC	15.00
ZN	19.37	0.039	19.54	2.3	

SAMPLE [illegible] CCCS-1
WEIGHT 1 GRAMS VOLUME 1 ML

000520 -86 27 CCCS-1

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR

SAMPLE NO. 24 8601047-01 MFC020
WEIGHT 1.07 GRAMS VOLUME 500 ML

11:31:51 3-21-86 24 8601047-01 MFC020

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	22.26	U 0.001	U 0.669	NC	57.01
SB	20.41	U-0.004	U-2.066	NC	19.16
AS	8.02	U-0.025	U-11.63	NC	34.58
BA	7.95	U 0.002	U 1.073	NC	10.75
BE	11.26	U-0.001	U-0.311	NC	0.467
CD	7.13	U-0.002	U-0.707	NC	1.402
CA	11.68	* 0.122	* 56.79	2.2	
CR	8.91	U-0.003	U-1.176	NC	3.271
CO	9.09	U 0.001	U 0.618	NC	5.140
CU	17.08	U-0.002	U-0.553	NC	2.804
FE	6.52	U 0.013	U 3.866	NC	12.15
PB	15.71	U-0.013	U-6.110	NC	19.16
MG	9.30	U-0.011	U-5.273	NC	57.01
MN	10.08	U 0.000	U 0.158	NC	0.467
NI	10.94	U-0.003	U-1.402	NC	5.607
K	8.49	U-0.168	U-78.69	NC	108.4
SE	21.76	U-0.004	U-1.720	NC	40.65
AG	27.38	U-0.005	U-2.432	NC	2.336
NA	10.13	* 0.298	* 139.4	2.8	
TL	10.58	U 0.007	U 3.184	NC	14.02
SN	8.03	U-0.006	U-2.656	NC	122.9
V	10.74	U-0.011	U-5.199	NC	14.02
ZN	15.38	U 0.003	U 1.416	NC	3.271

SAMPLE NO. 25 8647-02 MFC038
WEIGHT 1 GRAMS VOLUME 500 ML

11:34:18 3-21-86 25 8647-02 MFC038

	mV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	145.13	13.19	6397	0.5	
SB	20.63	U 0.012	U 5.895	NC	20.50
	.18	U-0.028	U-14.05	NC	37.00
	.72	* 0.056	* 28.07	0.4	
BE	11.66	U-0.001	U-0.648	NC	0.500
CD	7.19	U-0.000	U-0.083	NC	1.400

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SAMPLE NO. 23 LCS-3
WEIGHT 1 GRAMS VOLUME 1 ML

11:29:29 3-21-86 23 LCS-3

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	23.88	* 0.175	* 0.175	6.8	
SB	20.36	U-0.008	U-0.008	NC	0.041
AS	7.96	U-0.051	U-0.051	NC	0.074
BA	1545.65	17.36	17.36	0.2	
BE	11.29	U-0.001	U-0.001	NC	0.001
CD	7.13	U-0.001	U-0.001	NC	0.003
CA	162.52	20.12	20.12	0.3	
CR	9.66	* 0.023	* 0.023	3.7	
CO	9.08	U 0.001	U 0.001	NC	0.011
CU	17.25	U 0.002	U 0.002	NC	0.006
FE	14.96	0.198	0.198	0.3	
PB	13.65	U-0.019	U-0.019	NC	0.041
MG	67.93	18.05	18.05	0.3	
MN	11.24	0.007	0.007	2.1	
NI	11.30	U 0.008	U 0.008	NC	0.012
K	19.27	17.94	17.94	0.2	
SE	21.74	U-0.006	U-0.006	NC	0.087
AG	26.78	U-0.016	U-0.016	NC	0.005
NA	70.05	20.16	20.16	0.2	
TL	10.50	U 0.000	U 0.000	NC	0.030
SN	7.93	U-0.094	U-0.094	NC	0.253
V	10.57	U-0.024	U-0.024	NC	0.030
ZN	16.89	* 0.011	* 0.011	7.3	

SAMPLE NO. 24 8601047-01 MFC020
WEIGHT 1.07 GRAMS VOLUME 500 ML

11:31:31 3-21-86 24 8601047-01 MFC020

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	22.26	U 0.001	U 0.669	NC	57.01
SB	20.41	U-0.004	U-2.066	NC	19.16
AS	8.02	U-0.025	U-11.63	NC	34.58
BA	7.95	U 0.002	U 1.073	NC	10.75
BE	11.26	U-0.001	U-0.311	NC	0.467
CD	7.13	U-0.002	U-0.707	NC	1.402
CA	11.48	* 0.122	* 56.79	2.2	
CR	1	U-0.003	U-1.176	NC	3.271
CO	9.03	U 0.001	U 0.618	NC	3.140
CU	17.08	U-0.002	U-0.853	NC	2.804

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TL	10.38	U 0.007	U 3.184	NC	14.02
SN	8.03	U-0.006	U-2.656	NC	122.9
V	10.74	U-0.011	U-5.199	NC	14.02
ZN	15.38	U 0.003	U 1.416	NC	3.271

SAMPLE NO. 25 047-02 MFC038
WEIGHT 1 GRAMS VOLUME 500 ML

11:34:18 3-21-86 25 047-02 MFC038

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	145.13	13.19	6597	0.5	
SB	20.63	U 0.012	U 5.995	NC	20.50
AS	9.18	U-0.028	U-14.05	NC	37.00
BA	12.72	* 0.056	* 28.07	0.4	
BE	11.66	U-0.001	U-0.648	NC	0.500
CD	7.19	U-0.000	U-0.099	NC	1.500
CA	39.02	3.746	1873	0.2	
CR	9.71	* 0.008	* 3.833	14.4	
CO	9.09	U 0.002	U 0.827	NC	5.500
CU	17.10	U-0.002	U-0.766	NC	3.000
FE	312.40	6.733	3366	0.3	
PB	15.79	U-0.003	U-1.731	NC	20.50
MG	15.76	1.979	989.3	0.2	
MN	14.84	0.026	12.89	0.1	
NI	11.02	U-0.001	U-0.466	NC	6.000
K	7.26	* 0.504	* 252.2	9.1	
SE	22.10	U-0.003	U-1.497	NC	43.30
AG	27.20	U-0.008	U-4.169	NC	2.500
NA	11.08	0.613	306.7	1.2	
TL	10.65	U 0.003	U 1.564	NC	15.30
SN	8.51	U-0.328	U-163.8	NC	131.5
V	10.85	U-0.003	U-1.391	NC	15.00
ZN	13.84	* 0.013	* 6.670	3.8	

SAMPLE NO. 25 047-02 DUP
WEIGHT 1 GRAMS VOLUME 500 ML

11:36:42 3-21-86 25 047-02 DUP

	INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	150.18	13.74	6869	0.2	

WEIGHT 1 GRAMS VOLUME 1 ML

11:27:3 3-21-86 22 LCS-2

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	22.66	U 0.044	U 0.044	NC	0.122
SB	47.88	2.020	2.020	0.3	
AS	7.92	U-0.067	U-0.067	NC	0.074
BA	7.59	U-0.002	U-0.002	NC	0.023
BE	11.31	U-0.001	U-0.001	NC	0.001
CD	7.17	U-0.001	U-0.001	NC	0.003
CA	16.08	0.705	0.705	0.5	
CR	8.87	U-0.004	U-0.004	NC	0.007
CO	8.87	U-0.004	U-0.004	NC	0.011
CU	17.31	U 0.003	U 0.003	NC	0.006
FE	9.83	* 0.085	* 0.085	0.4	
PB	15.82	U 0.000	U 0.000	NC	0.041
MG	9.21	U-0.040	U-0.040	NC	0.122
MN	10.62	* 0.003	* 0.003	2.6	
NI	10.94	U-0.003	U-0.003	NC	0.012
K	6.38	U-0.360	U-0.360	NC	0.232
SE	22.79	* 0.123	* 0.123	4.9	
AG	125.83	1.741	1.741	0.3	
NA	14.56	1.765	1.765	0.3	
TL	10.64	U 0.012	U 0.012	NC	0.030
SN	7.97	U-0.063	U-0.063	NC	0.263
V	10.49	U-0.030	U-0.030	NC	0.030
ZN	16.25	* 0.012	* 0.012	3.2	

SAMPLE NO. 23 LCS-3
WEIGHT 1 GRAMS VOLUME 1 ML

11:29:29 3-21-86 23 LCS-3

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	23.88	* 0.175	* 0.175	6.8	
SB	20.36	U-0.008	U-0.008	NC	0.041
AS	7.96	U-0.051	U-0.051	NC	0.074
BA	1045.65	17.36	17.36	0.2	
BE	11.29	U-0.001	U-0.001	NC	0.001
CD	7.13	U-0.001	U-0.001	NC	0.003
CA	162.52	20.12	20.12	0.3	
CR	9.66	* 0.023	* 0.023	3.7	
CO	9.08	U 0.001	U 0.001	NC	0.011
CU	17.25	U 0.002	U 0.002	NC	0.006
FE	14.96	0.198	0.198	0.3	
PB	15.65	U-0.019	U-0.019	NC	0.041
MG	67.93	18.05	18.05	0.3	
	4	0.007	0.007	2.1	
	0	U 0.008	U 0.008	NC	0.012
K	17.37	17.24	17.24	0.2	
SE	21.24	U 0.000	U 0.000	NC	

SAMPLE NO. 21 LCS-1
WEIGHT 1 GRAMS VOLUME 1 ML

11:24:40 3-21-86 21 LCS-1

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	28.56	0.678	0.678	1.2	
SB	20.70	U 0.017	U 0.017	NC	0.041
AS	8.64	* 0.214	* 0.214	1.8	
BA	7.72	U-0.000	U-0.000	NC	0.023
BE	112.24	0.204	0.204	0.2	
CD	9.03	0.033	0.033	0.7	
CA	16.60	0.773	0.773	0.6	
CR	15.59	0.227	0.227	0.5	
CO	18.29	0.230	0.230	1.4	
CU	31.10	0.305	0.305	0.4	
FE	42.13	0.795	0.795	0.2	
PB	19.30	0.402	0.402	3.4	
MG	9.35	U 0.003	U 0.003	NC	0.122
MN	68.18	0.311	0.311	0.3	
NI	17.13	0.184	0.184	1.0	
K	6.50	U-0.139	U-0.139	NC	0.232
SE	22.39	U 0.072	U 0.072	NC	0.087
AG	27.21	U-0.008	U-0.008	NC	0.005
NA	16.00	2.245	2.245	0.6	
TL	10.65	U 0.012	U 0.012	NC	0.030
SN	8.02	U-0.017	U-0.017	NC	0.263
V	20.65	0.741	0.741	0.5	
ZN	53.23	0.377	0.377	0.7	

SAMPLE NO. 22 LCS-2
WEIGHT 1 GRAMS VOLUME 1 ML

11:27:3 3-21-86 22 LCS-2

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	22.66	U 0.044	U 0.044	NC	0.122
SB	47.88	2.020	2.020	0.3	
AS	7.92	U-0.067	U-0.067	NC	0.074
BA	7.59	U-0.002	U-0.002	NC	0.023
BE	11.31	U-0.001	U-0.001	NC	0.001
CD	7.17	U-0.001	U-0.001	NC	0.003
CA	16.02	0.769	0.769	0.4	
CR	3.87	0.228	0.228	0.5	0.001
CO	9.00	0.004	0.004	1.1	0.001
CU	1.71	0.303	0.303	0.4	0.001
FE	0.00	0.000			
PB	0.00	0.000			0.000
MG	0.00	0.000			
MN	0.00	0.000			

000525

SAMPLE NO. 20 PREP BLANK
WEIGHT 1 GRAMS VOLUME 1 ML

11:22:13 3-21-86 20 PREP BLANK

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	23.20	U 0.103	U 0.103	NC	0.122
SB	20.42	U-0.003	U-0.003	NC	0.041
AS	8.01	U-0.030	U-0.030	NC	0.074
BA	7.98	U 0.003	U 0.003	NC	0.023
BE	11.28	U-0.001	U-0.001	NC	0.001
CD	7.21	U-0.003	U-0.003	NC	0.003
CA	11.81	* 0.138	* 0.138	1.1	
CR	8.87	U-0.004	U-0.004	NC	0.007
CO	9.03	U 0.000	U 0.000	NC	0.011
CU	17.01	U-0.003	U-0.003	NC	0.006
FE	6.61	U 0.015	U 0.015	NC	0.026
PB	15.71	U-0.012	U-0.012	NC	0.041
MG	9.29	U-0.016	U-0.016	NC	0.122
MN	10.15	U 0.001	U 0.001	NC	0.001
NI	11.80	* 0.023	* 0.023	4.2	
K	6.44	U-0.244	U-0.244	NC	0.232
SE	21.71	U-0.010	U-0.010	NC	0.087
AG	27.25	U-0.008	U-0.008	NC	0.005
NA	10.12	* 0.293	* 0.293	3.5	
TL	10.49	U-0.000	U-0.000	NC	0.030
SN	8.08	U-0.053	U-0.053	NC	0.263
V	10.80	U-0.006	U-0.006	NC	0.030
ZN	15.27	U 0.002	U 0.002	NC	0.007

SAMPLE NO. 21 LCS-1
WEIGHT 1 GRAMS VOLUME 1 ML

11:24:40 3-21-86 21 LCS-1

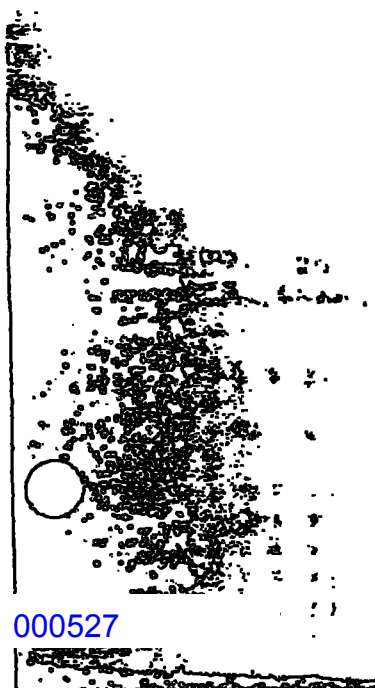
	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	28.56	0.678	0.678	1.2	
SB	20.70	U 0.017	U 0.017	NC	0.041
AS	8.64	* 0.214	* 0.214	1.8	
BA	7.72	U-0.000	U-0.000	NC	0.023
BE	112.24	0.204	0.204	0.2	
CD	9.03	0.033	0.033	0.7	
CA	16.60	0.773	0.773	0.6	
CR	15.59	0.227	0.227	0.5	
CO	18.29	0.230	0.230	1.4	
CU	31.10	0.505	0.505	0.1	
FE	42.13	0.795	0.795	0.1	
PB	17.70	1.000	1.000	0.0	
MG	9.33	1.043	1.043	0.1	0.122
NI	11.93	0.211	0.211	0.2	
K	6.33	10.000	10.000	0.0	0.232

SAMPLE NO. 19 [redacted] DILUTION
WEIGHT 1 GRAMS VOLUME 4 ML

048-01 SS 1-23-86 1:4 serial dilution

11:17:50 3-21-86 19 12[redacted]1 DILUTION

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR	
AL	23.17	U 0.100	U 0.398	NC	0.488	
SB	20.31	U-0.012	U-0.046	NC	0.164	
AS	6.08	U-0.004	U-0.016	NC	0.296	
BA	14.48	* 0.076	* 0.304	0.5		
BE	11.35	U-0.000	U-0.002	NC	0.004	
CD	7.16	U-0.001	U-0.004	NC	0.012	
CA	128.05	15.55 ✓	62.20	0.4		6.8%
CR	5.72	U-0.002	U-0.009	NC	0.016	
CO	9.01	U-0.000	U-0.001	NC	0.044	
CU	17.18	U 0.000	U 0.001	NC	0.003	
FE	107.60	2.233 ✓	8.934	0.3		7.0%
PB	15.69	U-0.015	U-0.058	NC	0.164	
MG	53.23	13.52 ✓	54.07	0.4		
MN	75.74	0.352 ✓	1.407	0.4		4.3
NI	10.38	U-0.005	U-0.020	NC	0.048	5.1
K	8.08	U-0.580	U-2.320	NC	0.928	
SE	21.81	U 0.003	U 0.010	NC	0.318	
AG	27.35	U-0.006	U-0.023	NC	0.028	
NA	75.77	22.06 ✓	88.25	0.1		~~5.1~~ 3.9%
TL	10.36	U-0.011	U-0.044	NC	0.120	
SN	3.20	U-0.105	U-0.661	NC	1.052	
V	10.74	U-0.011	U-0.043	NC	0.120	
ZN	15.92	U 0.002	U 0.008	NC	0.028	



[redacted] BLANK
[redacted] 1 ML

		IDL CORR
		0.122
		0.041
		0.074
		0.023
		0.001

000527

V	13.75	U-0.010	U-0.010	NC	0.030
ZN	14.84	U-0.002	U-0.002	NC	0.007

SAMPLE NO. 18
WEIGHT 1 GRAMS

048 SPK
~~133 61~~ SPK
VOLUME 1 ML

1-23-86

048 SPK
~~[illegible]~~ SPK

11:17:28 3-21-86 18

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	45.97	2.547	2.547	0.3	
SB	26.43	0.440	0.440	1.3	
AS	8.32	* 0.079	* 0.079	8.6	
BA	194.75	2.111	2.111	0.0	
BE	32.77	0.041	0.041	0.1	
CD	9.54	0.042	0.042	1.4	
CA	1156.42	151.9	151.9	0.2	
CR	14.34	0.184	0.184	0.5	
CO	26.51	0.434	0.434	0.4	
CU	27.73	0.231	0.231	0.5	
FE	425.95	9.227	9.227	0.1	
PB	19.23	0.394	0.394	1.4	
MG	327.30	97.94	97.94	0.1	
MN	291.16	1.504	1.504	0.2	
NI	22.63	0.349	0.349	0.2	
K	45.97	47.30	47.30	0.6	
SE	22.10	U 0.030	U 0.030	NC	0.087
AG	29.67	0.035	0.035	3.6	
NA	5460.28	178.1	178.1	0.3	
TL	10.61	U 0.007	U 0.007	NC	0.030
SN	9.50	* 0.276	* 0.276	6.2	
V	16.81	0.450	0.450	0.2	
ZN	36.45	0.191	0.191	0.7	

SAMPLE NO. 19
WEIGHT 1 GRAMS

~~1~~ DILUTION
VOLUME 4 ML

048-01
1 DILUTION

1-23-86

1:4 serial dilution

11:17:50 3-21-86 19

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
		U 0.100	U 0.398	NC	0.488
SB	20.31	U-0.012	U-0.046	NC	0.164
AS	8.08	U-0.004	U-0.016	NC	0.084

SB	20.42	U-0.003	U-0.003	NC	0.041
AS	8.07	U-0.007	U-0.007	NC	0.074
BA	8.74	U 0.011	U 0.011	NC	0.023
BE	11.42	U-0.000	U-0.000	NC	0.001
CD	7.23	U 0.000	U 0.000	NC	0.003
CA	333.30	42.76	42.76	0.3	
CR	8.99	U 0.000	U 0.000	NC	0.007
CO	9.10	U 0.002	U 0.002	NC	0.011
CU	16.99	U-0.004	U-0.004	NC	0.006
FE	5.89	U-0.001	U-0.001	NC	0.026
PB	15.76	U-0.007	U-0.007	NC	0.041
MG	36.57	8.386	8.386	0.3	
MN	10.14	U 0.001	U 0.001	NC	0.001
NI	11.80	* 0.029	* 0.029	9.3	
K	13.45	9.900	9.900	1.0	
SE	21.85	U 0.006	U 0.006	NC	0.087
AG	27.43	U-0.004	U-0.004	NC	0.005
NA	153.27	47.76	47.76	0.4	
TL	10.63	U 0.011	U 0.011	NC	0.030
SN	8.21	U 0.142	U 0.142	NC	0.263
V	10.84	U-0.003	U-0.003	NC	0.030
ZN	15.27	U-0.004	U-0.004	NC	0.007

SAMPLE NO. 17 CAL BLANK
WEIGHT 1 GRAMS VOLUME 1 ML

11:13:39 3-21-86 17 CAL BLANK

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	22.11	U-0.015	U-0.015	NC	0.122
SB	20.36	U-0.008	U-0.008	NC	0.041
AS	8.04	U-0.020	U-0.020	NC	0.074
BA	7.68	U-0.001	U-0.001	NC	0.023
BE	11.32	U-0.001	U-0.001	NC	0.001
CD	7.15	U-0.001	U-0.001	NC	0.003
CA	10.67	U-0.012	U-0.012	NC	0.032
CR	8.91	U-0.003	U-0.003	NC	0.007
CO	8.94	U-0.002	U-0.002	NC	0.011
CU	17.04	U-0.003	U-0.003	NC	0.006
FE	5.85	U-0.002	U-0.002	NC	0.026
PB	15.67	U-0.017	U-0.017	NC	0.041
MG	9.28	U-0.017	U-0.017	NC	0.122
MN	9.95	U-0.000	U-0.000	NC	0.001
NI	10.91	U 0.002	U 0.002	NC	0.012
K	6.49	U-0.157	U-0.157	NC	0.232
SE	21.82	U 0.004	U 0.004	NC	0.087
AG	27.43	U-0.004	U-0.004	NC	0.005
NA	9.16	U-0.023	U-0.023	NC	0.092
TL	10.49	U-0.000	U-0.000	NC	0.030
SN	7.07	U 0.023	U 0.023	NC	0.263
	.75	U-0.010	U-0.010	NC	0.030
ZN	14.84	U-0.002	U-0.002	NC	0.007

SAMPLE NO. 15 CCCS-2
WEIGHT 1 GRAMS VOLUME 1 ML

11:5:46 3-21-86 15 CCCS-2

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	23.23	U 0.105	U 0.105	NC	0.122
SB	49.32	2.127	2.127	1.1	
AS	8.13	U 0.017	U 0.017	NC	0.074
BA	7.96	U 0.002	U 0.002	NC	0.023
BE	11.68	U-0.000	U-0.000	NC	0.001
CD	7.31	U-0.001	U-0.001	NC	0.003
CA	10.69	U-0.010	U-0.010	NC	0.032
CR	9.02	U 0.001	U 0.001	NC	0.007
CO	9.20	U 0.004	U 0.004	NC	0.011
CU	17.06	U-0.002	U-0.002	NC	0.006
FE	8.37	* 0.053	* 0.053	4.0	
PB	15.98	U 0.019	U 0.019	NC	0.041
MG	9.33	U-0.003	U-0.003	NC	0.122
MN	10.24	* 0.001	* 0.001	5.2	
NI	12.03	* 0.030	* 0.030	7.4	
K	6.41	U-0.296	U-0.296	NC	0.232
SE	23.12	* 0.163	* 0.163	4.2	
AG	135.50	1.913	1.913	0.2	
NA	9.24	U 0.001	U 0.001	NC	0.099
TL	10.74	U 0.020	U 0.020	NC	0.030
SN	8.24	U 0.077	U 0.077	NC	0.263
V	10.63	U-0.004	U-0.004	NC	0.030
ZN	16.62	* 0.017	* 0.017	3.7	

SAMPLE NO. 16 CCCS-3
WEIGHT 1 GRAMS VOLUME 1 ML

11:6:9 3-21-86 16 CCCS-3

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	23.82	* 0.169	* 0.169	4.6	
SB	20.42	U-0.003	U-0.003	NC	0.041
AS	8.07	U-0.007	U-0.007	NC	0.074
BA	8.74	U 0.011	U 0.011	NC	0.023
BE	11.42	U-0.000	U-0.000	NC	0.001
CD	7.23	U 0.000	U 0.000	NC	0.003
CA	333.30	42.76	42.76	0.3	
CR	8.99	U 0.000	U 0.000	NC	0.007
CO	9.10	U 0.002	U 0.002	NC	0.011
CU	16.99	U-0.004	U-0.004	NC	0.006
FE	5.89	U-0.001	U-0.001	NC	0.026
[illegible]	6	U-0.007	U-0.007	NC	0.041
[illegible]	[illegible]7	8.386	8.386	0.3	
MN	10.14	U 0.001	U 0.001	NC	0.001

SE	11.02	U 0.002	U 0.002	NC	0.005
AG	27.21	U-0.008	U-0.008	NC	0.005
NA	260.56	83.33	83.33	0.8	
TL	10.80	U 0.024	U 0.024	NC	0.030
SN	8.75	U-0.269	U-0.269	NC	0.263
V	10.82	U-0.005	U-0.005	NC	0.030
ZN	18.67	* 0.022	* 0.022	4.5	

SAMPLE NO. 14 CCCS-1
WEIGHT 1 GRAMS VOLUME 1 ML

11:3:24 3-21-86 14 CCCS-1

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	37.10	1.595	1.595	0.1	
SB	20.75	U 0.021	U 0.021	NC	0.041
AS	9.46	0.530	0.530	1.1	
BA	94.68	0.981	0.981	0.3	
BE	235.60	0.456	0.456	0.3	
CD	11.45	0.080	0.080	0.6	
CA	10.81	U 0.006	U 0.006	NC	0.032
CR	23.97	0.514	0.514	0.3	
CO	29.98	0.520	0.520	1.4	
CU	47.96	0.674	0.674	0.4	
FE	83.33	1.700	1.700	0.2	
PB	23.49	0.885	0.885	1.6	
MG	9.34	U-0.001	U-0.001	NC	0.122
MN	140.73	0.699	0.699	0.2	
NI	24.72	0.412	0.412	1.5	
K	6.52	U-0.116	U-0.116	NC	0.232
SE	22.86	* 0.127	* 0.127	6.2	
AG	27.48	U-0.003	U-0.003	NC	0.005
NA	12.09	0.946	0.946	1.4	
TL	10.96	* 0.036	* 0.036	33.5	
SN	8.30	U-0.032	U-0.032	NC	0.263
V	33.08	1.684	1.684	0.3	
ZN	101.94	0.868	0.868	0.4	

SAMPLE
WEIGHT

TL	10.75	U 0.020	U 0.020	NC	0.030
SN	8.86	U-0.184	U-0.184	NC	0.263
V	10.92	U 0.003	U 0.003	NC	0.030
ZN	18.07	* 0.016	* 0.016	4.2	

SAMPLE NO. 13 048-01 DUP
WEIGHT 1 GRAMS VOLUME 1 ML

10:56:17 3-21-86 13 048-01 DUP

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	25.89	* 0.391	* 0.391	3.3	
SB	20.57	U 0.008	U 0.008	NC	0.041
AS	9.16	U 0.027	U 0.027	NC	0.074
BA	32.91	0.284	0.284	0.2	
BE	11.71	U-0.001	U-0.001	NC	0.001
CD	7.25	U-0.003	U-0.003	NC	0.003
CA	441.51	57.11	57.11	0.1	
CR	9.05	U 0.002	U 0.002	NC	0.007
CO	9.09	U 0.002	U 0.002	NC	0.011
CU	17.43	U 0.006	U 0.006	NC	0.006
FE	382.00	8.262	8.262	0.1	
PB	15.75	U-0.005	U-0.008	NC	0.041
MG	175.09	51.06	51.06	0.1	
MN	256.19	1.317	1.317	0.1	
NI	11.20	U 0.004	U 0.004	NC	0.012
K	12.41	U-1.144	U-1.144	NC	0.232
SE	21.82	U 0.002	U 0.002	NC	0.087
AG	27.21	U-0.008	U-0.008	NC	0.005
NA	260.56	83.33	83.33	0.8	
TL	10.80	U 0.024	U 0.024	NC	0.030
SN	8.75	U-0.269	U-0.269	NC	0.263
V	10.62	U-0.005	U-0.005	NC	0.030
ZN	18.67	* 0.022	* 0.022	4.5	

SAMPLE NO. 14 048-1
WEIGHT 1 GRAMS

11:3:24 3 21-86

000532

AL
SB

SE	[illegible]	[illegible]	[illegible]	NC	[illegible]
AG	27.41	U-0.005	U-9.343	NC	10.000
NA	9.78	* 0.182	* 364.7	1.1	
TL	10.62	U 0.008	U 16.14	NC	60.00
SN	8.20	U-0.255	U-509.9	NC	526.0
V	10.84	U-0.003	U-6.574	NC	60.00
ZN	15.73	U 0.003	U 5.078	NC	14.00

SAMPLE NO. 12 8601048-01 MF0004
WEIGHT 1 GRAMS VOLUME 1 ML

10:55:53 3-21-86 12 8601048-01 MF0004

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	26.79	* 0.488	* 0.488	1.1	
SB	20.59	U 0.009	U 0.009	NC	0.04[illegible]
AS	8.19	U 0.033	U 0.033	NC	0.07[illegible]
BA	33.88	0.295	0.295	0.3	
BE	11.71	U-0.001	U-0.001	NC	0.001
CD	7.27	U-0.003	U-0.003	NC	0.003
CA	448.63	58.05	58.05	0.3	
CR	9.09	U 0.004	U 0.004	NC	0.007
CO	9.15	U 0.003	U 0.003	NC	0.011
CU	17.54	* 0.008	* 0.008	7.1	
FE	385.03	8.329	8.329	0.5	
PB	15.70	U-0.014	U-0.014	NC	0.041
MG	177.53	51.81	51.81	0.4	
MN	260.03	1.338	1.338	0.5	
NI	12.13	* 0.032	* 0.032	8.2	
K	12.48	U-1.172	U-1.172	NC	0.232
SE	21.89	U 0.010	U 0.010	NC	0.087
AG	27.24	U-0.008	U-0.008	NC	0.005
NA	265.23	84.88	84.88	0.5	
TL	10.75	U 0.020	U 0.020	NC	0.030
SN	8.86	U-0.184	U-0.184	NC	0.263
V	10.92	U 0.003	U 0.003	NC	0.030
ZN	18.07	* 0.016	* 0.016	4.2	

SAMPLE NO. 13 8601048-01 DUP
WEIGHT 1 GRAMS VOLUME 1 ML

000533

-21-86 13 048-01 DUP

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR

TL	10.54	U-0.005	U-2.73	C	[illegible]
SN	8.83	U-0.616	U-306.0	NC	131.5
V	11.11	U 0.017	U 8.597	NC	15.00
ZN	16.93	* 0.014	* 7.068	6.2	

SAMPLE NO. 11 133-03 DILUTION
WEIGHT 1 GRAMS VOLUME 2000 ML

10:53:28 3-21-86 11 133-03 DILUTION 1:4 serial dilution

	MV INT	CONCEN	DIL CORR	RPD%	RSD	IDL CORR
AL	51.32	3.122	6243	1.4	0.6	
SB	20.41	U-0.004	U-8.352		NC	82.00
AS	8.11	U-0.007	U-14.93		NC	148.0
BA	9.24	U 0.017	U 33.72		NC	46.00
BE	11.56	U-0.000	U-0.109		NC	2.000
CD	7.22	U-0.003	U-6.262		NC	6.000
CA	28.89	2.404	4808	0.83	0.2	
CR	9.01	U 0.001	U 1.602		NC	14.00
CO	9.13	U 0.003	U 5.127		NC	22.00
CU	17.09	U-0.002	U-3.304		NC	12.00
FE	150.37	3.173	6346	0.80	0.1	
PB	15.78	U-0.004	U-8.460		NC	82.00
MG	11.30	0.664	1329		0.5	
MN	12.23	0.012	23.61	0.0	0.5	
NI	11.02	U-0.001	U-1.289		NC	24.00
K	6.74	U-0.121	U-242.6		NC	464.0
SE	21.75	U-0.005	U-9.814		NC	174.0
AG	27.41	U-0.005	U-9.343		NC	10.000
NA	9.78	* 0.182	* 364.7		1.1	
TL	10.62	U 0.008	U 16.14		NC	60.00
SN	8.20	U-0.255	U-509.9		NC	526.0
V	10.84	U-0.003	U-6.574		NC	40.00
ZN	15.73	U 0.003	U 5.079		NC	14.00

SAMPLE NO. 12 8601048-01 MF0004
WEIGHT 1 GRAMS VOLUME 1 ML

10:55:53 3-21-86 12 8601048-01 MF0004

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	46.79	* 0.488	* 0.488	1.1	
SB	20.59	U 0.009	U 0.009	NC	0.041

NA	[illegible]	[illegible]	[illegible]	[illegible]	
TL	10.62	U 0.010	U 0.010	NC	0.030
SN	8.05	U-0.087	U-0.087	NC	0.253
V	10.77	U-0.009	U-0.009	NC	0.030
ZN	16.50	U 0.007	U 0.007	NC	0.007

SAMPLE NO. 10 8512133-03 MFC018
WEIGHT 1 GRAMS VOLUME 500 ML

10:51:4 3-21-86 10 8512133-03 MFC018

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	140.05	12.63	6325	0.5	
SB	20.59	U 0.009	U 4.432	NC	30.00
AS	8.17	U-0.023	U-11.49	NC	37.60
BA	14.10	* 0.072	* 33.26	1.4	
BE	12.17	U-0.001	U-0.311	NC	0.500
CD	7.29	U-0.003	U-1.212	NC	1.500
CA	82.73	9.544	4772	0.3	
CR	9.26	* 0.009	* 4.691	2.1	
CO	9.27	U 0.006	U 2.019	NC	5.500
CU	17.24	U 0.002	U 0.703	NC	3.000
FE	379.23	12.60	6293	0.2	
PB	15.16	U 0.017	U 8.168	NC	20.50
MG	18.05	2.683	1341	0.3	
MN	18.72	0.048	23.80	0.5	
NI	11.18	U 0.003	U 1.709	NC	6.000
K	7.41	* 0.607	* 303.5	6.8	
SE	21.92	U-0.023	U-11.66	NC	43.50
AG	27.19	U-0.008	U-4.228	NC	2.500
NA	11.61	0.789	394.6	0.6	
TL	10.54	U-0.005	U-2.734	NC	15.00
SN	9.63	U-0.616	U-308.0	NC	131.5
V	[illegible]	U 0.017	U 8.577	NC	15.00
ZN	16.72	* 0.014	* 7.068	6.2	

SAMPLE NO. [illegible] 133-03 DILUTION
WEIGHT [illegible] VOLUME 2000 ML

10:53:28 3-21-86 11 133-03 DILUTION 1:4 serial dilution

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	INT	CONCEN	DIL CORR	RPD?	RSD	IDL CORR
[illegible]	[illegible]	[illegible]	[illegible]			

MG	[illegible]	[illegible]	[illegible]	[illegible]	
NA	15.26	1.999	1.999	0.3	
TL	10.70	U 0.016	U 0.016	NC	0.030
SN	7.97	U-0.063	U-0.063	NC	0.263
V	10.72	U-0.013	U-0.013	NC	0.030
ZN	16.28	* 0.008	* 0.008	9.5	

SAMPLE NO. 9 LCS-3
WEIGHT 1 GRAMS VOLUME 1 ML

10:48:39 3-21-86 9 LCS-3

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	23.72	* 0.158	* 0.158	6.0	
SB	20.34	U-0.009	U-0.009	NC	0.041
AS	8.06	U-0.010	U-0.010	NC	0.074
BA	1632.61	18.34	18.34	0.4	
BE	11.39	U-0.000	U-0.000	NC	0.001
CD	7.12	U-0.002	U-0.002	NC	0.003
CA	170.42	21.17	21.17	0.3	
CR	8.94	U-0.002	U-0.002	NC	0.007
CO	9.19	U 0.004	U 0.004	NC	0.011
CU	17.21	U 0.001	U 0.001	NC	0.006
FE	8.07	* 0.047	* 0.047	1.9	
PB	15.68	U-0.017	U-0.017	NC	0.041
MG	72.81	19.55	19.55	0.4	
MN	10.64	* 0.003	* 0.003	6.1	
NI	10.79	U-0.002	U-0.002	NC	0.012
K	20.37	19.52	19.52	0.3	
SE	21.84	U 0.005	U 0.005	NC	0.087
AG	27.28	U-0.007	U-0.007	NC	0.005
NA	72.37	20.94	20.94	0.7	
TL	10.62	U 0.010	U 0.010	NC	0.030
SN	8.03	U-0.087	U-0.087	NC	0.263
V	10.77	U-0.009	U-0.009	NC	0.030
ZN	16.50	U 0.007	U 0.007	NC	0.007

SAMPLE NO. [illegible] 8512133-03 MFC013
WEIGHT [illegible] GRAMS VOLUME 300 ML

[illegible]-86 10 8512133-03 MFC013

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR

NH	[illegible]	[illegible]	[illegible]	[illegible]	
TL	10.66	U 0.013	U 0.013	NC	0.030
SN	7.99	U-0.045	U-0.045	NC	0.263
V	20.64	0.740	0.740	0.3	
ZN	53.01	0.375	0.375	0.1	

SAMPLE NO. 8 LCS-2
WEIGHT 1 GRAMS VOLUME 1 ML

10:46:14 3-21-86 8 LCS-2

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	22.59	U 0.037	U 0.037	NC	0.122
SB	50.13	2.196	2.196	0.7	
AS	8.00	U-0.034	U-0.034	NC	0.074
BA	7.68	U-0.001	U-0.001	NC	0.023
BE	11.44	U-0.000	U-0.000	NC	0.001
CD	7.19	U-0.000	U-0.000	NC	0.003
CA	17.21	0.854	0.854	0.2	
CR	8.39	U-0.003	U-0.003	NC	0.007
CO	9.01	U-0.000	U-0.000	NC	0.011
CU	17.30	U 0.003	U 0.003	NC	0.006
FE	9.11	* 0.069	* 0.069	7.2	
PB	15.73	U-0.010	U-0.010	NC	0.041
MG	9.90	U 0.020	U 0.020	NC	0.122
MN	10.00	* 0.003	* 0.003	5.3	
NI	10.89	U-0.004	U-0.004	NC	0.012
K	6.47	U-0.197	U-0.197	NC	0.232
SE	22.96	* 0.143	* 0.143	20.8	
AG	133.04	1.869	1.869	0.3	
NA	15.26	1.999	1.999	0.3	
TL	10.70	U 0.016	U 0.016	NC	0.030
SN	7.97	U-0.063	U-0.063	NC	0.263
V	10.72	U-0.013	U-0.013	NC	0.030
ZN	16.26	* 0.008	* 0.008	9.3	

SAMPLE NO. 9 LCS-3
WEIGHT 1 GRAMS VOLUME 1 ML

10:48:39 3-21-86 9 LCS-3

	INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	23.72	* 0.158	* 0.158	6.0	

SE	30.69	0.136	0.136	14.0	
AG	80.20	0.932	0.932	0.2	
NA	19.85	3.521	3.521	0.3	
TL	25.51	0.873	0.873	2.1	
SN	22.82	U-4.942	U-4.942	NC	0.263
V	17.87	0.530	0.530	0.5	
ZN	122.68	0.977	0.977	0.2	

SAMPLE NO. 7 LCS-1
WEIGHT 1 GRAMS VOLUME 1 ML

10:43:51 3-21-86 7 LCS-1

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	29.01	0.727	0.727	2.9	
SB	20.32	U-0.011	U-0.011	NC	0.041
AS	8.59	* 0.194	* 0.194	5.4	
BA	7.68	U-0.001	U-0.001	NC	0.023
BE	112.48	0.205	0.205	0.2	
CD	9.00	0.032	0.032	3.1	
CA	16.84	0.806	0.806	1.8	
CR	15.52	0.224	0.224	0.6	
CO	18.15	0.226	0.226	0.7	
CU	31.10	0.305	0.305	0.3	
FE	44.45	0.846	0.846	1.5	
PB	19.01	0.368	0.368	0.8	
MG	9.48	U 0.044	U 0.044	NC	0.122
MN	67.95	0.310	0.310	0.3	
NI	17.04	0.181	0.181	1.7	
K	6.46	U-0.209	U-0.209	NC	0.232
SE	22.21	U 0.049	U 0.049	NC	0.087
AG	27.16	U-0.009	U-0.009	NC	0.005
NA	16.06	2.262	2.262	0.9	
TL	10.66	U 0.013	U 0.013	NC	0.030
SN	7.99	U-0.045	U-0.045	NC	0.263
V	20.64	0.740	0.740	0.3	
ZN	53.01	0.375	0.375	0.1	

SAMPLE NO. 8 LCS-2
WEIGHT 1 GRAMS VOLUME 1 ML

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1-86 8 LCS-2

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR

SAMPLE NO. 6 INTER ELEM CORR
WEIGHT 1 GRAMS VOLUME 1 ML

10:41:28 3-21-86 6 INTER ELEM CORR

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	4519.92	483.0	483.0	0.3	
SB	33.57	0.966	0.966	0.2	
AS	15.61	0.585	0.585	1.3	
BA	49.73	0.474	0.474	0.3	
BE	248.18	0.457	0.457	0.2	
CD	53.56	0.891	0.891	0.2	
CA	3619.65	478.5	478.5	0.2	
CR	37.30	0.972	0.972	0.2	
CO	28.19	0.475	0.475	0.4	
CU	40.64	0.514	0.514	0.1	
FE	8577.37	188.3	188.3	0.2	
PB	58.19	4.888	4.888	0.3	
MG	1648.21	504.8	504.8	0.3	
MN	110.09	0.535	0.535	0.2	
NI	40.71	0.879	0.879	0.7	
K	58.34	U-13.28	U-13.28	NC	0.252
SE	35.69	* 0.168	* 0.168	14.8	
AG	80.20	0.932	0.932	0.2	
NA	19.85	3.521	3.521	0.3	
TL	25.31	0.873	0.873	2.1	
SN	22.82	U-4.942	U-4.942	NC	0.263
V	17.87	0.530	0.530	0.3	
ZN	122.68	0.977	0.977	0.2	

SAMPLE NO. 7 LCS-1
WEIGHT 1 GRAMS VOLUME 1 ML

10:43:51 3-21-86 7 LCS-1

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	27.01	0.727	0.727	3.9	
SB	20.33	U-0.011	U-0.011	NC	0.041
AS	8.59	* 0.194	* 0.194	5.4	
BA	7.68	U-0.001	U-0.001	NC	0.023
BE	12.48	0.205	0.205	0.2	
CD	9.00	0.032	0.032	3.1	

WEIGHT 1 GRAMS VOLUME 1 ML

10:38:59 3-21-86 5 PREP BLANK

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	22.42	U 0.018	U 0.018	NC	0.122
SB	20.20	U-0.020	U-0.020	NC	0.041
AS	7.96	U-0.048	U-0.048	NC	0.074
BA	7.69	U-0.001	U-0.001	NC	0.023
BE	11.32	U-0.001	U-0.001	NC	0.001
CD	7.16	U-0.001	U-0.001	NC	0.003
CA	17.06	0.835	0.835	0.6	
CR	8.83	U-0.005	U-0.005	NC	0.007
CO	8.97	U-0.001	U-0.001	NC	0.011
CU	17.14	U-0.001	U-0.001	NC	0.006
FE	7.85	* 0.042	* 0.042	0.8	
PB	15.63	U-0.022	U-0.022	NC	0.041
MG	9.34	U 0.000	U 0.000	NC	0.122
MN	10.55	* 0.003	* 0.003	11.5	
NI	10.78	U-0.002	U-0.002	NC	0.012
K	6.46	U-0.215	U-0.215	NC	0.232
SE	21.57	U-0.027	U-0.027	NC	0.087
AG	27.10	U-0.010	U-0.010	NC	0.033
NA	15.04	1.926	1.926	0.9	
TL	10.62	U 0.010	U 0.010	NC	0.030
SN	7.92	U-0.079	U-0.079	NC	0.253
V	10.71	U-0.013	U-0.013	NC	0.030
ZN	16.10	U 0.006	U 0.006	NC	0.007

SAMPLE NO. 6 INTER ELEM CORR
WEIGHT 1 GRAMS VOLUME 1 ML

10:41:26 3-21-86 6 INTER ELEM CORR

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	4519.92	483.0	483.0	0.3	
SB	33.57	0.966	0.966	0.2	
AS	15.01	0.585	0.585	1.5	
BA	49.73	0.474	0.474	0.3	
BE	248.18	0.457	0.457	0.2	
CD	53.56	0.891	0.891	0.2	
CA	3619.65	478.5	478.5	0.2	
CR	37.30	0.972	0.972	0.2	
CO	26.19	0.475	0.475	0.4	
CU	40.84	0.514	0.514	0.1	
FE	6577.37	188.3	188.3	0.2	
PB	58.19	4.888	4.888	0.3	
MG	1648.21	504.8	504.8	0.3	
MN	110.08	0.535	0.535	0.2	
NI	71	0.879	0.879	0.7	
K	55.34	U-13.28	U-13.28	NC	0.232
SE	35.69	* 0.188	* 0.188	14.8	

SAMPLE NO. 4 CAL BLANK
WEIGHT 1 GRAMS VOLUME 1 ML

10:36:34 3-21-86 4 CAL BLANK

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	22.39	U 0.016	U 0.016	NC	0.122
SB	20.50	U 0.002	U 0.002	NC	0.041
AS	8.09	U-0.000	U-0.000	NC	0.074
BA	7.72	U-0.000	U-0.000	NC	0.023
BE	11.47	U-0.000	U-0.000	NC	0.001
CD	7.24	U 0.001	U 0.001	NC	0.003
CA	10.80	U 0.005	U 0.005	NC	0.032
CR	8.93	U-0.002	U-0.002	NC	0.007
CO	9.07	U 0.001	U 0.001	NC	0.011
CU	17.15	U-0.000	U-0.000	NC	0.006
FE	5.89	U-0.001	U-0.001	NC	0.026
PB	15.69	U-0.015	U-0.015	NC	0.041
MG	9.35	U 0.003	U 0.003	NC	0.122
MN	9.98	U-0.000	U-0.000	NC	0.001
NI	10.91	U 0.002	U 0.002	NC	0.012
K	6.54	U-0.081	U-0.081	NC	0.232
SE	21.87	U 0.010	U 0.010	NC	0.087
AG	27.64	U-0.001	U-0.001	NC	0.005
NA	9.30	U 0.021	U 0.021	NC	0.099
TL	10.52	U 0.002	U 0.002	NC	0.030
SN	8.06	U 0.020	U 0.020	NC	0.263
V	10.86	U-0.002	U-0.002	NC	0.030
ZN	14.93	U-0.001	U-0.001	NC	0.007

SAMPLE NO. 5 PREP BLANK
WEIGHT 1 GRAMS VOLUME 1 ML

10:38:59 3-21-86 5 PREP BLANK

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	22.42	U 0.018	U 0.018	NC	0.122
SB	20.20	U-0.020	U-0.020	NC	0.041
AS	7.76	U-0.048	U-0.048	NC	0.074
BA	7.69	U-0.001	U-0.001	NC	0.023
BE	11.52	U-0.001	U-0.001	NC	0.001
CD	7.16	U-0.001	U-0.001	NC	0.003
CA	17.06	0.835	0.835	0.6	
CR	8.93	U-0.003	U-0.003	NC	0.007
CO	8.97	U-0.001	U-0.001	NC	0.011
CU	17.14	U-0.001	U-0.001	NC	0.006
FE	7.63	* 0.042	* 0.042	0.8	
PB	15.65	U-0.022	U-0.022	NC	0.041
[illegible]	.34	U 0.000	U 0.000	NC	0.122
[illegible]	.55	* 0.003	* 0.003	11.5	
NI	10.78	U-0.002	U-0.002	NC	0.012
K	6.46	U-0.215	U-0.215	NC	0.232

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SAMPLE NO. 3 ICCS-3
WEIGHT 1 GRAMS VOLUME 1 ML

10:34:10 3-21-86 3 ICCS-3

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	23.64	* 0.149	* 0.149	6.1	
SB	20.40	U-0.005	U-0.003	NC	0.041
AS	8.08	U-0.004	U-0.004	NC	0.074
BA	8.75	U 0.011	U 0.011	NC	0.023
BE	11.45	U-0.000	U-0.000	NC	0.001
CD	7.17	U-0.001	U-0.001	NC	0.003
CA	330.73	42.42	42.42	0.3	
CR	8.96	U-0.001	U-0.001	NC	0.007
CO	9.10	U 0.002	U 0.002	NC	0.011
CU	17.01	U-0.004	U-0.004	NC	0.006
FE	5.96	U 0.000	U 0.000	NC	0.026
PB	15.64	U-0.021	U-0.021	NC	0.041
MG	36.43	8.344	8.344	0.2	
MN	10.12	U 0.001	U 0.001	NC	0.001
NI	11.82	* 0.024	* 0.024	8.0	
K	13.42	9.837	9.837	0.7	
SE	21.70	U-0.011	U-0.011	NC	0.087
AG	27.48	U-0.003	U-0.003	NC	0.005
NA	153.07	47.69	47.69	0.3	
TL	10.81	U 0.026	U 0.026	NC	0.030
SN	8.18	U 0.034	U 0.034	NC	0.263
V	10.92	U 0.003	U 0.003	NC	0.030
ZN	15.27	U-0.004	U-0.004	NC	0.007

SAMPLE NO. 4 CAL BLANK
WEIGHT 1 GRAMS VOLUME 1 ML

10:36:34 3-21-86 4 CAL BLANK

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	22.39	U 0.016	U 0.016	NC	0.122
SB	20.50	U 0.002	U 0.002	NC	0.041
AS	8.09	U-0.000	U-0.000	NC	0.074
BA	7.73	U-0.000	U-0.000	NC	0.023
BE	11.47	U-0.000	U-0.000	NC	0.001
CD	7.19	U 0.001	U 0.001	NC	0.003
CA	330.73	42.42	42.42	0.3	0.007
CR	8.96	U-0.001	U-0.001	NC	0.007
CO	9.10	U 0.002	U 0.002	NC	0.011
CU	17.01	U-0.004	U-0.004	NC	0.006
FE	5.96	U 0.000	U 0.000	NC	0.026
PB	15.64	U-0.021	U-0.021	NC	0.041

SAMPLE NO. 2 ICCS-2
WEIGHT 1 GRAMS VOLUME 1 ML

10:31:46 3-21-86 2 ICCS-2

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	22.07	U-0.019	U-0.019	NC	0.122
SB	48.93	2.097	2.097	0.9	
AS	8.05	U-0.016	U-0.016	NC	0.074
BA	7.65	U-0.001	U-0.001	NC	0.023
BE	11.61	U-0.001	U-0.001	NC	0.001
CD	7.21	U-0.003	U-0.003	NC	0.003
CA	10.62	U-0.019	U-0.019	NC	0.032
CR	8.92	U-0.002	U-0.002	NC	0.007
CO	9.00	U-0.001	U-0.001	NC	0.011
CU	17.00	U-0.004	U-0.004	NC	0.006
FE	9.09	* 0.069	* 0.069	11.8	
PB	15.77	U-0.006	U-0.006	NC	0.041
MG	9.24	U-0.032	U-0.032	NC	0.122
MN	10.06	U 0.000	U 0.000	NC	0.001
NI	10.92	U-0.003	U-0.003	NC	0.012
K	6.74	U-0.244	U-0.244	NC	0.232
SE	23.06	* 0.155	* 0.155	17.2	
AG	134.97	1.903	1.903	0.1	
NA	9.19	U-0.015	U-0.015	NC	0.099
TL	10.53	U 0.003	U 0.003	NC	0.030
SN	8.04	U-0.003	U-0.003	NC	0.263
V	10.75	U-0.010	U-0.010	NC	0.030
ZN	17.02	* 0.019	* 0.019	6.5	

SAMPLE NO. 3 ICCS-3
WEIGHT 1 GRAMS VOLUME 1 ML

10:34:10 3-21-86 3 ICCS-3

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	23.64	* 0.149	* 0.149	6.1	
SB	20.40	U-0.005	U-0.005	NC	0.041
AS	8.08	U-0.004	U-0.004	NC	0.074
BA	8.75	U 0.011	U 0.011	NC	0.023
BE	11.45	U-0.000	U-0.000	NC	0.001
CD	7.17	U-0.001	U-0.001	NC	0.003
CA	330.73	42.42	42.42	0.3	
	.96	U-0.001	U-0.001	NC	0.007
	.10	U 0.002	U 0.002	NC	0.011
CU	17.01	U-0.004	U-0.004	NC	0.006

35	35	047-06 MFC042	WT.	0.9200	VOL.	500.000
36	36	047-06 DILUTION	WT.	0.9200	VOL.	2000.00
37	37	CCCS-1	WT.	1.0000	VOL.	1.0000
38	38	CCCS-2	WT.	1.0000	VOL.	1.0000
39	39	CCCS-3	WT.	1.0000	VOL.	1.0000
40	40	CAL BLANK	WT.	1.0000	VOL.	1.0000
41	41	INTER ELEM CORR	WT.	1.0000	VOL.	1.0000

All weights listed are dry wts.
All concentration values are in ppm.
DATE OF ANALYSIS is 1-21-86 not 3-21-86 as printed.

SAMPLE NO. 1 ICCS-1
WEIGHT 1 GRAMS VOLUME 1 ML

10:29:24 3-21-86 1 ICCS-1

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
AL	37.14	1.600	1.600	0.7	
SB	20.20	U-0.020	U-0.020	NC	0.041
AS	9.31	0.473	0.473	3.8	
BA	96.02	0.997	0.997	0.1	
BE	238.43	0.461	0.461	0.2	
CD	11.34	0.078	0.078	1.1	
CA	10.71	U-0.008	U-0.008	NC	0.032
CR	23.94	0.513	0.513	0.2	
CO	29.83	0.516	0.516	0.7	
CU	48.28	0.681	0.681	0.1	
FE	83.00	1.693	1.693	0.1	
PB	23.33	0.866	0.866	2.2	
MG	9.25	U-0.027	U-0.027	NC	0.122
MN	141.03	0.701	0.701	0.2	
NI	24.68	0.411	0.411	0.6	
K	6.48	U-0.190	U-0.190	NC	0.232
SE	22.30	U 0.082	U 0.082	NC	0.087
AG	27.25	U-0.007	U-0.007	NC	0.005
NA	12.02	0.923	0.923	1.3	
TL	10.59	U 0.007	U 0.007	NC	0.030
SN	8.12	U-0.179	U-0.179	NC	0.263
V	33.00	1.677	1.677	0.5	
ZN	101.82	0.867	0.867	0.1	

SAMPLE NO. 2 ICCS-2
WEIGHT 1 GRAMS VOLUME 1 ML

10:31:[illegible] 3-21-86 2 ICCS-2

	MV INT	CONCEN	DIL CORR	RSD	IDL CORR
	7	U-0.019	U-0.019	NC	0.122
SB	48.93	2.097	2.097	0.9	
AS	8.05	U-0.016	U-0.016	NC	0.074

000544

5296 - MFC018, MFC018s.d

case 5421
5445
5429 (8512133-1

SEQ. #	SAMPLE #	TITLE				
1	1	ICCS-1	WT.	1.0000	VOL.	1.0000
2	2	ICCS-2	WT.	1.0000	VOL.	1.0000
3	3	ICCS-3	WT.	1.0000	VOL.	1.0000
4	4	CAL BLANK	WT.	1.0000	VOL.	1.0000
5	5	PREP BLANK	WT.	1.0000	VOL.	1.0000
6	6	INTER ELEM CORR	WT.	1.0000	VOL.	1.0000
7	7	LCS-1	WT.	1.0000	VOL.	1.0000
8	8	LCS-2	WT.	1.0000	VOL.	1.0000
9	9	LCS-3	WT.	1.0000	VOL.	1.0000
10	10	8512133-03 MFC018	WT.	1.0000	VOL.	500.000
11	11	133-03 DILUTION	WT.	1.0000	VOL.	2000.00
12	12	8601048-01 MFC004	WT.	1.0000	VOL.	1.0000
13	13	048-01 DUP	WT.	1.0000	VOL.	1.0000
14	14	CCCS-1	WT.	1.0000	VOL.	1.0000
15	15	CCCS-2	WT.	1.0000	VOL.	1.0000
16	16	CCCS-3	WT.	1.0000	VOL.	1.0000
17	17	CAL BLANK	WT.	1.0000	VOL.	1.0000
18	18 SCD 1-23-86	048-01 SPK	WT.	1.0000	VOL.	1.0000
19	19	048-01 DILUTION	WT.	1.0000	VOL.	4.0000
20	20	PREP BLANK	WT.	1.0000	VOL.	1.0000
21	21	LCS-1	WT.	1.0000	VOL.	1.0000
22	22	LCS-2	WT.	1.0000	VOL.	1.0000
23	23	LCS-3	WT.	1.0000	VOL.	1.0000
24	24	8601047-01 MFC020	WT.	1.0700	VOL.	500.000
25	25	047-02 MFC038	WT.	1.0000	VOL.	500.000
26	26	047-02 DUP	WT.	1.0000	VOL.	500.000
27	27	CCCS-1	WT.	1.0000	VOL.	1.0000
28	28	CCCS-2	WT.	1.0000	VOL.	1.0000
29	29	CCCS-3	WT.	1.0000	VOL.	1.0000
30	30	CAL BLANK	WT.	1.0000	VOL.	1.0000
31	31	047-03 MFC039	WT.	0.9800	VOL.	500.000
32	32	047-03 SPK	WT.	0.9200	VOL.	500.000
33	33	047-04 MFC040	WT.	0.9800	VOL.	500.000
34	34	047-05 MFC041	WT.	0.9400	VOL.	500.000
35	35	047-06 MFC042	WT.	0.9200	VOL.	500.000
36	36	047-06 DILUTION	WT.	0.9200	VOL.	2000.00
37	37	CCCS-1	WT.	1.0000	VOL.	1.0000
38	38	CCCS-2	WT.	1.0000	VOL.	1.0000
39	39	CCCS-3	WT.	1.0000	VOL.	1.0000
40	40	CAL BLANK	WT.	1.0000	VOL.	1.0000
41	41	INTER ELEM CORR	WT.	1.0000	VOL.	1.0000

All weights listed are dry wts.
All concentration values are in ppm.

000545

* ANALYSIS is 1-21-86 not 3-21-86 as printed.

SAMPLE NO. 1 ICCS-1

[illegible] RMS ERROR = 0.00%

TL CH # 9

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
10.50	132.8	-.8585528	.0817929	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	10.50	0.11	-0.0000	-0.0000	0.00	1
3	10.0000	132.76	0.15	10.0000	0.0000	0.00	1

RMS ERROR = 0.00%

SN CH # 38

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
8.04	19.77	-6.85422	.8525149	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	8.04	0.06	-0.0000	-0.0000	0.00	1
4	10.0000	19.77	0.09	10.0000	0.0000	0.00	1

RMS ERROR = 0.00%

V CH # 10

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
10.88	142.7	-.8255373	.7585335E-1	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	10.89	0.05	0.0000	0.0000	0.00	1
3	10.0000	142.72	0.21	10.0000	0.0000	0.00	1

RMS ERROR = 0.00%

ZN CH # 1

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
15.08	1015.	-.150682	.9992173E-2	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	15.08	0.16	0.0000	0.0000	0.00	1
3	10.0000	1015.86	1.72	10.0000	0.0000	0.00	1

RMS ERROR = 0.00%

CALIBRATION DATA ON FILE SETUP ON DRIVE 1

RMS ERROR = 0.00%

SE CH # 32

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
21.79	103.3	-2.673073	.1223743	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	21.79	0.07	0.0000	0.0000	0.00	1
3	10.0000	103.31	0.76	10.0000	0.0000	0.00	1

RMS ERROR = 0.00%

AG CH # 34

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
27.67	591.4	-.4906378	.1773699E-1	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	27.67	0.09	0.0000	0.0000	0.00	1
2	10.0000	591.40	0.53	10.0000	-0.0000	-0.00	1

RMS ERROR = 0.00%

NA CH # 30

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
9.23	612.4	-3.061465	.5315e3	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	9.23	0.06	0.0000	0.0000	0.00	1
6	200.0000	612.43	3.11	200.0000	-0.0000	-0.00	1

RMS ERROR = 0.00%

TL CH # [illegible]

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
10.50	132.8	-.8585578	.0817929	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	10.50	0.11	-0.0000	-0.0000	0.00	1
[illegible]	[illegible]	132.76	0.19	10.0000	0.0000	0.00	1

RMS [illegible] 0.00%

000547

SN CH # 38

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)

RMS ERROR = [illegible]

MG CH # 28

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
9.34	658.6	-2.876944	.306024	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	9.34	0.03	0.0000	0.0000	0.00	1
6	200.0000	658.64	0.95	200.0000	0.0000	0.00	1

RMS ERROR = 0.00%

MN CH # 26

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
10.02	1679.	-.5331098E-1	.5350398E-2	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	[illegible]	10.02	0.02	0.0000	0.0000	0.00	1
3	[illegible]	1379.04	3.46	10.0000	0.0000	0.00	1

RMS ERROR = [illegible]%

NI CH # 16

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
10.04	[illegible]	.157409	.3013259E-1	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.[illegible]	[illegible]	0.07	0.0000	0.0000	0.00	1
3	10.[illegible]	[illegible]	0.55	10.0000	0.0000	0.00	1

RMS ERROR [illegible]%

K

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
6.58	141.9	[illegible]	1.741977	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	[illegible]	[illegible]	0.0000	0.0000	0.00	1
5	242.7270	[illegible]	[illegible]	242.7270	-0.0000	-0.00	1

RMS ERROR = 0.00%

000548

CH # 32

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
21.79	194.3	-2.673073	1.231747	0	0

1	[illegible]	[illegible]	[illegible]	0.0000	[illegible]	0.00	1
3	10.0000	300.35	0.55	10.0000	0.0000	0.00	1

RMS ERROR = 0.00%

CO CH # 37

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
9.03	412.1	-.2239201	.2480651E-1	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	9.03	0.08	0.0000	0.0000	0.00	1
3	10.0000	412.15	0.55	10.0000	0.0000	0.00	1

RMS ERROR = 0.00%

CU CH # 15

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
17.17	473.8	-.3759261	.2189861E-1	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	17.17	0.06	0.0000	0.0000	0.00	1
3	10.0000	473.82	0.95	10.0000	-0.0000	-0.00	1

RMS ERROR = 0.00%

FE CH # 20

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
5.94	9109.	-.1303752	.2197002E-1	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	5.94	0.02	0.0000	0.0000	0.00	1
5	200.0000	9109.26	13.80	200.0000	-0.0000	-0.00	1

RMS ERROR = 0.00%

PB CH # 35

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
15.82	102.5	-1.825104	.1153669	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	15.82	0.14	-0.0000	-0.0000	0.00	1
2	10.0000	102.50	0.26	10.0000	0.0000	0.00	1

RMS ERROR = 0.00%

7.75 893.3 -.9740357E-1 .1128919E-1 0 0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	7.75	0.02	-0.0000	-0.0000	0.00	1
3	10.0000	893.55	1.51	10.0000	0.0000	0.00	1

RMS ERROR = 0.00%

BE CH # 25

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
11.59	4920.	-.2360576E-1	.2037321E-2	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	11.59	0.03	0.0000	0.0000	0.00	1
3	10.0000	4919.99	6.66	10.0000	-0.0000	-0.00	1

RMS ERROR = 0.00%

CD CH # 36

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
7.20	514.1	-.1420972	.1972659E-1	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	7.20	0.03	0.0000	0.0000	0.00	1
3	10.0000	514.13	0.45	10.0000	0.0000	0.00	1

RMS ERROR = 0.00%

CA CH # 33

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
10.76	1519.	-1.427056	.1322335	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	10.76	0.03	0.0000	0.0000	0.00	1
5	200.0000	1519.23	2.65	200.0000	-0.0000	-0.00	1

RMS ERROR = 0.00%

CR CH # 27

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
8.98	300.3	-.3083207	.3432141E-1	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	8.98	0.02	0.0000	0.0000	0.00	1
	00	300.35	0.55	10.0000	0.0000	0.00	1

0.00%

DO NOT TERMINATE PROGRAM EXECUTION OR DATA WILL NOT BE STORED.

Doc # 5445 -6-20-39 37pgs
PB

AL CH # 18

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
22.25	1885.	-2.388827	.1073791	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	22.25	0.03	0.0000	0.0000	0.00	1
5	200.0000	1884.81	3.06	200.0000	-0.0000	-0.00	1

RMS ERROR = 0.00%

SB CH # 12

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
20.47	156.2	-1.508229	.7369197E-1	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	20.47	0.11	-0.0000	-0.0000	0.00	1
4	10.0000	156.17	0.67	10.0000	-0.0000	-0.00	1

RMS ERROR = 0.00%

AS CH # 29

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
8.09	33.54	-3.17664	.3928244	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	8.09	0.02	0.0000	0.0000	0.00	1
3	10.0000	33.54	0.05	10.0000	-0.0000	-0.00	1

RMS ERROR = 0.00%

BA CH # 3

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
7.75	893.3	-.9745357E-1	.1128919E-1	0	0

STD	CONC.	INT.	S.D.	CALC CONC.	CONC ERROR	% ERROR	CURVE
1	0.0000	7.75	0.02	-0.0000	-0.0000	0.00	1
3	10.0000	893.35	1.51	10.0000	0.0000	0.00	1

RMS ERROR = 0.00%

000551

CH # 25

LOW I	HIGH I	B(0)	B(1)	B(2)	B(3)
11.59	4820.	-.2360576E-1	.2077721E-2	0	0

RADIAN
CORPORATION

ICP Calibration Standard Sources

As, B, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Se, Sr, Tl, V, Zn	Spex 1000 ppm mixture Lot #0685NK
Al - Spex 1000ppm Lot #0685RSB	
Ca - Spex 1000ppm Lot #0585RS	
Fe - Spex 1000ppm Lot #0285RMP	
K - Spex 1000ppm Lot #684DA	
Mg - Spex 1000ppm Lot #0385DH	
Na - Spex 1000ppm Lot #0885RS	
Sn - Spex 1000ppm Lot #0385DHB	
Sb - Spex 1000ppm Lot #1184DHB	
Pb - Spex 1000ppm Lot #0785DHB2	
Ag - spex 1000ppm Lot #0385RS	

8501 Mo-Pac Blvd. / P.O. Box 9948 / Austin, Texas 78766 / (512)454-4797

TLE CLP Case 5421-6-80 5445-6-80-39 5296 (132 mode) 1-21-86

Project No.

Book No.

COPY

From Page No.			To Page No.
1	ICCS-1 (WP284 conc 2 x 2) + Ba-1 ppm	38	CCCS-2
2	ICCS-2 (NBS Ag & Sb)	39	CCCS-3
3	ICCS-3 (WP 882 conc ±1)	40	Cal blank
4	Cal blank	41	Inter Elem Corr.
5	Prep blank (case 5445)	42	
6	Inter Elem Corr.	43	
7	ICS-1	44	
8	ICS-2	45	
9	ICS-3 1.00,500 nls	46	
10	8512133-03 MFC D18 (case 5296)	47	
11	03 dilution 1.00,2000	48	
12	8601048-01 MF0004 (case 5445)	49	
13	01 dup	50	
14	CCCS-1		
15	CCCS-2		
16	CCCS-3		
17	Cal blank		
18	01 dig spk		
19	01 dilution 1.4		
20	prep blank (case 5421)		
21	LCS-1		
22	LCS-2		
23	LCS-3		
24	8601047-01 1.07,500 MFC020		
25	02 1.00,500 MFC033		
26	02 dup 1.00,500		
27	CCCS-1		
28	CCCS-2		
29	CCCS-3		
30	Cal blank		
31	03 .98,500 MFC039		
32	03 spk .92,500		
33	04 .98,500 MFC040		
34	05 .94,500 MFC041		
35	06 .92,500 MFC042		
36	06 dilution .92,2000		
37	CCCS-1		

stood by me.	Date	Invented by	Date
		Recorded by	

000553

Laboratory Name WESTON

Case No

Sample Number F2C57 .11SD

Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Concentration Low Medium (Circle One)

Date Extracted 'Prepared

Date Analyzed:

Conc/Dil Factor:

Percent Moisture (Decanted)

GPC Cleanup ☐Yes ☐No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	
111-44-4	bis(-2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1 3-Dichlorobenzene	
106-46-7	1. 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2. 4-Dimethylphenol	
65-85-0	Benzoic Acid	
111-91-1	bis(-2-Chloroethoxy)Methane	
120-83-2	2. 4-Dichlorophenol	
120-82-1	1. 2. 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2 4 6-Trichlorophenol	
95-95-4	2. 4. 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	
51-28-5	2. 4-Dinitrophenol	
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	
121-14-2	2 4-Dinitrotoluene	
606-20-2	2. 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	
534-52-1	4. 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	
206-44-0	Fluoranthene	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	
91-94-1	3. 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	
117-81-7	bis(2-Ethylhexyl)Phthalate	
218-01-9	Chrysene	
117-84-0	Di-n-Octyl Phthalate	
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	
193-39-5	Indeno(1. 2. 3-cd)Pyrene	
53-70-3	Dibenz(a h)Anthracene	
191-24-2	Benzo(g. h. i)Perylene	

(1)-Cannot be separated from diphenylamine

Laboratory Name WESTON

Case No 5495

Sample Number F2087 MSA

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Organics Analysis Data Sheet (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 1-11-86

Date Analyzed 1-30-86

Conc/Dil Factor 1

Percent Moisture (decanted) _____

GPC Cleanup ☐ Yes ☑ No

Separatory Funnel Extraction ☐ Yes

Continuous Liquid - Liquid Extraction ☑ Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	.07 U
319-85-7	Beta-BHC	.07 U
319-86-8	Delta-BHC	.07 U
58-89-9	Gamma-BHC (Lindane)	*
76-44-8	Heptachlor	*
309-00-2	Aldrin	*
1024-57-3	Heptachlor Epoxide	.07 U
959-98-8	Endosulfan I	.07 U
60-57-1	Dieldrin	*
72-55-9	4,4'-DDE	.13 U
72-20-8	Endrin	*
33213-65-9	Endosulfan II	.13 U
72-54-8	4,4'-DDD	.13 U
1031-07-8	Endosulfan Sulfate	.13 U
50-29-3	4,4'-DDT	*
72-43-5	Methoxychlor	.70 U
53494-70-5	Endrin Ketone	.13 U
57-74-9	Chlordane	.70 U
8001-35-2	Toxaphene	1.30 U
12674-11-2	Aroclor-1016	.70 U
11104-28-2	Aroclor-1221	.70 U
11141-16-5	Aroclor-1232	.70 U
53469-21-9	Aroclor-1242	.70 U
12672-29-6	Aroclor-1248	.70 U
11097-69-1	Aroclor-1254	1.30 U
11096-82-5	Aroclor-1260	1.30 U

* Denotes spiking compounds

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 750 or W_s _____ V_t 10,000 V_i 3.2

Environmental Protection Agency. CLP Sample Management Office.
P O Box 818. Alexandria, Virginia 22313 703/557-2400

Sample Number
F2C87-MSD

Organics Analysis Data Sheet
(Page 1)

13:11

Laboratory Name: ROY F WESTON, INC. Case No: 5445

Lab Sample ID No: 8601-45**-0090MSD QC Report No: N/A

Sample Matrix: WATER Contract No: 6801-6781

Data Release Authorized By: [signature] Date Sample Received: [illegible]

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____ pH 4.90

Percent Moisture: _____

Percent Moisture (Decanted): _____

N.C. required

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	
74-83-9	Bromomethane	
75-01-4	Vinyl Chloride	
75-00-3	Chloroethane	
75-09-2	Methylene Chloride	
67-64-1	Acetone	
75-15-0	Carbon Disulfide	
75-35-4	1, 1-Dichloroethene	
75-34-3	1, 1-Dichloroethane	
156-60-5	Trans-1, 2-Dichloroethene	
67-66-3	Chloroform	
107-06-2	1, 2-Dichloroethane	
78-93-3	2-Butanone	
71-55-6	1, 1, 1-Trichloroethane	
56-23-5	Carbon Tetrachloride	
108-05-4	Vinyl Acetate	
75-27-4	Bromodichloromethane	

CAS Number		ug/l or ug/Kg (Circle One)
79-34-5	1, 1, 2, 2-Tetrachloroethane	
78-87-5	1, 2-Dichloropropane	
10061-02-6	Trans-1, 3-Dichloropropene	
79-01-6	Trichloroethene	
124-48-1	Dibromochloromethane	
79-00-5	1, 1, 2-Trichloroethane	
71-43-2	Benzene	
10061-01-5	cis-1, 3-Dichloropropene	
110-75-8	2-Chloroethylvinylether	
75-25-2	Bromoform	
591-78-6	2-Hexanone	
108-10-1	4-Methyl-2-Pentanone	
127-18-4	Tetrachloroethene	
108-88-3	Toluene	
108-90-7	Chlorobenzene	
100-41-4	Ethylbenzene	
100-42-5	Styrene	
	Total Xylenes	

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument *detection limit*.) The footnote should read: U- Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J).

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ml in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name WESTON

Case No 5995

Sample Number F2087 MS

1335

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 1-11-86

Date Analyzed 1-30-86

Conc/Dil Factor 1

Percent Moisture (decanted) _____

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☒Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	.07 U
319-85-7	Beta-BHC	.07 U
319-86-8	Delta-BHC	.07 U
58-89-9	Gamma-BHC (Lindane)	*
76-44-8	Heptachlor	*
309-00-2	Aldrin	*
1024-57-3	Heptachlor Epoxide	.07 U
959-98-8	Endosulfan I	.07 U
60-57-1	Dieldrin	*
72-55-9	4,4'-DDE	.13 U
72-20-8	Endrin	*
33213-65-9	Endosulfan II	.13 U
72-54-8	4,4'-DDD	.13 U
1031-07-8	Endosulfan Sulfate	.13 U
50-29-3	4,4'-DDT	*
72-43-5	Methoxychlor	.70 U
53494-70-5	Endrin Ketone	.13 U
57-74-9	Chlordane	.70 U
8001-35-2	Toxaphene	1.30 U
12674-11-2	Aroclor-1016	.70 U
11104-28-2	Aroclor-1221	.70 U
11141-16-5	Aroclor-1232	.70 U
53469-21-9	Aroclor-1242	.70 U
12672-29-6	Aroclor-1248	.70 U
11097-69-1	Aroclor-1254	1.30 U
11096-82-5	Aroclor-1260	1.30 U

* denotes spiking compounds

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 750 or W_s _____ V_t 10,000 V_i 3.2

Laboratory Name WESTON

Case No 5445

Sample Number F2C87 115

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration (Low) / Medium (Circle One)

Date Extracted/Prepared _____

Date Analyzed _____

Conc./Dil Factor _____

Percent Moisture (Decanted) _____

GPC Cleanup ☐Yes ☐No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	
111-44-4	bis(2-Chloroethyl)Ether	
95-57-8	2-Chlorophenol	
541-73-1	1 3-Dichlorobenzene	
106-46-7	1 4-Dichlorobenzene	
100-51-6	Benzyl Alcohol	
95-50-1	1 2-Dichlorobenzene	
95-48-7	2-Methylphenol	
39638-32-9	bis(2-chloroisopropyl)Ether	
106-44-5	4-Methylphenol	
621-64-7	N-Nitroso-Di-n-Propylamine	
67-72-1	Hexachloroethane	
98-95-3	Nitrobenzene	
78-59-1	Isophorone	
88-75-5	2-Nitrophenol	
105-67-9	2. 4-Dimethylphenol	
65-85-0	Benzoic Acid	
111-91-1	bis(2-Chloroethoxy)Methane	
120-83-2	2. 4-Dichlorophenol	
120-82-1	1. 2. 4-Trichlorobenzene	
91-20-3	Naphthalene	
106-47-8	4-Chloroaniline	
87-68-3	Hexachlorobutadiene	
59-50-7	4-Chloro-3-Methylphenol	
91-57-6	2-Methylnaphthalene	
77-47-4	Hexachlorocyclopentadiene	
88-06-2	2 4 6-Trichlorophenol	
95-95-4	2. 4 5-Trichlorophenol	
91-58-7	2-Chloronaphthalene	
88-74-4	2-Nitroaniline	
131-11-3	Dimethyl Phthalate	
208-96-8	Acenaphthylene	
99-09-2	3-Nitroaniline	

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	
51-28-5	2. 4-Dinitrophenol	
100-02-7	4-Nitrophenol	
132-64-9	Dibenzofuran	
121-14-2	2 4-Dinitrotoluene	
606-20-2	2 6-Dinitrotoluene	
84-66-2	Diethylphthalate	
7005-72-3	4-Chlorophenyl-phenylether	
86-73-7	Fluorene	
100-01-6	4-Nitroaniline	
534-52-1	4. 6-Dinitro-2-Methylphenol	
86-30-6	N-Nitrosodiphenylamine (1)	
101-55-3	4-Bromophenyl-phenylether	
118-74-1	Hexachlorobenzene	
87-86-5	Pentachlorophenol	
85-01-8	Phenanthrene	
120-12-7	Anthracene	
84-74-2	Di-n-Butylphthalate	
206-44-0	Fluoranthene	
129-00-0	Pyrene	
85-68-7	Butylbenzylphthalate	
91-94-1	3. 3'-Dichlorobenzidine	
56-55-3	Benzo(a)Anthracene	
117-81-7	bis(2-Ethylhexyl)Phthalate	
218-01-9	Chrysene	
117-84-0	Di-n-Octyl Phthalate	
205-99-2	Benzo(b)Fluoranthene	
207-08-9	Benzo(k)Fluoranthene	
50-32-8	Benzo(a)Pyrene	
193-39-5	Indeno(1. 2. 3-cd)Pyrene	
53-70-3	Dibenz(a h)Anthracene	
191-24-2	Benzo(g. h. i)Perylene	

(1)-Cannot be separated from diphenylamine

Environmental Protection Agency. CLP Sample Management Office.
P O Box 818. Alexandria, Virginia 22313 703/557-2400

Sample Number
F0087 MS

1336

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ROY F WESTON, INC. Case No: 5445

Lab Sample ID No: 8401-454-0087MS QC Report No: N/A

Sample Matrix: water Contract No: 6801-6781

Data Release Authorized By: [signature] Date Sample Received: [illegible]

Volatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____ pH 4.20

Percent Moisture: _____

Percent Moisture (Decanted): _____

D.F. required

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	
74-83-9	Bromomethane	
75-01-4	Vinyl Chloride	
75-00-3	Chloroethane	
75-09-2	Methylene Chloride	
67-64-1	Acetone	
75-15-0	Carbon Disulfide	
75-35-4	1, 1-Dichloroethene	
75-34-3	1, 1-Dichloroethane	
156-60-5	Trans-1, 2-Dichloroethene	
67-66-3	Chloroform	
107-06-2	1, 2-Dichloroethane	
78-93-3	2-Butanone	
71-55-6	1, 1, 1-Trichloroethane	
56-23-5	Carbon Tetrachloride	
108-05-4	Vinyl Acetate	
75-27-4	Bromodichloromethane	

CAS Number		ug l or ug Kg (Circle One)
79-34-5	1, 1, 2, 2-Tetrachloroethane	
78-87-5	1, 2-Dichloropropane	
10061-02-6	Trans-1, 3-Dichloropropene	
79-01-6	Trichloroethene	
124-48-1	Dibromochloromethane	
79-00-5	1, 1, 2-Trichloroethane	
71-43-2	Benzene	
10061-01-5	cis-1, 3-Dichloropropene	
110-75-8	2-Chloroethylvinylether	
75-25-2	Bromoform	
591-78-6	2-Hexanone	
108-10-1	4-Methyl-2-Pentanone	
127-18-4	Tetrachloroethene	
108-88-3	Toluene	
108-90-7	Chlorobenzene	
100-41-4	Ethylbenzene	
100-42-5	Styrene	
	Total Xylenes	

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However the definition of each flag must be explained.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read "U- Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample."

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J).

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name WESTON

Case No 5445

Sample Number F2084-5 MSD

1321

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared 1-14-86

Date Analyzed 1-30-86

Conc/Dil Factor 10

Percent Moisture (decanted) 67.6% DRY

GPC Cleanup ☑Yes ☐No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	180 U
319-85-7	Beta-BHC	180 U
319-86-8	Delta-BHC	180 U
58-89-9	Gamma-BHC (Lindane)	180 U
76-44-8	Heptachlor	180 U
309-00-2	Aldrin	180 U
1024-57-3	Heptachlor Epoxide	180 U
959-98-8	Endosulfan I	180 U
60-57-1	Dieldrin	360 U
72-55-9	4,4'-DDE	360 U
72-20-8	Endrin	360 U
33213-65-9	Endosulfan II	360 U
72-54-8	4,4'-DDD	360 U
1031-07-8	Endosulfan Sulfate	360 U
50-29-3	4,4'-DDT	360 U
72-43-5	Methoxychlor	1800 U
53494-70-5	Endrin Ketone	360 U
57-74-9	Chlordane	1800 U
8001-35-2	Toxaphene	36000 U
12674-11-2	Aroclor-1016	1800 U
11104-28-2	Aroclor-1221	1800 U
11141-16-5	Aroclor-1232	1800 U
53469-21-9	Aroclor-1242	1800 U
12672-29-6	Aroclor-1248	1800 U
11097-69-1	Aroclor-1254	3600 U
11096-82-5	Aroclor-1260	3600 U

V_t = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 20.3 V_t 20,000 V_t 3.2

Laboratory Name: R F WESTON INC
Case No: 5445

Sample Number
F2084SMSD

1320

ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration: LOW
Date Extracted/Prepared: 01/14/86
Date Analyzed: 01/29/86
Dil Factor: 1.556
Percent Moisture: (~~Decanted~~) 32.4
FW 2/7/86

GPC Cleanup X Yes ___ No
Separatory Funnel Extraction ___ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		UG/KG	CAS Number		UG/KG
108-95-2	Phenol	3300. U	83-32-9	Acenaphthene	3100. U
111-44-4	bis(2-Chloroethyl)Ether	760. U	51-28-5	2,4-Dinitrophenol	3700. U
95-57-8	2-Chlorophenol	4300. U	100-02-7	4-Nitrophenol	5200. U
541-73-1	1,3-Dichlorobenzene	760. U	132-64-9	Dibenzofuran	630. J
106-46-7	1,4-Dichlorobenzene	1700. U	121-14-2	2,4-Dinitrotoluene	1900. U
100-51-6	Benzyl Alcohol	760. U	606-20-2	2,6-Dinitrotoluene	760. U
95-50-1	1,2-Dichlorobenzene	760. U	84-66-2	Diethylphthalate	760. U
95-48-7	2-Methylphenol	760. U	7005-72-3	4-Chlorophenyl-phenylether	760. U
39638-32-9	bis(2-Chloroisopropyl)Ether	760. U	86-73-7	Fluorene	870. U
106-44-5	4-Methylphenol	760. U	100-10-6	4-Nitroaniline	3700. U
621-64-7	N-Nitroso-Di-n-Propylamine	1800. U	534-52-1	4,6-Dinitro-2-Methylphenol	3700. U
67-72-1	Hexachloroethane	760. U	86-30-6	N-Nitrosodiphenylamine (1)	760. U
98-95-3	Nitrobenzene	760. U	101-55-3	4-Bromophenyl-phenylether	760. U
78-59-1	Isophorone	760. U	118-74-1	Hexachlorobenzene	760. U
88-75-5	2-Nitrophenol	760. U	87-86-5	Pentachlorophenol	6600. U
105-67-9	2,4-Dimethylphenol	760. U	85-01-8	Phenanthrene	4100. B
65-85-0	Benzoic Acid	3700. U	120-12-7	Anthracene	360. J
111-91-1	bis(2-Chloroethoxy)Methane	760. U	84-74-2	Di-n-Butylphthalate	3700. B
120-83-2	2,4-Dichlorophenol	760. U	206-44-0	Fluoranthene	2500. U
120-82-1	1,2,4-Trichlorobenzene	1900. U	129-00-0	Pyrene	4400. U
91-20-3	Naphthalene	120. J	85-68-7	Butylbenzylphthalate	760. U
106-47-8	4-Chloroaniline	760. U	91-94-1	3,3'-Dichlorobenzidine	1500. U
87-68-3	Hexachlorobutadiene	760. U	56-55-3	Benzo(a)Anthracene	320. J
59-50-7	4-Chloro-3-Methylphenol	4900. U	117-81-7	bis(2-Ethylhexyl)Phthalate	140. BJ
91-57-6	2-Methylnaphthalene	190. J	218-01-9	Chrysene	340. J
77-47-4	Hexachlorocyclopentadiene	760. U	117-84-0	Di-n-Octyl Phthalate	760. U
88-06-2	2,4,6-Trichlorophenol	760. U	205-99-2	Benzo(b)Fluoranthene	760. U
95-95-4	2,4,5-Trichlorophenol	3700. U	207-08-9	Benzo(k)Fluoranthene	760. U
91-58-7	2-Chloronaphthalene	760. U	50-32-8	Benzo(a)Pyrene	760. U
88-74-4	2-Nitroaniline	3700. U	193-39-5	Indeno(1,2,3-cd)Pyrene	760. U
131-11-3	Dimethyl Phthalate	760. U	53-70-3	Dibenz(a,h)Anthracene	760. U
208-96-8	Acenaphthylene	760. U	191-24-2	Benzo(g,h,i)Perylene	760. U
99-09-2	3-Nitroaniline	3700. U			

(1) - Cannot be separated from diphenylamine

Sample Number
F2084-S Matrix Spike Dup.

Organics Analysis Data Sheet
(Page 1)

131

Laboratory Name: WESTON
Case No: 5445
Lab Sample ID No: 8601-454-0140MSD
QC Report No: NA
Sample Matrix: Soil
Contract No: 6801-6781
Data Release Authorized By:
Date Sample Received: Jan 11, 1986

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: Jan 14, 1986
Date Analyzed: Jan 14, 1986
Conc/Dil Factor: 1.4 pH 4.75
Percent Moisture: (Not Decanted) 32.4

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	14U
74-83-9	Bromomethane	1
75-01-4	Vinyl Chloride	1
75-00-3	Chloroethane	1
75-09-2	Methylene Chloride	10B
67-64-1	Acetone	10JB
75-15-0	Carbon Disulfide	7U
75-35-4	1, 1-Dichloroethene	Spiked
75-34-3	1, 1-Dichloroethane	7U
156-60-5	Trans-1, 2-Dichloroethene	1
67-66-3	Chloroform	1
107-06-2	1, 2-Dichloroethane	1
78-93-3	2-Butanone	11JB
71-55-6	1, 1, 1-Trichloroethane	2J
56-23-5	Carbon Tetrachloride	7U
108-05-4	Vinyl Acetate	14U
75-27-4	Bromodichloromethane	7U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	7U
10061-02-6	Trans-1, 3-Dichloropropene	1
79-01-6	Trichloroethene	Spiked
124-48-1	Dibromochloromethane	7U
79-00-5	1, 1, 2-Trichloroethane	1
71-43-2	Benzene	Spiked
10061-01-5	cis-1, 3-Dichloropropene	7U
110-75-8	2-Chloroethylvinylether	14U
75-25-2	Bromoform	7U
591-78-6	4-Methyl-2-Pentanone	14U
108-10-1	2-Hexanone	1
127-18-4	Tetrachloroethene	7U
79-34-5	1, 1, 2, 2-Tetrachloroethane	1
108-88-3	Toluene	Spiked
108-90-7	Chlorobenzene	Spiked
100-41-4	Ethylbenzene	7U
100-42-5	Styrene	1
	Total Xylenes	1

Data Reporting Qualifiors

For reporting results to EPA, the following results qualifiors are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value

U Indicates compound was analyzed for but not detected Report the minimum detection limit for the sample with the U (e g., 10U) based on necessary concentration dilution action (This is not necessarily the instrument detection limit) The footnote should read U- Compound was analyzed for but not detected The number is the minimum attainable detection limit for the sample

J Indicates an estimated value This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but r than zero (e g 10J) If limit of detection is 10 µg/l and a ntration of 3 µg l is calculated report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC MS Single component pesticides ≥10 ng ul in the final extract should be confirmed by GC MS

B This flag is used when the analyte is found in the blank as well as a sample It indicates possible probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results If used, they must be fully described and such description attached to the data summary report

Laboratory Name WESTON

Case No 5445

Sample Number F2084-S 1015

1305

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

Date Extracted/Prepared: 1-14-86

Date Analyzed 1-30-86

Conc/Dil Factor 10

Percent Moisture (decanted) 67.6% DRY

GPC Cleanup ☑Yes ☐No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	150 U
319-85-7	Beta-BHC	150 U
319-86-8	Delta-BHC	150 U
58-89-9	Gamma-BHC (Lindane)	150 U
76-44-8	Heptachlor	150 U
309-00-2	Aldrin	150 U
1024-57-3	Heptachlor Epoxide	150 U
959-98-8	Endosulfan I	150 U
60-57-1	Dieldrin	360 U
72-55-9	4,4'-DDE	360 U
72-20-8	Endrin	360 U
33213-65-9	Endosulfan II	360 U
72-54-8	4,4'-DDD	360 U
1031-07-8	Endosulfan Sulfate	360 U
50-29-3	4,4'-DDT	360 U
72-43-5	Methoxychlor	1500 U
53494-70-5	Endrin Ketone	? U
57-74-9	Chlordane	1800 U
8001-35-2	Toxaphene	54,000 U
12674-11-2	Aroclor-1016	1800 U
11104-28-2	Aroclor-1221	1800 U
11141-16-5	Aroclor-1232	1800 U
53469-21-9	Aroclor-1242	1800 U
12672-29-6	Aroclor-1248	1800 U
11097-69-1	Aroclor-1254	3600 U
11096-82-5	Aroclor-1260	3600 U

V_t = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 21.8 V_t 20,000 V_t 3.3

000563

Laboratory Name: R F WESTON INC
Case No: 5445

Sample Number
F2084SMS

ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration: LOW
Date Extracted/Prepared: 01/14/86
Date Analyzed: 01/29/86
Dil Factor: 1.449
Percent Moisture: ~~(Decanted)~~ 32.4
JW 4/7/86

GPC Cleanup X Yes __ No
Separatory Funnel Extraction __ Yes
Continuous Liquid-Liquid Extraction __ Yes

CAS Number		UG/KG		CAS Number		UG/KG	
108-95-2	Phenol	3100.		83-32-9	Acenaphthene	2400.	
111-44-4	bis(2-Chloroethyl)Ether	710.	U	51-28-5	2,4-Dinitrophenol	3400.	U
95-57-8	2-Chlorophenol	4200.		100-02-7	4-Nitrophenol	4900.	
541-73-1	1,3-Dichlorobenzene	710.	U	132-64-9	Dibenzofuran	710.	U
106-46-7	1,4-Dichlorobenzene	1900.		121-14-2	2,4-Dinitrotoluene	1700.	
100-51-6	Benzyl Alcohol	710.	U	606-20-2	2,6-Dinitrotoluene	710.	U
95-50-1	1,2-Dichlorobenzene	710.	U	84-66-2	Diethylphthalate	710.	U
95-48-7	2-Methylphenol	710.	U	7005-72-3	4-Chlorophenyl-phenylether	710.	U
39638-32-9	bis(2-Chloroisopropyl)Ether	710.	U	86-73-7	Fluorene	710.	U
106-44-5	4-Methylphenol	710.	U	100-10-6	4-Nitroaniline	3400.	U
621-64-7	N-Nitroso-Di-n-Propylamine	1900.		534-52-1	4,6-Dinitro-2-Methylphenol	3400.	U
67-72-1	Hexachloroethane	710.	U	86-30-6	N-Nitrosodiphenylamine (1)	710.	U
98-95-3	Nitrobenzene	710.	U	101-55-3	4-Bromophenyl-phenylether	710.	U
78-59-1	Isophorone	710.	U	118-74-1	Hexachlorobenzene	710.	U
88-75-5	2-Nitrophenol	710.	U	87-86-5	Pentachlorophenol	5900.	
105-67-9	2,4-Dimethylphenol	710.	U	85-01-8	Phenanthrene	350.	BJ
65-85-0	Benzoic Acid	3400.	U	120-12-7	Anthracene	710.	U
111-91-1	bis(2-Chloroethoxy)Methane	710.	U	84-74-2	Di-n-Butylphthalate	3800.	B
120-83-2	2,4-Dichlorophenol	710.	U	206-44-0	Fluoranthene	190.	J
120-82-1	1,2,4-Trichlorobenzene	1900.		129-00-0	Pyrene	2900.	
91-20-3	Naphthalene	710.	U	85-68-7	Butylbenzylphthalate	710.	U
106-47-8	4-Chloroaniline	710.	U	91-94-1	3,3'-Dichlorobenzidine	1400.	U
87-68-3	Hexachlorobutadiene	710.	U	56-55-3	Benzo(a)Anthracene	710.	U
59-50-7	4-Chloro-3-Methylphenol	4900.		117-81-7	bis(2-Ethylhexyl)Phthalate	710.	BU
91-57-6	2-Methylnaphthalene	710.	U	218-01-9	Chrysene	710.	U
77-47-4	Hexachlorocyclopentadiene	710.	U	117-84-0	Di-n-Octyl Phthalate	710.	U
88-06-2	2,4,6-Trichlorophenol	710.	U	205-99-2	Benzo(b)Fluoranthene	710.	U
95-95-4	2,4,5-Trichlorophenol	3400.	U	207-08-9	Benzo(k)Fluoranthene	710.	U
91-58-7	2-Chloronaphthalene	710.	U	50-32-8	Benzo(a)Pyrene	710.	U
88-74-4	2-Nitroaniline	3400.	U	193-39-5	Indeno(1,2,3-cd)Pyrene	710.	U
131-11-3	Dimethyl Phthalate	710.	U	53-70-3	Dibenz(a,h)Anthracene	710.	U
208-96-8	Acenaphthylene	710.	U	191-24-2	Benzo(g,h,i)Perylene	710.	U
99-09-2	3-Nitroaniline	3400.	U				

(1) - Cannot be separated from diphenylamine

Sample Number
F2084-S Matrix Spike

130

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: WESTON
Case No: 5445
Lab Sample ID No: 8601-454-0140 MS
QC Report No: NA
Sample Matrix: Soil
Contract No: 6801-6781
Data Release Authorized By:
Date Sample Received: Jan 11, 1988

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: Jan 14, 1988
Date Analyzed: Jan 14, 1988
Conc/Dil Factor: 1.4 pH 4.75
Percent Moisture: (Not Decanted) 32.4

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	14U
74-83-9	Bromomethane	1
75-01-4	Vinyl Chloride	1
75-00-3	Chloroethane	1
75-09-2	Methylene Chloride	9B
67-64-1	Acetone	47B
75-15-0	Carbon Disulfide	7U
75-35-4	1, 1-Dichloroethene	Spiked
75-34-3	1, 1-Dichloroethane	7U
156-60-5	Trans-1, 2-Dichloroethene	1
67-66-3	Chloroform	1
107-06-2	1, 2-Dichloroethane	1
78-93-3	2-Butanone	10JB
71-55-6	1, 1, 1-Trichloroethane	7U
56-23-5	Carbon Tetrachloride	1
108-05-4	Vinyl Acetate	14U
75-27-4	Bromodichloromethane	7U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	7U
10061-02-6	Trans-1, 3-Dichloropropene	1
79-01-6	Trichloroethene	Spiked
124-48-1	Dibromochloromethane	7U
79-00-5	1, 1, 2-Trichloroethane	1
71-43-2	Benzene	Spiked
10061-01-5	cis-1, 3-Dichloropropene	7U
110-75-8	2-Chloroethylvinylether	14U
75-25-2	Bromoform	7U
591-78-6	4-Methyl-2-Pentanone	14U
108-10-1	2-Hexanone	1
127-18-4	Tetrachloroethene	7U
79-34-5	1, 1, 2, 2-Tetrachloroethane	1
108-88-3	Toluene	Spiked
108-90-7	Chlorobenzene	Spiked
100-41-4	Ethylbenzene	7U
100-42-5	Styrene	1
	Total Xylenes	1

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value

U Indicates compound was analyzed for but not detected Report the minimum detection limit for the sample with the U (e g , 10U) based on necessary concentration dilution ation (This is not necessarily the instrument detection limit) The footnote should read U- Compound was analyzed for but not detected The number is the minimum attainable detection limit for the sample

J Indicates an estimated value This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification ia but the result is less than the specified detection limit but er than zero (e g 10J) If limit of detection is 10 µg l and a ...ntration of 3 µg l is calculated report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC MS Single component pesticides ≥10 ng ul in the final extract should be confirmed by GC MS

B This flag is used when the analyte is found in the blank as well as a sample It indicates possible probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results If used, they must be fully described and such description attached to the data summary report

Environmental Protection Agency. CLP Sample Management Office.
P. O. Box 818. Alexandria, Virginia 22313 703/557-2490

Sample Number
F2084 .11SD

Organics Analysis Data Sheet
(Page 3)

125

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

not required

CAS Number		ug/l or ug/kg (Circle One)
319-84-6	Alpha-BHC	
319-85-7	Beta-BHC	
319-86-8	Delta-BHC	
58-89-9	Gamma-BHC (Lindane)	
76-44-8	Heptachlor	
309-00-2	Aldrin	
1024-57-3	Heptachlor Epoxide	
959-98-8	Endosulfan I	
60-57-1	Dieldrin	
72-55-9	4,4'-DDE	
72-20-8	Endrin	
33213-65-9	Endosulfan II	
72-54-8	4,4'-DDD	
7421-93-4	Endrin Aldehyde	
1031-07-8	Endosulfan Sulfate	
50-29-3	4,4'-DDT	
72-43-5	Methoxychlor	
53494-70-5	Endrin Ketone	
57-74-9	Chlordane	
8001-35-2	Toxaphene	
12674-11-2	Aroclor-1016	
11104-28-2	Aroclor-1221	
11141-16-5	Aroclor-1232	
53469-21-9	Aroclor-1242	
12672-29-6	Aroclor-1248	
11097-69-1	Aroclor-1254	
11096-82-5	Aroclor-1260	

V_i = Volume of extract injected (ul)

V_o = Volume of water extracted (ml)

W_o = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_o _____ or W_o _____ V_t _____ V_i _____

000566

Laboratory Name: R F WESTON INC
Case No: 5445

Sample Number
F2984MSD

1293

ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration: LOW
Date Extracted/Prepared: 01/13/86
Date Analyzed: 01/17/86
Dil Factor: 1.250
Percent Moisture: (Decanted)

GPC Cleanup __ Yes X No
Separatory Funnel Extraction X Yes
Continuous Liquid-Liquid Extraction __ Yes

CAS Number		UG/L	CAS Number		UG/L
108-95-2	Phenol	4.5J	83-32-9	Acenaphthene	39.
111-44-4	bis(2-Chloroethyl)Ether	13. U	51-28-5	2,4-Dinitrophenol	63. U
95-57-8	2-Chlorophenol	13. U	100-02-7	4-Nitrophenol	63. U
541-73-1	1,3-Dichlorobenzene	13. U	132-64-9	Dibenzofuran	13. U
106-46-7	1,4-Dichlorobenzene	39.	121-14-2	2,4-Dinitrotoluene	36.
100-51-6	Benzyl Alcohol	13. U	606-20-2	2,6-Dinitrotoluene	13. U
95-50-1	1,2-Dichlorobenzene	13. U	84-66-2	Diethylphthalate	13. U
95-48-7	2-Methylphenol	13. U	7005-72-3	4-Chlorophenyl-phenylether	13. U
39638-32-9	bis(2-Chloroisopropyl)Ether	13. U	86-73-7	Fluorene	13. U
106-44-5	4-Methylphenol	13. U	100-10-6	4-Nitroaniline	63. U
621-64-7	N-Nitroso-Di-n-Propylamine	38.	534-52-1	4,6-Dinitro-2-Methylphenol	63. U
67-72-1	Hexachloroethane	13. U	86-30-6	N-Nitrosodiphenylamine (1)	13. U
98-95-3	Nitrobenzene	13. U	101-55-3	4-Bromophenyl-phenylether	13. U
78-59-1	Isophorone	13. U	118-74-1	Hexachlorobenzene	13. U
88-75-5	2-Nitrophenol	13. U	87-86-5	Pentachlorophenol	28. J
105-67-9	2,4-Dimethylphenol	13. U	85-01-8	Phenanthrene	13. U
65-85-0	Benzoic Acid	63. U	120-12-7	Anthracene	13. U
111-91-1	bis(2-Chloroethoxy)Methane	13. U	84-74-2	Di-n-Butylphthalate	58.
120-83-2	2,4-Dichlorophenol	13. U	206-44-0	Fluoranthene	13. U
120-82-1	1,2,4-Trichlorobenzene	40.	129-00-0	Pyrene	48.
91-20-3	Naphthalene	13. U	85-68-7	Butylbenzylphthalate	13. U
106-47-8	4-Chloroaniline	13. U	91-94-1	3,3'-Dichlorobenzidine	25. U
87-68-3	Hexachlorobutadiene	13. U	56-55-3	Benzo(a)Anthracene	13. U
59-50-7	4-Chloro-3-Methylphenol	22.	117-81-7	bis(2-Ethylhexyl)Phthalate	13. U
91-57-6	2-Methylnaphthalene	13. U	218-01-9	Chrysene	13. U
77-47-4	Hexachlorocyclopentadiene	13. U	117-84-0	Di-n-Octyl Phthalate	13. U
88-06-2	2,4,6-Trichlorophenol	13. U	205-99-2	Benzo(b)Fluoranthene	13. U
95-95-4	2,4,5-Trichlorophenol	63. U	207-08-9	Benzo(k)Fluoranthene	13. U
91-58-7	2-Chloronaphthalene	13. U	50-32-8	Benzo(a)Pyrene	13. U
88-74-4	2-Nitroaniline	63. U	193-39-5	Indeno(1,2,3-cd)Pyrene	13. U
131-11-3	Dimethyl Phthalate	13. U	53-70-3	Dibenz(a,h)Anthracene	13. U
208-96-8	Acenaphthylene	13. U	191-24-2	Benzo(g,h,i)Perylene	13. U
99-09-2	3-Nitroaniline	63. U			

(1) - Cannot be separated from diphenylamine

Environmental Protection Agency. CLP Sample Management Office.
P O Box 818. Alexandria. Virginia 22313 703/557-2490

Sample Number
F2C34 MSD

Organics Analysis Data Sheet
(Page 1)

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Laboratory Name: ROY F WESTON, INC.
Case No: 5445
Lab Sample ID No: 8601-454-CC10
QC Report No: N/A
Sample Matrix: water
Contract No: 6801-6781
Data Release Authorized By: [signature]
Date Sample Received: Jan. 11, 1986

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared:
Date Analyzed:
Conc/Dil Factor: pH 6.25
Percent Moisture:
Percent Moisture (Decanted):

N.A. required

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	
74-83-9	Bromomethane	
75-01-4	Vinyl Chloride	
75-00-3	Chloroethane	
75-09-2	Methylene Chloride	
67-64-1	Acetone	
75-15-0	Carbon Disulfide	
75-35-4	1, 1-Dichloroethene	
75-34-3	1, 1-Dichloroethane	
156-60-5	Trans-1, 2-Dichloroethene	
67-66-3	Chloroform	
107-06-2	1, 2-Dichloroethane	
78-93-3	2-Butanone	
71-55-6	1, 1, 1-Trichloroethane	
56-23-5	Carbon Tetrachloride	
108-05-4	Vinyl Acetate	
75-27-4	Bromodichloromethane	

CAS Number		ug l or ug Kg (Circle One)
79-34-5	1, 1, 2, 2-Tetrachloroethane	
78-87-5	1, 2-Dichloropropane	
10061-02-6	Trans-1, 3-Dichloropropene	
79-01-6	Trichloroethene	
124-48-1	Dibromochloromethane	
79-00-5	1, 1, 2-Trichloroethane	
71-43-2	Benzene	
10061-01-5	cis-1, 3-Dichloropropene	
110-75-8	2-Chloroethylvinylether	
75-25-2	Bromoform	
591-78-6	2-Hexanone	
108-10-1	4-Methyl-2-Pentanone	
127-18-4	Tetrachloroethene	
108-88-3	Toluene	
108-90-7	Chlorobenzene	
100-41-4	Ethylbenzene	
100-42-5	Styrene	
	Total Xylenes	

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read "U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample."

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Environmental Protection Agency, ESP Sample Management Office,
P.O. Box 818, Alexandria, Virginia 22313 703/557-2490

Sample Number
F20S4.115

Organics Analysis Data Sheet
(Page 3)

12?

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

not required

CAS Number		ug/l or ug/kg (Circle One)
319-84-6	Alpha-BHC	
319-85-7	Beta-BHC	
319-86-8	Delta-BHC	
58-89-9	Gamma-BHC (Lindane)	
76-44-8	Heptachlor	
309-00-2	Aldrin	
1024-57-3	Heptachlor Epoxide	
959-98-8	Endosulfan I	
60-57-1	Dieldrin	
72-55-9	4,4'-DDE	
72-20-8	Endrin	
33213-65-9	Endosulfan II	
72-54-8	4,4'-DDD	
7421-93-4	Endrin Aldehyde	
1031-07-8	Endosulfan Sulfate	
50-29-3	4,4'-DDT	
72-43-5	Methoxychlor	
53494-70-5	Endrin Ketone	
57-74-9	Chlordane	
8001-35-2	Toxaphene	
12674-11-2	Aroclor-1016	
11104-28-2	Aroclor-1221	
11141-16-5	Aroclor-1232	
53469-21-9	Aroclor-1242	
12672-29-6	Aroclor-1248	
11097-69-1	Aroclor-1254	
11096-82-5	Aroclor-1260	

V_i = Volume of extract injected (ul)

V_o = Volume of water extracted (ml)

W_o = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

$$\frac{V_t}{V_i} \quad \text{or} \quad \frac{W_o}{V_i}$$

Laboratory Name: R F WESTON INC
Case No: 5445

Sample Number
F2084MS

1299

ORGANICS ANALYSIS DATA SHEET

(Page 2)

SEMIVOLATILE COMPOUNDS

Concentration: LOW
Date Extracted/Prepared: 01/13/86
Date Analyzed: 01/17/86
Dil Factor: 1.250
Percent Moisture: (Decanted) _____

GPC Cleanup ___ Yes _X_ No
Separatory Funnel Extraction _X_ Yes
Continuous Liquid-Liquid Extraction ___ Yes

CAS Number		UG/L	CAS Number		UG/L
108-95-2	Phenol	41.	83-32-9	Acenaphthene	46.
111-44-4	bis(2-Chloroethyl)Ether	13. U	51-28-5	2,4-Dinitrophenol	63. U
95-57-8	2-Chlorophenol	89.	100-02-7	4-Nitrophenol	43. J
541-73-1	1,3-Dichlorobenzene	13. U	132-64-9	Dibenzofuran	13. U
106-46-7	1,4-Dichlorobenzene	42.	121-14-2	2,4-Dinitrotoluene	35.
100-51-6	Benzyl Alcohol	13. U	606-20-2	2,6-Dinitrotoluene	13. U
95-50-1	1,2-Dichlorobenzene	13. U	84-66-2	Diethylphthalate	13. U
95-48-7	2-Methylphenol	13. U	7005-72-3	4-Chlorophenyl-phenylether	13. U
39638-32-9	bis(2-Chloroisopropyl)Ether	13. U	86-73-7	Fluorene	13. U
106-44-5	4-Methylphenol	13. U	100-10-6	4-Nitroaniline	63. U
621-64-7	N-Nitroso-Di-n-Propylamine	39.	534-52-1	4,6-Dinitro-2-Methylphenol	63. U
67-72-1	Hexachloroethane	13. U	86-30-6	N-Nitrosodiphenylamine (1)	13. U
98-95-3	Nitrobenzene	13. U	101-55-3	4-Bromophenyl-phenylether	13. U
78-59-1	Isophorone	13. U	118-74-1	Hexachlorobenzene	13. U
88-75-5	2-Nitrophenol	13. U	87-86-5	Pentachlorophenol	27. J
105-67-9	2,4-Dimethylphenol	13. U	85-01-8	Phenanthrene	13. U
65-85-0	Benzoic Acid	63. U	120-12-7	Anthracene	13. U
111-91-1	bis(2-Chloroethoxy)Methane	13. U	84-74-2	Di-n-Butylphthalate	43.
120-83-2	2,4-Dichlorophenol	13. U	206-44-0	Fluoranthene	13. U
120-82-1	1,2,4-Trichlorobenzene	38.	129-00-0	Pyrene	46.
91-20-3	Naphthalene	13. U	85-68-7	Butylbenzylphthalate	13. U
106-47-8	4-Chloroaniline	13. U	91-94-1	3,3'-Dichlorobenzidine	25. U
87-68-3	Hexachlorobutadiene	13. U	56-55-3	Benzo(a)Anthracene	13. U
59-50-7	4-Chloro-3-Methylphenol	83.	117-81-7	bis(2-Ethylhexyl)Phthalate	13. U
91-57-6	2-Methylnaphthalene	13. U	218-01-9	Chrysene	13. U
77-47-4	Hexachlorocyclopentadiene	13. U	117-84-0	Di-n-Octyl Phthalate	13. U
88-06-2	2,4,6-Trichlorophenol	13. U	205-99-2	Benzo(b)Fluoranthene	13. U
95-95-4	2,4,5-Trichlorophenol	63. U	207-08-9	Benzo(k)Fluoranthene	13. U
91-58-7	2-Chloronaphthalene	13. U	50-32-8	Benzo(a)Pyrene	13. U
88-74-4	2-Nitroaniline	63. U	193-39-5	Indeno(1,2,3-cd)Pyrene	13. U
131-11-3	Dimethyl Phthalate	13. U	53-70-3	Dibenz(a,h)Anthracene	13. U
208-96-8	Acenaphthylene	13. U	191-24-2	Benzo(g,h,i)Perylene	13. U
99-09-2	3-Nitroaniline	63. U			

(1) - Cannot be separated from diphenylamine

Environmental Protection Agency. CLP Sample Management Office.
P O Box 818. Alexandria. Virginia 22313 703/557-2490

Sample Number
F2C54.115

125

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ROY F WESTON, INC.
Case No: 5445
Lab Sample ID No: 5601-454-CCIC
QC Report No: N/A
Sample Matrix: Water
Contract No: 6801-6781
Data Release Authorized By:
Date Sample Received: June 11, 1986

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared:
Date Analyzed:
Conc/Dil Factor: pH 6.25
Percent Moisture:
Percent Moisture (Decanted):

N.A. required

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	
74-83-9	Bromomethane	
75-01-4	Vinyl Chloride	
75-00-3	Chloroethane	
75-09-2	Methylene Chloride	
67-64-1	Acetone	
75-15-0	Carbon Disulfide	
75-35-4	1, 1-Dichloroethene	
75-34-3	1, 1-Dichloroethane	
156-60-5	Trans-1, 2-Dichloroethene	
67-66-3	Chloroform	
107-06-2	1, 2-Dichloroethane	
78-93-3	2-Butanone	
71-55-6	1, 1, 1-Trichloroethane	
56-23-5	Carbon Tetrachloride	
108-05-4	Vinyl Acetate	
75-27-4	Bromodichloromethane	

CAS Number		ug/l or ug Kg (Circle One)
79-34-5	1, 1, 2, 2-Tetrachloroethane	
78-87-5	1, 2-Dichloropropane	
10061-02-6	Trans-1, 3-Dichloropropene	
79-01-6	Trichloroethene	
124-48-1	Dibromochloromethane	
79-00-5	1, 1, 2-Trichloroethane	
71-43-2	Benzene	
10061-01-5	cis-1, 3-Dichloropropene	
110-75-8	2-Chloroethylvinylether	
75-25-2	Bromoform	
591-78-6	2-Hexanone	
108-10-1	4-Methyl-2-Pentanone	
127-18-4	Tetrachloroethene	
108-88-3	Toluene	
108-90-7	Chlorobenzene	
100-41-4	Ethylbenzene	
100-42-5	Styrene	
	Total Xylenes	

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explained.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read "U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample."

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name WESTON

Case No 5445

Sample Number F2082-S MSD

Organics Analysis Data Sheet (Page 3)

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Pesticide / PCBs

Concentration Low (Medium) (Circle One)

Date Extracted / Prepared 1-24-86

Date Analyzed 1-30-86

Conc (Dil Factor) 100

Percent Moisture (decanted) 68.6% DRY

GPC Cleanup ☐ Yes ☑ No

Separatory Funnel Extraction ☐ Yes

Continuous Liquid - Liquid Extraction ☐ Yes

CAS Number		ug / l or (ug / Kg) (Circle One)
319-84-6	Alpha BHC	17500 U
319-85-7	Beta-BHC	17500 U
319-86-8	Delta-BHC	17500 U
58 89-9	Gamma-BHC (Lindane)	*
76-44-8	Heptachlor	*
309-00-2	Aldrin	*
1024-57-3	Heptachlor Epoxide	17500 U
959-98-8	Endosulfan I	17500 U
60-57-1	Dieldrin	*
72-55-9	4 4 -DDE	35000 U
72-20-8	Endrin	*
33213-65-9	Endosulfan II	35000 U
72-54-8	4 4 -DDD	35000 U
1031-07-8	Endosulfan Sulfate	35000 U
50-29-3	4 4 -DDT	*
72-43-5	Methoxychlor	175000 U
53494-70 5	Endrin Ketone	35000 U
57-74-9	Chlordane	175000 U
8001-35-2	Toxaphene	350000 U
12674-11-2	Aroclor-1016	175000 U
11104-28-2	Aroclor-1221	175000 U
11141-16-5	Aroclor-1232	175000 U
53469-21-9	Aroclor-1242	175000 U
12672-29-6	Aroclor-1248	175000 U
11097-69-1	Aroclor-1254	350000 U
11096 82-5	Aroclor-1260	350000 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 1.0 V_t 10,000 V_i 3.2

Laboratory Name WESTON

Case No 5445

Sample Number F2CB23M3C 1:300

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Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Concentration: Low (Medium) (Circle One)

Date Extracted 'Prepared 1/24/86

Date Analyzed: 1/29/86

Conc(Dil) Factor: 107.143

Percent Moisture (~~Decanted~~) 31.4

Jw 2/7/86

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	3.1E6 U
111-44-4	bis(-2-Chloroethyl)Ether	"
95-57-8	2-Chlorophenol	"
541-73-1	1 3-Dichlorobenzene	"
106-46-7	1 4-Dichlorobenzene	"
100-51-6	Benzyl Alcohol	"
95-50-1	1 2-Dichlorobenzene	"
95-48-7	2-Methylphenol	"
39638-32-9	bis(2-chloroisopropyl)Ether	"
106-44-5	4-Methylphenol	"
621-64-7	N-Nitroso-Di-n-Propylamine	"
67-72-1	Hexachloroethane	"
98-95-3	Nitrobenzene	"
78-59-1	Isophorone	"
88-75-5	2-Nitrophenol	"
105-67-9	2. 4-Dimethylphenol	"
65-85-0	Benzoic Acid	1.6E7U
111-91-1	bis(-2-Chloroethoxy)Methane	3.1E6U
120-83-2	2. 4-Dichlorophenol	"
120-82-1	1. 2. 4-Trichlorobenzene	"
91-20-3	Naphthalene	2.2E6 J
106-47-8	4-Chloroaniline	3.1E6U
87-68-3	Hexachlorobutadiene	"
59-50-7	4-Chloro-3-Methylphenol	"
91-57-6	2-Methylnaphthalene	4.0E7
77-47-4	Hexachlorocyclopentadiene	3.1E6U
88-06-2	2 4 6-Trichlorophenol	"
95-95-4	2. 4. 5-Trichlorophenol	1.6E7U
91-58-7	2-Chloronaphthalene	3.1E6U
88-74-4	2-Nitroaniline	1.6E7U
131-11-3	Dimethyl Phthalate	3.1E6U
208-96-8	Acenaphthylene	"
99-09-2	3-Nitroaniline	1.6E7U

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	1.9E7
51-28-5	2. 4-Dinitrophenol	1.6E7U
100-02-7	4-Nitrophenol	"
132-64-9	Dibenzofuran	1.6E7
121-14-2	2 4-Dinitrotoluene	3.1E6U
606-20-2	2 6-Dinitrotoluene	"
84-66-2	Diethylphthalate	"
7005-72-3	4-Chlorophenyl-phenylether	"
86-73-7	Fluorene	2.3E7
100-01-6	4-Nitroaniline	1.6E7U
534-52-1	4. 6-Dinitro-2-Methylphenol	"
86-30-6	N-Nitrosodiphenylamine (1)	3.1E6U
101-55-3	4-Bromophenyl-phenylether	"
118-74-1	Hexachlorobenzene	"
87-86-5	Pentachlorophenol	1.2E7 J
85-01-8	Phenanthrene	7.3E7
120-12-7	Anthracene	4.0E6
84-74-2	Di-n-Butylphthalate	3.1E6U
206-44-0	Fluoranthene	5.7E7
129-00-0	Pyrene	3.2E7
85-68-7	Butylbenzylphthalate	3.1E6U
91-94-1	3. 3'-Dichlorobenzidine	6.2E6U
56-55-3	Benzo(a)Anthracene	7.6E6
117-81-7	bis(2-Ethylhexyl)Phthalate	
218-01-9	Chrysene	7.4E6
117-84-0	Di-n-Octyl Phthalate	3.1E6U
205-99-2	Benzo(b)Fluoranthene	"
207-08-9	Benzo(k)Fluoranthene	"
50-32-8	Benzo(a)Pyrene	1.5E6 J
193-39-5	Indeno(1 2. 3-cd)Pyrene	340,000 J
53-70-3	Dibenz(a h)Anthracene	3.1E6U
191-24-2	Benzo(g h. i)Perylene	410,000 J

(1)-Cannot be separated from diphenylamine

Sample Number
FZ082-S Matrix Spike Dup.

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Organics Analysis Data Sheet
(Page 1)

Laboratory Name: WESTON
Case No: 5445
Lab Sample ID No: 8801-4524-0160MSD
QC Report No: NA
Sample Matrix: Soil
Contract No: 6801-6781
Data Release Authorized By: [signature]
Date Sample Received: Jan 11, 1988

Volatile Compounds

Concentration: Low (Medium) (Circle One)
Date Extracted/Prepared: Jan 14, 1988
Date Analyzed: Jan 14, 1988
Conc/Dil Factor: 348 pH 5.05
Percent Moisture: (Not Decanted) 31.4

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	3,500 U
74-83-9	Bromomethane	1
75-01-4	Vinyl Chloride	1
75-00-3	Chloroethane	1
75-09-2	Methylene Chloride	18,000 B
67-64-1	Acetone	3,500.
75-15-0	Carbon Disulfide	1,700 U
75-35-4	1, 1-Dichloroethene	marked
75-34-3	1, 1-Dichloroethane	1,700 U
156-60-5	Trans-1, 2-Dichloroethene	1
67-66-3	Chloroform	1,100 J
107-06-2	1, 2-Dichloroethane	1,700 U
78-93-3	2-Butanone	41,000 B
71-55-6	1, 1, 1-Trichloroethane	1,700 U
56-23-5	Carbon Tetrachloride	1
108-05-4	Vinyl Acetate	3,500 U
75-27-4	Bromodichloromethane	1,700 U

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	1,700 U
10061-02-6	Trans-1, 3-Dichloropropene	1
79-01-6	Trichloroethene	marked
124-48-1	Dibromochloromethane	1,700 U
79-00-5	1, 1, 2-Trichloroethane	1
71-43-2	Benzene	marked
10061-01-5	cis-1, 3-Dichloropropene	1,700 U
110-75-8	2-Chloroethylvinylether	3,500 U
75-25-2	Bromoform	1,700 U
591-78-6	4-Methyl-2-Pentanone	3,500 U
108-10-1	2-Hexanone	1
127-18-4	Tetrachloroethene	1,700 U
79-34-5	1, 1, 2, 2-Tetrachloroethane	1
108-88-3	Toluene	marked
108-90-7	Chlorobenzene	marked
100-41-4	Ethylbenzene	3,400.
100-42-5	Styrene	1,700 U
	Total Xylenes	2,100.

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit.) The footnote should read "U - Compound was analyzed for but not detected." The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g., 10J). If limit of detection is 10 µg/l and a concentration of 3 µg/l is calculated, report as 3J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ml in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

Laboratory Name WESTON

Case No 5445

Sample Number F2082-S MS

Organics Analysis Data Sheet (Page 3)

1250

Pesticide/PCBs

Concentration Low (Medium) (Circle One)

Date Extracted/Prepared 1-24-86

Date Analyzed 1-30-86

Conc/(Dil Factor) 100

Percent Moisture (decanted) 68.6% DRY

GPC Cleanup ☐Yes ☑No

Separatory Funnel Extraction ☐Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or (ug/Kg) (Circle One)
319-84-6	Alpha-BHC	1750U
319-85-7	Beta-BHC	1750U
319-86-8	Delta-BHC	1750U
58 89-9	Gamma-BHC (Lindane)	*
76-44-8	Heptachlor	*
309-00-2	Aldrin	*
1024-57-3	Heptachlor Epoxide	1750U
959-98-8	Endosulfan I	1750U
60-57-1	Dieldrin	*
72-55-9	4 4-DDE	3500U
72-20-8	Endrin	*
33213-65 9	Endosulfan II	3500U
72-54-8	4.4-DDD	3500U
1031-07-8	Endosulfan Sulfate	3500U
50-29-3	4 4-DDT	*
72-43-5	Methoxychlor	17500U
53494-70 5	Endrin Ketone	3500U
57-74-9	Chlordane	17500U
8001-35-2	Toxaphene	350000U
12674-11-2	Aroclor-1016	17500U
11104-28-2	Aroclor-1221	17500U
11141-16-5	Aroclor-1232	17500U
53469-21-9	Aroclor-1242	17500U
12672-29-6	Aroclor-1248	17500U
11097-69-1	Aroclor-1254	35000U
11096 82-5	Aroclor-1260	35000U

175 ppm !?!

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 1.4 V_t 10,000 V_i 3.2

RADIAN

Element Tl SOP # _____

Date 1-17-86 Time On 8AM Time Off 3pm

Instrument Setup

Wavelength 276.8nm Lamp: EDL ☑ Vendor B34PE Power 7

Slit 0.7 Bkg Corr ☑ Y ☐ N HCL ☑ Serial # _____

☐ Flame; Fuel _____ Oxid _____ ☐ Hydride ☐ Cold Vapor

☐ HGA Program

Step	1	2	3	4	5
Temp °C	150	500	1900	2100	20
Ramp	1	1	0	1	1
Hold	30	30	5	3	10
Read			✓		
Int. Flow			5		

Sample Vol (ul) 25

Gas Flow 5-300

Matrix Mod: Vol (ul) 5

Type 1% H_2SO_4

Conc _____

Platform Used ☑ Y ☐ N

Standard Prep

Source Rica Lot # E190 Exp. Date 1-19-87

Conc	Abs (Pk.Ht.)
20	.068
40	.137
60	.199
Blank	~~.000~~ -0.004 RB

QC Source WP581-1

Corr. Coef .999

Slope .003

Intercept ~~.001~~ -.0017 RB

Preventative Maintenance

new tube/platform; clean system

Consummables (Approx.)

Sampler Cups 60 Pipet Tips small 120

Graphite Tubes 1 med _____

Platforms 1 large 60

Other _____

Remarks _____

Analyst Name Mary Riddle

CLP AAS BENCH SHEET

ELEMENT Tl INSTRUMENT 30305 CRDL 10 ANALYST MR²

DATE 1-17-86 SOP # _____ IDL 1.7

NOTE: Use proper data flags for final concentration.

CUP #	SAMPLE #	Avg. Peak Height	RPD	Calc. Conc.	Dilution Factor	Digestion Factor	Recovery	MSA Data	☆ Final Conc. mg/L
2	8601047-03	MFC039	—	<1.7	1.05	0.959/100 ml (1:5)		RR 0.94 u	0.9 mg/kg U
3	" Analyst Spike		0.9	20			100%		
4	CCCS-WP581-1(25) µg/l		3.3	25			100%		25 µg/l
5	cal blank		—	<1.7				RR 1.7u µg/l	.002 mg/kg U
6	PD spk 03	MFC 039	6.1	41		0.959/100 ml (1:5)	85%	spike added = 26 mg/kg	22 mg/kg
7	8601047-04	MFC 040	—	<1.7	1.05	0.989/100 ml (1:5)		RR 0.91u	0.9 mg/kg U
8	" Analyst Spike		3.5	21			105%		
9	8601047-05	MFC041	—	<1.7	1.05	0.999/100 ml (1:5)		RR 0.90u	0.9 mg/kg U
10	" Analyst Spike		0.2	19			95%		
11	8601047-06	MFC042	—	<1.7	1.05	0.959/100 ml (1:5)		RR 0.94u	0.9 mg/kg U
12	" Analyst Spike		3.9	19			95%		
13	CCCS-WP581-1(25) µg/l		0.5	25			100%		25 µg/l
14	cal blank		—	<1.7				RR 1.7u µg/l	.002 mg/kg U
15									
16									

I hereby certify that all analyses and quality control procedures were followed according to current SOP's for this procedure except as follows:

Comments: _____

Mary Riddle
Signature of Analyst

00
05
77

RADIAN

Element Tl

Date 1-17-86

Daily Run Log

List all standards, samples, etc. in the order run.

1		Blank	8601045-01 dil						1
2		20	spk						2
3		40	PDdup01 dil						3
4		60	spk						4
5		ICCS	prep blank (case 5421)						5
6	calb	lank	LCS						6
case	prep	blank	sludge						7
5445		LCS	CCCS						8
9	8601045-01		calblank						9
10		spk	8601047-01						10
11	PDdup01		spk						11
12		spk	8601047-02						12
13	PDspk01		spk						13
14	CCCS		PDdup02						14
15	calblank		spk						15
16	MSA	01	8601047-03						16
17		+10	SPK						17
18		+20	CCCS						18
19		+30	calblank						19
20	MSAPDdup01		PDspk03						20
21		+10	8601047-04						21
22		+20	spk						22
23		+30	8601047-05						23
24		CCCS	SPK						24
25	calblank		8601047-06						25
26	incorrect procedure		SPK						26
27	abort-		CCCS		MK 2				27
28	begin since again		calblank						28
29									29
30									30
31									31

MS not necessary

000578

TL

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.007	0.008	0.006
PEAK AREA (ABS-SECONDS)	-0.008	-0.002	-0.006

-0.002

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.005	0.008	0.008
PEAK AREA (ABS-SECONDS)	-0.008	-0.006	-0.002

-0.006

MEAN= -0.004 STD.DEV.= 0.003 COEF.VAR.= 67.88 %

****

0.000 AUTOZERO

****

TL

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.299	0.286	0.013
PEAK AREA (ABS-SECONDS)	0.067	0.068	-0.001

0.071

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.290	0.280	0.012
PEAK AREA (ABS-SECONDS)	0.069	0.067	0.002

0.070

MEAN= 0.071 STD.DEV.= 0.001 COEF.VAR.= 1.10 %

****

20.0 STANDARD 1

****

TL

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.559	0.542	0.020
PEAK AREA (ABS-SECONDS)	0.139	0.137	0.002

39.7

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.576	0.560	0.018
PEAK AREA (ABS-SECONDS)	0.139	0.136	0.004

39.3

MEAN= 39.5 STD.DEV.= 0.3 COEF.VAR.= 0.81 %

****

39.5 E-25: READING GREATER THAN HIGHEST STANDARD.

****

40.0 STANDARD 2

****

TL

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.756	0.736	0.020
PEAK AREA (ABS-SECONDS)	0.203	0.197	0.006

000579

MEAN= 39.5 STD.DEV.= 0.3 COEF.VAR.= 0.81 %

39.5 E-25: READING GREATER THAN HIGHEST STANDARD.

40.0 STANDARD 2

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.756	0.736	0.020
PEAK AREA (ABS-SECONDS)	0.203	0.197	0.006

58.0

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.760	0.744	0.020
PEAK AREA (ABS-SECONDS)	0.204	0.201	0.003

59.3

MEAN= 58.6 STD.DEV.= 1.0 COEF.VAR.= 1.63 %

****

58.6 E-25: READING GREATER THAN HIGHEST STANDARD.

****

59.9 STANDARD 3

****

TL

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.343	0.330	0.013
PEAK AREA (ABS-SECONDS)	0.082	0.081	0.001

23.8 ICCS WP581-1(25) 2nd 100% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.347	0.339	0.009
PEAK AREA (ABS-SECONDS)	0.084	0.086	-0.001

25.2

MEAN= 24.5 STD.DEV.= 1.0 COEF.VAR.= 3.96 %

****

TL

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.005	0.010	0.006
PEAK AREA (ABS-SECONDS)	-0.006	-0.003	-0.003

0.2 cal blank

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.005	0.008	0.006
PEAK AREA (ABS-SECONDS)	-0.010	-0.004	-0.006

-0.1

MEAN= 0.0 STD.DEV.= 0.2 COEF.VAR.= 99.99 %

****

TL

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.004	0.007	0.007
PEAK AREA (ABS-SECONDS)	-0.007	-0.008	0.001

-1.1 prep blank case 5445

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.006	0.008	0.005
PEAK AREA (ABS-SECONDS)	-0.006	-0.001	-0.004

0.7

MEAN= -0.2 STD.DEV.= 1.3 COEF.VAR.= 99.99 %

****

TL

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.534	0.520	0.015
PEAK AREA (ABS-SECONDS)	0.151	0.151	0.000

LCS(50) 90% recovery

(CONTINUED)

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.538	0.526	0.016
PEAK AREA (ABS-SECONDS)	0.152	0.151	0.002

44.6

MEAN= 44.6 STD.DEV.= 0.1 COEF.VAR.= 0.16 %

****

TL

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.057	0.008	0.066
PEAK AREA (ABS-SECONDS)	0.098	-0.010	0.107

-1.7 8601048-01 MF0004

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.056	0.009	0.068
PEAK AREA (ABS-SECONDS)	0.099	-0.007	0.106

1.05 DF

-0.9

MEAN= -1.3 STD.DEV.= 0.5 COEF.VAR.= 41.45 %

****

TL

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.125	0.081	0.071
PEAK AREA (ABS-SECONDS) MFC 0004	0.133	0.024	0.108

7.7 spk01

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.125	0.076	0.084
PEAK AREA (ABS-SECONDS)	0.131	0.025	0.106

see dilution

7.9 19ml sample + 0.100ml 400ppb Tl 39% recovery

MEAN= 7.8 STD.DEV.= 0.1 COEF.VAR.= 1.66 %

****

TL

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE) MFC 0004	0.065	0.010	0.076
PEAK AREA (ABS-SECONDS) PDdup01	0.095	-0.013	0.108

-2.5 1.05 DF

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.069	0.007	0.074
PEAK AREA (ABS-SECONDS)	0.091	-0.013	0.104

-2.4

MEAN= -2.4 STD.DEV.= 0.1 COEF.VAR.= 2.45 %

****

spk PDdup01 MFC 0004

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.133	0.088	0.071
PEAK AREA (ABS-SECONDS)	0.133	0.025	0.108

000583

PEAK HEIGHT (ABSORBANCE)	0.125	0.076	0.084
PEAK AREA (ABS-SECONDS)	0.131	0.025	0.106

see dilution

7.9 1.9ml sample + 0.100ml 400ppb Tl 39% recovery

MEAN= 7.8 STD.DEV.= 0.1 COEF.VAR.= 1.66 %

****

TL

MFC0004 pDdup01

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.065	0.010	0.076
PEAK AREA (ABS-SECONDS)	0.095	-0.013	0.108

-2.5 1.05 DF

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.069	0.007	0.074
PEAK AREA (ABS-SECONDS)	0.091	-0.013	0.104

-2.4

MEAN= -2.4 STD.DEV.= 0.1 COEF.VAR.= 2.45 %

****

TL

spk pDdup01 MFC0004

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.133	0.088	0.071
PEAK AREA (ABS-SECONDS)	0.133	0.025	0.108

7.9

1.9ml sample + 0.100ml 400ppb Tl 36% recovery

see dilution

(CONTINUED)

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.113	0.068	0.072
PEAK AREA (ABS-SECONDS)	0.119	0.019	0.100

6.2

MEAN= 7.1 STD.DEV.= 1.2 COEF.VAR.= 16.98 %

****

TL PDspk01

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.236	0.190	0.088
PEAK AREA (ABS-SECONDS)	0.185	0.071	0.114

20.9 (50) ug/l 38% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.208	0.166	0.081
PEAK AREA (ABS-SECONDS)	0.167	0.060	0.107

17.8

MEAN= 19.3 STD.DEV.= 2.3 COEF.VAR.= 11.73 %

****

TL

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.330	0.322	0.014
PEAK AREA (ABS-SECONDS)	0.081	0.082	-0.001

23.9 CCCS- WP581-1 (25) ug/l 96% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.332	0.321	0.011
PEAK AREA (ABS-SECONDS)	0.082	0.083	-0.001

24.4

MEAN= 24.2 STD.DEV.= 0.3 COEF.VAR.= 1.39 %

****

TL

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.006	0.007	0.006
PEAK AREA (ABS-SECONDS)	-0.009	-0.006	-0.004

-0.5 cal blank

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.005	0.006	0.006
PEAK AREA (ABS-SECONDS)	-0.010	-0.005	-0.004

-0.4

MEAN= -0.5 STD.DEV.= 0.1 COEF.VAR.= 17.29 %

****

TL 0012

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.076	0.008	0.081
PEAK AREA (ABS-SECONDS)	0.106	-0.011	0.117

-0/ 1.05 DF

-1.8

****

TL 0013

	AA	AA-BG	BG

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.076	0.008	0.081
PEAK AREA (ABS-SECONDS)	0.106	-0.011	0.117

-01

1.05 DF

-1.8

****

TL 0013

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.088	0.041	0.068
PEAK AREA (ABS-SECONDS)	0.117	0.011	0.106

data not used RB

3.9 1.9 ml(01) + 0.100 ml 200 ppb TL

****

TL 0014

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.150	0.101	0.086
PEAK AREA (ABS-SECONDS)	0.161	0.031	0.130

9.5 1.9 ml(01) + 0.100 ml 400 ppb TL

****

TL 0015

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.176	0.140	0.070
PEAK AREA (ABS-SECONDS)	0.159	0.047	0.112

13.9 1.9 ml(01) + 0.100 ml 600 ppb TL con: .998 slope: 0.48 int: 0.61

****

TL 0016

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.056	0.008	0.070
PEAK AREA (ABS-SECONDS)	0.095	-0.013	0.108

PDdup01

1.05 DF

-2.4

****

TL 0017

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.086	0.040	0.069
PEAK AREA (ABS-SECONDS)	0.110	0.010	0.100

data not used RB

3.6 1.9 ml (PDdup01) + 0.100 ml 200 ppb TL

****

TL 0018

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.130	0.087	0.074
PEAK AREA (ABS-SECONDS)	0.130	0.027	0.104

8.4 1.9 ml (PDdup01) + 0.100 ml 400 ppb TL

****

TL 0019

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.148	0.117 con: .998	0.068
PEAK AREA (ABS-SECONDS)	0.137	0.040 slope: .41	0.097
		int: .29	

000586

ml (PDdup01) + 0.100 ml 600 ppb TL

****

TL 0020

8.4 1.9 ml (PDdup01) + 0.100 ml 400 ppb TL

TL 0019

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.148	0.117	0.068
PEAK AREA (ABS-SECONDS)	0.137	0.040	0.097

corr: .998
slope: .41
int: .29

12.2 1.9 ml (PDdup01) + 0.100 ml 600 ppb TL

TL 0020

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.341	0.331	0.010
PEAK AREA (ABS-SECONDS)	0.082	0.082	0.000

24.0 CCCS - WP581-1(25) ug/l 100% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.331	0.324	0.009
PEAK AREA (ABS-SECONDS)	0.084	0.086	-0.003

25.3

MEAN= 24.7 STD.DEV.= 1.0 COEF.VAR.= 3.94 %

TL 0021

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.007	0.008	0.006
PEAK AREA (ABS-SECONDS)	-0.006	-0.004	-0.001

-0.2 Cal blank

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.005	0.008	0.005
PEAK AREA (ABS-SECONDS)	-0.008	-0.003	-0.005

0.2

MEAN= 0.0 STD.DEV.= 0.3 COEF.VAR.= 99.99 %

8601048-01

TL 0022 MF0004

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.006	0.007	0.008
PEAK AREA (ABS-SECONDS)	-0.001	-0.001	0.000

0.7 1:10

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.006	0.008	0.008
PEAK AREA (ABS-SECONDS)	-0.002	-0.004	0.002

000587

-0.1

0.7 1:10

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.006	0.008	0.008
PEAK AREA (ABS-SECONDS)	-0.002	-0.004	0.002

-0.1

MEAN= 0.3 STD.DEV.= 0.6 COEF.VAR.= 99.99 %

****

TL 0023 MF 0004

Spk 01

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.145	0.137	0.010
PEAK AREA (ABS-SECONDS)	0.053	0.049	0.004

14.5 1.9ml(01) 1:10 +0.100ml 400 ppb TL 76% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.153	0.145	0.010
PEAK AREA (ABS-SECONDS)	0.054	0.050	0.004

15.0

MEAN= 14.8 STD.DEV.= 0.3 COEF.VAR.= 2.19 %

****

TL 0024

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.007	0.008	0.008
PEAK AREA (ABS-SECONDS)	-0.006	-0.008	0.002

MF 0004

-1.3 PDdup01 1:10

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.005	0.009	0.008
PEAK AREA (ABS-SECONDS)	-0.003	-0.006	0.003

-0.5

MEAN= -0.9 STD.DEV.= 0.5 COEF.VAR.= 60.51 %

****

TL 0025

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.161	0.152	0.011
PEAK AREA (ABS-SECONDS)	0.060	0.055	0.004

16.4 1.9ml(PDdup01) 1:10 +0.100ml 400ppb TL 80% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.158	0.152	0.011
PEAK AREA (ABS-SECONDS)	0.056	0.055	0.001

MF 0004

16.3 Spk PDdup01

000588

---.3 STD.DEV.= 0.1 COEF.VAR.= 0.39 %

****

16.4 1.9ml (PDdup01) + 0.100 mL 400ppb TL 80% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.158	0.152	0.011
PEAK AREA (ABS-SECONDS)	0.056	0.055	0.001

HF 0004

16.3 Sple PDdup01

MEAN= 16.3 STD.DEV.= 0.1 COEF.VAR.= 0.39 %

TL 0026

0026 (CONTINUED)

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.006	0.008	0.004
PEAK AREA (ABS-SECONDS)	-0.006	-0.003	-0.004

0.2 prep blank (case 541) 1:5 dig. dil. factor

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.006	0.008	0.006
PEAK AREA (ABS-SECONDS)	-0.004	0.000	-0.004

0.9

MEAN= 0.6 STD.DEV.= 0.5 COEF.VAR.= 83.52 %

****

TL 0027

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.535	0.522	0.014
PEAK AREA (ABS-SECONDS)	0.154	0.152	0.002

45.0 LCS (50) RB 94% recovery 1:5 dig. dil. factor 250 ug/l

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.563	0.551	0.015
PEAK AREA (ABS-SECONDS)	0.163	0.163	0.000

48.3

MEAN= 46.6 STD.DEV.= 2.5 COEF.VAR.= 5.37 %

****

TL 0028

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.014	0.009	0.017
PEAK AREA (ABS-SECONDS)	0.008	-0.005	0.013

-0.2 municipal sludge

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.014	0.009	0.016
PEAK AREA (ABS-SECONDS)	0.010	-0.003	0.013

0.2

MEAN= 0.0 STD.DEV.= 0.3 COEF.VAR.= 99.99 %

****

TL 0029

	AA	AA-BG	BG
ABSORBANCE)	0.338	0.333	0.009
-SECONDS)	0.084	0.084	-0.001

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.014	0.009	0.017
PEAK AREA (ABS-SECONDS)	0.008	-0.005	0.013

-0.2

municipal sludge

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.014	0.009	0.016
PEAK AREA (ABS-SECONDS)	0.010	-0.003	0.013

0.2

MEAN= 0.0 STD.DEV.= 0.3 COEF.VAR.= 99.99 %

TL 0029

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.338	0.333	0.009
PEAK AREA (ABS-SECONDS)	0.084	0.084	-0.001

24.7

CCCS - WP581-1 (25) @ 100% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.347	0.338	0.010
PEAK AREA (ABS-SECONDS)	0.089	0.089	0.000

26.0

MEAN= 25.4 STD.DEV.= 1.0 COEF.VAR.= 3.82 %

TL 0030

0030 (CONTINUED)

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.003	0.007	0.004
PEAK AREA (ABS-SECONDS)	-0.009	-0.003	-0.006

0.1 cal blank

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.008	0.008	0.006
PEAK AREA (ABS-SECONDS)	-0.008	-0.004	-0.004

-0.1

MEAN= 0.0 STD.DEV.= 0.1 COEF.VAR.= 99.99 %

****

TL 0031 8601047-01

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE) MFC020	0.005	0.010	0.004
PEAK AREA (ABS-SECONDS)	-0.007	0.000	-0.007

0.9 1.05 DF

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.007	0.009	0.005
PEAK AREA (ABS-SECONDS)	-0.004	0.000	-0.005

1.1

MEAN= 1.0 STD.DEV.= 0.2 COEF.VAR.= 17.31 %

****

TL 0032 spk 01

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE) MFC 020	0.257	0.251	0.009
PEAK AREA (ABS-SECONDS)	0.063	0.066	-0.003

19.4 1.9ml(01) + 0.100ml 400ppb TL 95% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.260	0.250	0.010
PEAK AREA (ABS-SECONDS)	0.062	0.065	-0.002

19.0

MEAN= 19.2 STD.DEV.= 0.2 COEF.VAR.= 1.30 %

****

TL 0033

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.008	0.008	0.009
PEAK AREA (ABS-SECONDS)	-0.005	-0.007	0.003

-0.9 8601047-02 MFC038 1.05 DF

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.008	0.008	0.008
PEAK AREA (ABS-SECONDS)	0.000	-0.003	0.003

0.3

TL 0033

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.008	0.008	0.009
PEAK AREA (ABS-SECONDS)	-0.005	-0.007	0.003

-0.9 8601047-02 MFC038 1.05 DF

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.008	0.008	0.008
PEAK AREA (ABS-SECONDS)	0.000	-0.003	0.003

0.3

MEAN= -0.3 STD.DEV.= 0.9 COEF.VAR.= 99.99 %

TL 0034

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.259	0.250	0.012

MFC 038 Spk02

PEAK AREA (ABS-SECONDS)	0.068	0.063	0.005

18.5 1.9ml(02) +0.100ml 400ppb TL 95%

	AA	AA-BG	BG
K HEIGHT (ABSORBANCE)	0.264	0.257	0.012
EAK AREA (ABS-SECONDS)	0.070	0.064	0.006

19.0

MEAN= 18.7 STD.DEV.= 0.3 COEF.VAR.= 1.64 %

TL 0035

MFC 038

8601047-02 PO dup

0035 (CONTINUED)

1.05 DF

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.006	0.007	0.006
PEAK AREA (ABS-SECONDS)	-0.003	-0.003	0.000

0.3

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.007	0.009	0.009
PEAK AREA (ABS-SECONDS)	-0.002	-0.001	-0.001

0.6

MEAN= 0.4 STD.DEV.= 0.2 COEF.VAR.= 55.10 %

****

TL 0001

spk 02 PO dup

MFC 038

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.262	0.250	0.013
PEAK AREA (ABS-SECONDS)	0.074	0.070	0.004

20.6 1.9 ml (02 PO dup) + 0.100 ml 400 ppb TL 105% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.263	0.252	0.012
PEAK AREA (ABS-SECONDS)	0.072	0.072	0.000

21.2

MEAN= 20.9 STD.DEV.= 0.5 COEF.VAR.= 2.18 %

****

TL 0002

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.014	0.008	0.019
PEAK AREA (ABS-SECONDS)	0.012	-0.007	0.019

-0.9

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.014	0.006	0.020
PEAK AREA (ABS-SECONDS)	0.011	-0.008	0.019

8601047-03

-1.2

MFC 039 1.05 DF

MEAN= -1.1 STD.DEV.= 0.2 COEF.VAR.= 17.09 %

****

TL 0003

MFC 039

spk 03

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.272	0.262	0.017
PEAK AREA (ABS-SECONDS)	0.089	0.069	0.020

20.3 1.9 ml (03) + 0.100 ml 400 ppb TL 100% recovery

000594

	AA	AA-BG	BG
BSORBANCE)	0.257	0.248	0.016
PEAK AREA (ABS-SECONDS)	0.088	0.070	0.018

TL 0003

MFC 039 Apk03

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.272	0.262	0.017
PEAK AREA (ABS-SECONDS)	0.089	0.069	0.020

20.3 1.9ml(03) + 0.100ml 400ppb T-L 100% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.257	0.248	0.016
PEAK AREA (ABS-SECONDS)	0.088	0.070	0.018

20.5

MEAN= 20.4 STD.DEV.= 0.2 COEF.VAR.= 0.90 %

TL 0004

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.334	0.324	0.014
PEAK AREA (ABS-SECONDS)	0.086	0.085	0.001

24.8 CCCS WP581-1(25)"all" 100% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.342	0.335	0.014
PEAK AREA (ABS-SECONDS)	0.087	0.088	-0.001

25.9

MEAN= 25.4 STD.DEV.= 0.8 COEF.VAR.= 3.29 %

TL 0005

0005 (CONTINUED)

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.006	0.008	0.006
PEAK AREA (ABS-SECONDS)	-0.010	-0.007	-0.003

-0.8 cal blank

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.005	0.008	0.005
PEAK AREA (ABS-SECONDS)	-0.008	-0.003	-0.005

0.2

MEAN= -0.3 STD.DEV.= 0.7 COEF.VAR.= 99.99 %

****

TL 0006

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.472	0.458	0.016
PEAK AREA (ABS-SECONDS)	0.149	0.133	0.017

MFC 039

39.2 PO spk 03 85% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.489	0.472	0.018
PEAK AREA (ABS-SECONDS)	0.163	0.144	0.019

42.5

MEAN= 40.8 STD.DEV.= 2.5 COEF.VAR.= 6.06 %

****

TL 0007

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.013	0.008	0.010
PEAK AREA (ABS-SECONDS)	-0.001	-0.005	0.003

-0.3 8601047-04 MFC 040 1.05 DF

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.008	0.010	0.009
PEAK AREA (ABS-SECONDS)	-0.003	-0.005	0.002

-0.3

MEAN= -0.3 STD.DEV.= 0.0 COEF.VAR.= 10.60 %

****

TL 0008

MFC 040

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE) 2pk04	0.265	0.254	0.016
PEAK AREA (ABS-SECONDS)	0.078	0.073	0.005

21.5 1.9 ml (04) + 0.100 ml 400 ppb T-2 105%

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.253	0.241	0.016
PEAK AREA (ABS-SECONDS)	0.075	0.070	0.006

20.5

000596

MEAN= 21.0 STD.DEV.= 0.7 COEF.VAR.= 3.52 %

****

21.5 1.9 ml (04) + 0.100 ml 400 ppb TL 105%

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.253	0.241	0.016
PEAK AREA (ABS-SECONDS)	0.075	0.070	0.006

20.5

MEAN= 21.0 STD.DEV.= 0.7 COEF.VAR.= 3.52 %

****

TL 0009

0003 (CONTINUED)

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.025	0.009	0.030
PEAK AREA (ABS-SECONDS)	0.044	-0.008	0.052

8601047-05 MFC 041 042 RB 1.05 DF

-1.2

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.033	0.006	0.035
PEAK AREA (ABS-SECONDS)	0.065	-0.009	0.075

-1.5

MEAN= -1.4 STD.DEV.= 0.3 COEF.VAR.= 19.68 %

****

TL 0010

MFC 041 spk05

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.238	0.220	0.042
PEAK AREA (ABS-SECONDS)	0.150	0.063	0.086

18.6 1.9ml(05) + 0.100ml 400ppb TL 95% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.248	0.226	0.040
PEAK AREA (ABS-SECONDS)	0.165	0.063	0.102

18.6

MEAN= 18.6 STD.DEV.= 0.0 COEF.VAR.= 0.16 %

****

TL 0011

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.020	0.008	0.022
PEAK AREA (ABS-SECONDS)	0.032	-0.005	0.037

8601047-06 MFC 042 1.05 DF

-0.3

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.021	0.007	0.023
PEAK AREA (ABS-SECONDS)	0.026	-0.007	0.033

-0.7

MEAN= -0.5 STD.DEV.= 0.3 COEF.VAR.= 64.88 %

****

TL 0012

MFC 042 spk06

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.228	0.217	0.022
PEAK AREA (ABS-SECONDS)	0.094	0.064	0.030

18.8 1.9ml(06) + 0.100ml 400ppb TL 96% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.233	0.219	0.023
PEAK AREA (ABS-SECONDS)	0.097	0.067	0.030

19.9

MEAN= 19.3 STD.DEV.= 0.8 COEF.VAR.= 3.92 %

****

TL 0013

0013 (CONTINUED)

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.329	0.320	0.014
PEAK AREA (ABS-SECONDS)	0.086	0.086	0.001

25.1 CCCS WP581-1 (25) 4P 100%

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.330	0.320	0.012
PEAK AREA (ABS-SECONDS)	0.085	0.085	0.000

25.0

MEAN= 25.0 STD.DEV.= 0.1 COEF.VAR.= 0.51 %

****

TL 0014

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.006	0.007	0.007
PEAK AREA (ABS-SECONDS)	-0.008	-0.005	-0.003

-0.3 real blank

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.006	0.008	0.006
PEAK AREA (ABS-SECONDS)	-0.009	-0.004	-0.005

0.0

MEAN= -0.2 STD.DEV.= 0.2 COEF.VAR.= 99.99 %

****

PROGRAMMING MODE STD. METH # 81.1 - TL DATE: 86/01/17

ELEMENT: TL WAVELENGTH (NM): 276.8 ALT SLIT (NM): 0.7
PYRO COATED TUBE WITH PLATFORM - MAX POWER HEATING - GAS STOP - MATRIX MOD.
PRETREAT TEMP: 600 ATOMIZE TEMP: 1500 MG/L (20 UL)/0.2 ABS: ----

1. TECHNIQUE: AA-BG
2. LAMP CURRENT (MA): 5
3. SIGNAL PROCESSING: PEAK AREA
4. CALIBRATION: AUTO SELECT
5. NOMINAL WEIGHT: 1.0
6. STATISTICS: 2 AVG. & SD & CV
7. TIME (SECONDS): 5.0
8. READ DELAY (SECONDS): 0.0
9. SCREEN FORMAT: 1.0 GRAPHICS
10. PRINTER: MAIN SUPPL
11. RECORDER SIGNAL: 0.2 CONT ABS
12. RECORDER EXP: 1000

13. S1: 20.0
14. S2: 40.0
15. S3: 60.0
16. S4: CASE 5445
17. S5:
18. S6:
19. S7: 5421
20. S8:
21. RSLP:

30305; IDL = 1.7; CRDL = 10 ug/l; BDL #PE1834; Ricca lot #C190; conc 20,40,60 prep 1-17-86
COR: .999 analytical spike: 1.9 ml sample + 0.100 ml 400ppb Tl
Slope: .003 & 1.05 dil. of each sample w/DI
0017 CAL VERIFICATION = WP581 #1 = 25 µg/l TIME: 17:01

000599

Mary Riddle 1-17-86

WBC# 3TTU-6-60-4

Page 1 of 1

CLP AAS BENCH SHEET

ELEMENT Pb | INSTRUMENT 30305 | CRDL 5 | ANALYST DES

DATE 1-18-86 | SOP 0 | IDL 1.7

NOTE: Use proper data flags for final concentration.

CUP 0	SAMPLE 0	Avg. Peak Height	RPD	Calc. Conc. ug/l	Dilution Factor	Digestion Factor	Recovery	MSA Data	Final Conc. mg/L
1	WP284C1 (43ug/l)		1	46			107		.046 mg/l
2	Calblk		NC	<1.7					.0017 U
3	Dig Blk		NC	<1.7					.0017 U
4	LCS (20ug/l)		5	21			105		.021
5	MF0004		NC	<1.7	1.05				.0018 U
6	A.Spk MF0004		6	10		100%	100 %	1-25-86	-
7	Dup MF0004		NC	<1.7	1.05				.0018 U
8	A.Spk Dup MF0004		3	10		100%	100 %	"	-
9	Pre Dig Spk MF0004		8	20		100%	100 %	"	.020
11	Cal Blk		NC	<1.7					.0017 U
11	WP284C1 (43ug/l)		3	46			107		.046

I hereby certify that all analyses and quality control procedures were followed according to current SOP's for this procedure except as follows:

Comments:

D Stevens
Signature of Analyst

000600

RADIAN

Element Pb SOP # _____

Date 1-18-86 Time On _____ Time Off _____

Instrument Setup

Wavelength 283 nm Lamp: EDL ☑ Vendor PE Power 8

Slit 7 Bkg Corr ☑ Y ☐ N HCL ☑ Serial # 319295

☐ Flame; Fuel _____ Oxid _____ ☐ Hydride ☐ Cold Vapor

☐ HGA Program

Step	1	2	3	4	5
Temp °C	140	450	2100	2600	20
Ramp	15	15	0	0	10
Hold	15	15	5	3	10
Read			–		
Int. Flow			0		

Sample Vol (ul) 25

Gas Flow _____

Matrix Mod: Vol (ul) 5

Type $M_2(NO_3)_2$

Conc .4 %

Platform Used ☑ Y ☐ N

Standard Prep

Source Fisher Lot # 852812-24 Exp. Date 7-87

Conc	Abs	
20	.090	QC Source WP284 C1
40	.155	(Pk.Ht.) Corr. Coef .999
60	.217	Slope .0033
		Intercept .028
Blank	.017	

Preventative Maintenance

_____

_____

_____

Consummables (Approx.)

Sampler Cups _____ Pipet Tips small _____

Graphite Tubes _____ med _____

Platforms _____ large _____

Other _____

Remarks _____

_____

_____

Analyst Name Stevens

000601

Element P5

Date 1-18-86

Daily Run Log

List all standards, samples, etc. in the order run.

1	Blk								1
2	20								2
3	40								3
4	60								4
5	WP284C1								5
6	Cal Blk								6
7	Dup Blk								7
8	LCS								8
9	MF0004								9
10	A. Sol								10
11	Dup MF0004								11
12	A. Sol								12
13	Pre Dig Sol MF0004								13
14	Cal Blk								14
15	WP284 C1								15
16									16
17									17
18									18
19									19
20									20
21					—				21
22									22
23									23
24									24
25									25
26									26
27									27
28									28
29									29
30									30
31									31

TUTTY AT

1-16-86
36305
065

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.010	0.013	0.006
PEAK AREA (ABS-SECONDS)	0.008	0.015	-0.008

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.010	0.012	0.005
PEAK AREA (ABS-SECONDS)	0.009	0.019	-0.010

MEAN= 0.1 STD.DEV.= 0.5 COEF.VAR.= 99.99 %

0.0 AUTOZERO

PB

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.264	0.262	0.006
PEAK AREA (ABS-SECONDS)	0.080	0.088	-0.008

15.8

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.261	0.259	0.006
PEAK AREA (ABS-SECONDS)	0.084	0.091	-0.007

16.5

MEAN= 16.2 STD.DEV.= 0.4 COEF.VAR.= 2.78 %

20.0 STANDARD 1

PB

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.476	0.472	0.009
PEAK AREA (ABS-SECONDS)	0.151	0.155	-0.004

38.0

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.474	0.473	0.005
PEAK AREA (ABS-SECONDS)	0.146	0.154	-0.008

37.9

MEAN= 38.0 STD.DEV.= 0.1 COEF.VAR.= 0.18 %

38.0 E-25: READING GREATER THAN HIGHEST STANDARD.

40.0 STANDARD 2

PB

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.641	0.639	0.007
PEAK AREA (ABS-SECONDS)	0.210	0.218	-0.008

51.6

	AA	AA-BG	BG
BSORBANCE)	0.641	0.636	0.007
PEAK AREA (ABS-SECONDS)	0.209	0.215	-0.006

000603

PB

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.641	0.639	0.007
PEAK AREA (ABS-SECONDS)	0.210	0.218	-0.008

61.6

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.641	0.636	0.007
PEAK AREA (ABS-SECONDS)	0.209	0.215	-0.006

(CONTINUED)

60.7

MEAN= 61.1 STD.DEV.= 0.7 COEF.VAR.= 1.21 %

61.1 E-25: READING GREATER THAN HIGHEST STANDARD.

60.1 STANDARD 3

PB 0001

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.515	0.513	0.006
PEAK AREA (ABS-SECONDS)	0.168	0.174	-0.006

46.0 WP284 C1 Initial cal. verif (43ug/l)

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.516	0.513	0.005
PEAK AREA (ABS-SECONDS)	0.164	0.171	-0.007

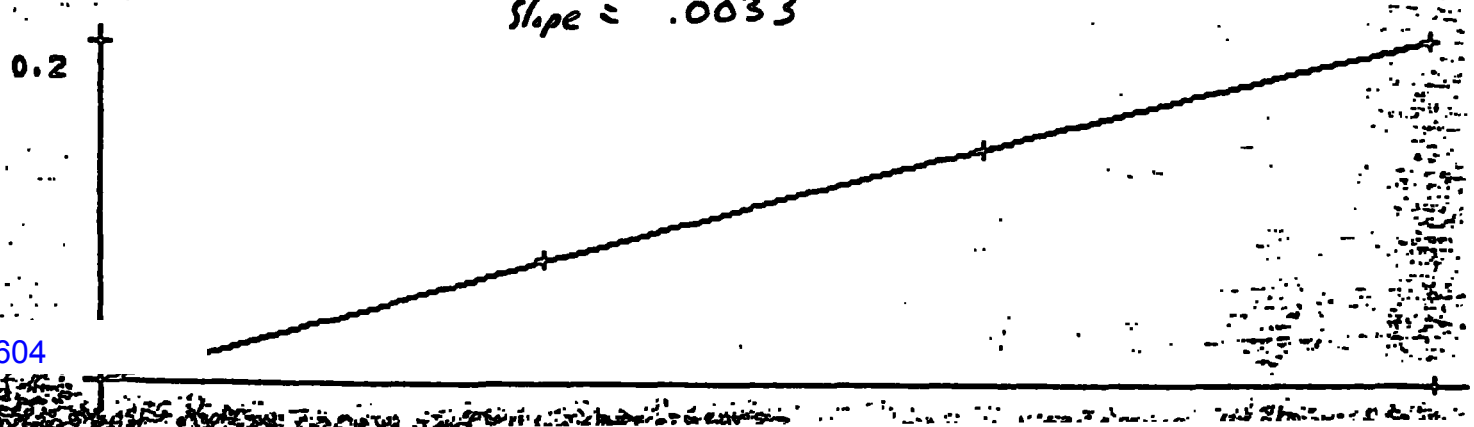
45.2 107 %

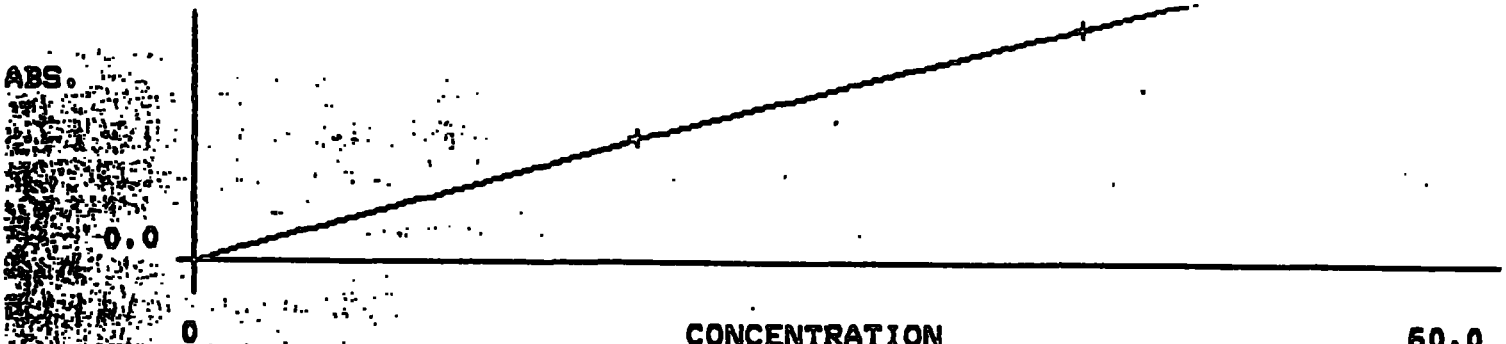
MEAN= 45.6 STD.DEV.= 0.6 COEF.VAR.= 1.36 %

corr = .999

Int. = .02

Slope = .0033





TIME: 22:15

IDC = 1.7 PPB

PROGRAMMING MODE USER METH 0 02 - PB DATE: 86/01/18

ELEMENT: PB WAVELENGTH (NM): 283.3 ALT SLIT (NM): 0.7
PYRO COATED TUBE WITH PLATFORM - MAX POWER HEATING - GAS STOP - MATRIX MOD.
PRETREAT TEMP: 1000 ATOMIZE TEMP: 1800 MG/L (20 UL)/0.2 ABS: ----

1. TECHNIQUE: AA-BC
2. LAMP CURRENT (MA): 8
3. SIGNAL PROCESSING: PEAK AREA
4. CALIBRATION: AUTO SELECT
5. NOMINAL WEIGHT: 1.0
6. STATISTICS: 2 AVG. & SD & CV
7. TIME (SECONDS): 5.0
8. READ DELAY (SECONDS): 0.0
9. SCREEN FORMAT: 1.0 GRAPHICS
10. PRINTER: MAIN SUPPL
11. RECORDER SIGNAL: 0.2 CONT ABS
12. RECORDER EXP: 1000

PE HCL 8ma 319295

13. S1: 20.0 Fisher Std.s 14. S2: 40.0 15. S3: 60.0
16. S4: PPB 17. S5: 18. S6:
19. S7: 20. S8: 21. RSLP:

A.Spk = 100 µl of 200 PPB into 1900 µl sample
100 µl of DI H2O added to 1900 µl of ea. sample producing a dilution factor of 1.05 = (1900 µl : 2000 µl d.f.)

PB 0002 TIME: 22:16

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.010	0.012	0.006
PEAK AREA (ABS-SECONDS)	0.008	0.017	-0.010

0.1

Cal Blk

	AA	AA-BC	BC
ABSORBANCE)	0.009	0.011	0.007
S-SECONDS)	0.008	0.016	-0.008

000605

-0.0

0.1

Cal Blk

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.009	0.011	0.007
PEAK AREA (ABS-SECONDS)	0.008	0.016	-0.008

-0.3

MEAN= -0.1 STD.DEV.= 0.3 COEF.VAR.= 99.99 %

PB 0003

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.022	0.025	0.005
PEAK AREA (ABS-SECONDS)	0.009	0.018	-0.010

0.4

Dup Blk

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.022	0.022	0.006
PEAK AREA (ABS-SECONDS)	0.011	0.017	-0.006

0.1

MEAN= 0.3 STD.DEV.= 0.2 COEF.VAR.= 60.82 %

PB 0004

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.240	0.238	0.006
PEAK AREA (ABS-SECONDS)	0.086	0.094	-0.007

21.4

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.241	0.240	0.007
PEAK AREA (ABS-SECONDS)	0.082	0.089	-0.007

19.9

LCS 105% (20 ug/L)

PB 0004 (CONTINUED)

MEAN= 20.6 STD.DEV.= 1.1 COEF.VAR.= 5.24 %

PB 0005

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.036	0.022	0.037
PEAK AREA (ABS-SECONDS)	0.067	0.018	0.049

0.4

MFO 004 +0 1.05x

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.037	0.018	0.040
PEAK AREA (ABS-SECONDS)	0.072	0.015	0.057

-0.4

MEAN= 0.0 STD.DEV.= 0.6 COEF.VAR.= 99.99 %

000606

PB 0006

	AA	AA-BG	BG

PEAK HEIGHT (ABSORBANCE)	0.037	0.018	0.040
PEAK AREA (ABS-SECONDS)	0.072	0.015	0.057

-0.4

MEAN= 0.0 STD.DEV.= 0.6 COEF.VAR.= 99.99 %

PB 0006

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.130	0.127	0.040
PEAK AREA (ABS-SECONDS)	0.107	0.054	0.053

10.0 A.Spk MFO 004 1.05X

PEAK HEIGHT (ABSORBANCE)	0.134	0.132	0.044
PEAK AREA (ABS-SECONDS)	0.113	0.057	0.056

10.8 100 %

MEAN= 10.4 STD.DEV.= 0.6 COEF.VAR.= 5.77 %

PB 0007

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.048	0.026	0.043
PEAK AREA (ABS-SECONDS)	0.076	0.021	0.055

1.2 Dup MFO 004 1.05X

PEAK HEIGHT (ABSORBANCE)	0.045	0.030	0.045
PEAK AREA (ABS-SECONDS)	0.073	0.020	0.053

0.8

MEAN= 1.0 STD.DEV.= 0.3 COEF.VAR.= 28.82 %

PB 0008

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.139	0.137	0.044
PEAK AREA (ABS-SECONDS)	0.108	0.054	0.054

10.2 A.Spk DupMFO 004 1.05X

PEAK HEIGHT (ABSORBANCE)	0.138	0.136	0.047
PEAK AREA (ABS-SECONDS)	0.109	0.056	0.054

10.5 100 %

MEAN= 10.3 STD.DEV.= 0.3 COEF.VAR.= 2.65 %

PB 0009

0009 (CONTINUED)

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.224	0.220	0.046
PEAK AREA (ABS-SECONDS)	0.141	0.086	0.055

19.2

000607

Pre Dig Spk MFO 004 (20ng/l)

1.05X

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.138	0.136	0.047
PEAK AREA (ABS-SECONDS)	0.109	0.056	0.054

10.5 100 L

MEAN= 10.3 STD.DEV.= 0.3 COEF.VAR.= 2.65 %

F : 0009

0009 (CONTINUED)

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.224	0.220	0.046
PEAK AREA (ABS-SECONDS)	0.141	0.086	0.055

19.2

PreDig Spk MFO 004 (20ug/L)

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.234	0.234	0.044
PEAK AREA (ABS-SECONDS)	0.146	0.093	0.053

21.3 100 L

MEAN= 20.2 STD.DEV.= 1.5 COEF.VAR.= 7.52 %

PB 0010

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.016	0.014	0.009
PEAK AREA (ABS-SECONDS)	0.011	0.015	-0.004

Cal. Blk

-0.6

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.013	0.011	0.009
PEAK AREA (ABS-SECONDS)	0.009	0.014	-0.006

-0.6

MEAN= -0.6 STD.DEV.= 0.0 COEF.VAR.= 4.64 %

PB 0011

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.519	0.516	0.009
PEAK AREA (ABS-SECONDS)	0.168	0.171	-0.003

45.0 WP284 C1 (43ug/L)

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.533	0.531	0.008
PEAK AREA (ABS-SECONDS)	0.171	0.177	-0.006

46.8 107 L

MEAN= 45.9 STD.DEV.= 1.4 COEF.VAR.= 3.06 %

(5445-6-70-20)

ATOMIC ABSORPTION SPECTROPHOTOMETRY BENCH SHEET

Document No. 5453-1-70- Element Sn Analyst MPE

Date 1-27-86

Instrument 30305

SOP #

Commercial: Contract Laboratory Program: ✓

Work Order Numbers Case Numbers 5445 5453

CRDL 40 ppb IDL 9.6 ppb

Note: Use proper data flags for final concentrations.

Cup #	Sample ID	Avg. Peak Height	CV	Calc. Conc.: Units	Dilution Factor	Dig. Fact. Wt or Vol/ Final Vol.	Spike Added or True Value Units:	% Rec.	Notes	Final Conc.: Units
	ICCS				ug/L					
1	SRM2126-4		0.6	110		1	100 ug/L	110%		110 ug/L
2	Cal blank		—	<9.6			MPE			9.6 ug/L U
3	prepblank (5445)		—	<9.6	1:10	100 ml/ 100 ml				9.6 ug/L U
4	LCS		4.3	48	1:10	100 ml/ 100 ml	400 ug/L	120%		480 ug/L
5	4601049-01	MFOOOY	—	<9.6	1.05	100 ml/ 100 ml				10 ug/L U
6	" Analyte spike		7.5	84		1		105%		
7	PDup101		—	<9.6	1.05	100 ml/ 100 ml				10 ug/L U
8	" Analyte spike		6.5	95		1		106%		
9	PDspike1		4.9	47	1:10	100 ml/ 100 ml	400 ug/L	119%		470 ug/L
10	CCCS-SRM2126		2.1	112		1	100 ug/L	112%		112 ug/L
11	calblank2		—	<9.6		1				9.6 ug/L U
12	prepblank (5453)		—	<9.6		100 ml/ 100 ml				9.6 ug/L U
13	LCS		4.2	45	1:10	100 ml/ 100 ml	400 ug/L	113%		450 ug/L
14	4601106-01	MSC879	—	<9.6	1.05	100 ml / 100 ml				10 ug/L U

I hereby certify that all analyses and quality control procedures were followed according to current standard operating procedures except as follows:

Notes: Analyte Spike: 1.9 ml sample + 0.100 ml 1,000 ppb Sn => 50 ppb spike added

Mary Riddle

Signature of Analyst

000609

ATOMIC ABSORPTION SPECTROPHOTOMETRY QUALITY CONTROL SUMMARY

Analysis and QC Requirements

1. High standard must be within linear range.
2. Low standard must be 10X detection limit or 1/2 lowest sample.
3. Minimum of 3 standards and one blank comprise standard curve.
4. Standard curves must be greater than 0.995.
5. If duplicate analyses do not agree within 20%, a third value must be obtained.
6. Measure and mark peaks from the average of baseline noise to the average of peak height.
7. QC check samples (calibration verification samples) and spikes must be run every ten samples.
8. Spiking volumes should be negligable.
9. QC recoveries must be within 90-110%.
10. Spike recoveries should be within 80-120%. If they are not, duplicate the spiking effort.

Standard Calibration

Conc.	Pk Height
40	.110
80	.226
120	.336
Blank	.000

Corr. Coef. .999
(>0.995)

Initial QC Check

Measured	Theo.	% Rec.
110	100	110%

Continuing QC Check

Measured	Theo.	% Rec.
112	100	112%
113	100	113%
115	100	115%

Duplicates

Sample No.	Sample Result	Duplicate Result	RPD
860108-01	10 ug/l U	10 ug/l U	NC
860106-01	10 ug/l U	10 ug/l U	NC
~~860106-02 3rd~~			

Spikes

Sample No.	Spike + Sample Result	Sample Result	Spike Added	% Recovery
860108-01	470 ug/l	10 ug/l U	400 ug/l	118%
860106-03	430 ug/l	10 ug/l U	400 ug/l	108%
~~860106-04 3rd~~				

ECOLOGY & ENVIRONMENT, INC.

MEMORANDUM

TO: Keith Bradley, Region VI RPO

FROM: David Anderson, FIT Chemist DA.

THRU: for K.H. Malone, Jr., RPM

DATE: April 26, 1985

SUBJ: Interim Report - Installation of Monitoring Wells and Sampling at Old Midland Products Site, Ola, Arkansas (AR1902)
TDD#R6-8410-10

On January 28 - February 7, 1985 the FIT (Tom Smith, Lloyd Collins and Lonnie Ross) supervised the installation of eight (8) groundwater monitoring wells at the Old Midland Products Site in Ola, Arkansas.

Drilling was conducted by Jim Winnek, Inc. (Tulsa, Oklahoma), with a Failing 1500 air rotary rig and consisted of four(4) cluster well locations with a deep well and a shallow well at each location (see attached Well Information Sheet). In general, a shallow aquifer was encountered at depths ranging from 12 ft. to 18 ft. and a deeper aquifer was found at depths ranging from 29 ft. to 36 ft. Well screens were installed at these intervals to allow the retrieval of representative samples from both aquifers. Bentonite was emplaced at appropriate depths to prevent any mixing of the two groundwater zones.

In addition to the installation of the wells, soil samples were collected from selected intervals at each boring. Sample location descriptions (see map and photos) and analytical review comments (see attached Organic and Inorganic summaries) are listed below:

SAMPLE LOCATION DESCRIPTIONS

Sample location 01 (see photos #1 and #8)-well #1, 10'-15' interval and 40'-42' interval.

Sample location 02 (see photos #5 and #10)-well #2, 10'-12' interval and 30'-32' interval.

Sample location 03 (see photos #2, #6 and #7)-well #3, 10'-12' interval and 30'-32' interval.

Sample location 04 (see photos #3, #4 and #9)-well #4, 10'-12' interval and 40'-42' interval.

The results of chemical analysis of the soil samples collected have been reviewed except for the organic samples from wells 1 and 3 which have not yet been received. These results will be reviewed and forwarded to EPA upon receipt. Sample FB035, a field rinsate blank was not analyzed by the laboratory as per instructions from SMO regarding water samples used as soil blanks.

The inorganic samples were received and analyzed by the laboratory in two batches, samples from wells 1 and 3 in batch 1 and samples from wells 2 and 4 in batch 2. This batching is noted because there appears to be a consistent variation in the quantification of six metals in the two batches. Levels of aluminum, cobalt, vanadium, and potassium are consistently higher in batch 2 while levels of cadmium and lead are higher in batch 1. There is also a major contamination problem with tin and sodium in batch 2.

Levels of arsenic, cobalt, copper, iron, nickel, and zinc all exceeded ambient background levels for the eastern U.S., however a comparison of the samples shows a uniformity which suggests that the levels present are probably the natural backgrounds for the area. Mean ambient background levels are exceeded for chromium, (5 samples) and vanadium (3 samples) however the levels detected, when compared with all samples, appear to be natural background levels. Manganese levels in all eight samples exceeds the ambient background, however only samples from stations 01 (40-42'), 02 (10-12') and 04 (10-12') appear to be elevated when the samples themselves are compared. Five of the eight samples show lead levels above ambient background, however only station 02 (30-32') appears to be elevated when comparing the samples. Levels of barium are lower than ambient background in all eight samples, however the levels in station 02 (10-12') and 04 (10-12') appear to be elevated when comparing the samples. Cadmium, where detected, also exceeded the ambient background, however the quantification question noted earlier makes a complete evaluation impossible.

Most of the organic contaminants detected in the samples are probably laboratory contaminants (methylene chloride, hexane, di-n-butyl and bis (2-ethyl hexyl) phthalates, 1,1,2-tri and 1,1,2,2-tetra chloroethanes). The only non-lab contaminants detected were toluene and pyrene in the shallow well 2 sample and an unknown in the shallow well 4 sample.

CASE NUMBER: 3880

SITE NAME/CODE: Midland Products AR1902

CONCENTRATIONS (ppm)

PARAMETER	EPA Sample Numbers										Ambient Background 1.	
	MF1964	MF1965	MF1982	MF1983	MF1997	MF1998	MF1985	MF1996	MF1984	MF1999	Western U.S. 2.	Eastern U.S. 2.
Matrix Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Blank	Blank	Soil	Soil
Aluminum	15017	16808	15763	11667	20109	20595	20406	16648	54	40	58,000	33,000
Antimony											.47	.52
Arsenic	17	13	9.4	21	21		29	15			5.5	4.8
Barium	52	58	61	50	98	68	114	62			580	290
Beryllium											0.68	0.55
Cadmium	6.5	8.2	6.5	5.4							<1	<1
Chromium	35	40	36	30	37	35	32	32			41	33
Cobalt	17	17	13		23	23	23	14			7.1	5.9
Copper	27	28	24	15	28	27	25	29			21	13
Iron	59865	53989	46576	35179	49443	37373	47442	37668	43	73	21,000	14,000
Lead	21	24	20	23	10	46	13	8.7	4.9		17	14
Manganese	716	1420	845	658	1752	570	1628	789			380	260
Mercury											0.046	0.081
Nickel	49	57	50	42	51	49	54	49			15	11
Selenium											.23	.30
Silver											-	-
Thallium											9.1	7.7
Tin					454	297	394	435		620	.90	.96
Vanadium	39	41	37	28	52	48	52	41			70	43
Zinc	173	156	145	106	145	127	131	113	8.5		55	40
Cyanide												
Calcium	1100	3207	1505	1836	1757	2141	1290	2149	173			
Magnesium	3982	7145	4748	4647	5036	6487	4117	5632				
Potassium	677	969	939	901	1505	1943	1632	1294				
Sodium					1068	1053	1043	807		530		
Station No.	01	01	03	03	02	02	04	04				
Sample Station Location	Well 1 10-15'	Well 1 40-42'	Well 3 10-12'	Well 3 30-32'	Well 2 10-12'	Well 2 30-32'	Well 4 10-12'	Well 4 40-42'	Blank	Blank		

1. Values obtained from "Element Concentrations in Soils and Other Surface Materials of the Conterminous United States", dated 1984. U.S.G.S. Professional Paper 1270.

2. Reference for East/West Division is the 96°W longitudinal line which bisects Region VI.

000613

2/12/

CASE NUMBER: 3880

SITE NAME/CODE: Midland Products/AR1902

CONCENTRATIONS (ppb)

PARAMETERS				EPA SAMPLE NUMBERS								
Compound		Fraction	Class					FB033	FB034	FB016	FB032	
Methylene chloride		VOA	1					180B	280B	590B	100B	43,46,49
Hexane	329	VOA	3						30	200		
Toluene		VOA	1					11J				
Di-n-butyl phthalate		ABN	1							35J		
Bis (2-ethyl hexyl) phthalate		ABN	1					27J	P	37J	47J	
1,1,2-trichloroethane	211	ABN	3							80	200	
1,1,2,2-tetrachloroethane	437	ABN	3					100B	100B	200B	600B	200
Unknown	1862	ABN	3							100		
Pyrene		ABN	1					27J				
Matrix Type										Soil	Soil	
Sample Station Number				01	01	03	03	02	02	04	04	
Sample Station Location								Well 2 10-12'	Well 2 30-32'	Well 4 10-12'	Well 4 40-42'	

1. Priority Pollutant.
2. Specified Hazardous Substance.
3. Tentatively Identified.

B - The analyte is found in the lab blank.
J - Indicates an estimated value for tententatively identified compounds or for compounds found below detection limit.
P - Present in sample, but not reported by lab.

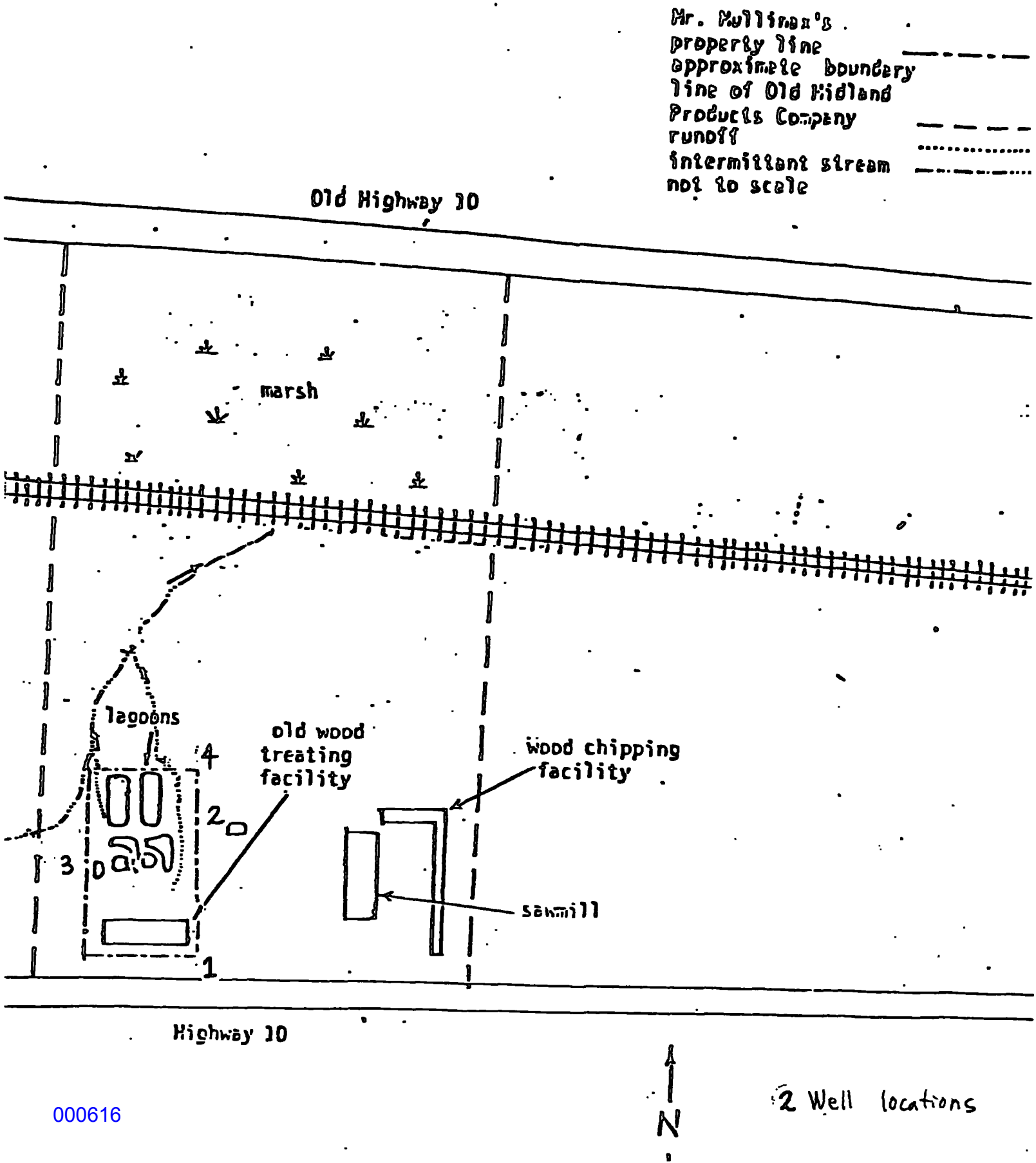
1/30/85

00
06
15

WELL INFORMATION SHEET

Well #	Depth (ft.)	Screened Interval (ft.)	Sand (ft.)	Bentonite (ft.)	Grout (ft.)
1	40	35-40	29-40	27-29	0-27
1s	15	10-15	8-15	6-8	0-6
2	40	25-35	22-40	18-22	0-18
2s	20	10-20	8-20	6-8	0-6
3	35	25-35	25-35	23-25	0-23
3s	20	15-20	13-20	11-13	0-11
4	42	32-42	29-42	27-29	0-27
4s	15	10-15	8-15	6-8	0-6

Old Midland Products Company
Highway 10
Ola, AR



FEDEX: 101
DOPPY

101 N Yonges

From (Your Name): Dave Sanders
Your Phone Number (Very Important): (214) 348-4521

To (Recipient's Name): Carla Brooks-Burgess
Recipient's Phone Number (Very Important): (713) 523-9200

Company: ECOLOGY & ENVIRONMENT INC
Department/Floor No.:

Company: P.T. Corp?
Department/Floor No.:

Street Address: 4849 GREEN OAKS BLVD

Exact Street Address (Use of P.O. Box or P.O. Route Delivery and Box to Store Shipment): 7703 Fairway Dr. Ste "A"

City: ARLINGTON
State: TX

City: Corpus Christi
State: TX

AIRBILL NO. 590462646

ZIP *Zip Code Required For Correct Invoicing: 7 6 0 1 8

ZIP Street Address Zip Required (for All Air * Zip Area): 78701

YOUR BILLING REFERENCE INFORMATION (FIRST TWELVE CHARACTERS WILL APPEAR ON INVOICE)
Sam 12-6.84 10-10

PAYMENT
- Bill Shipper
- Bill Recipient's FedEx Acct. No. Fill in line below
- Bill 3rd Party FedEx Acct. No. Fill in line below: 0320-7751-4
- Bill Credit Card Fill in line below:
- Cash

FedEx Acct. No. or Major Credit Card No.

HOLD FOR PICK-UP AT THIS FEDERAL EXPRESS ADDRESS
Street Address (See Service Guide or Call 800-238-5355)
City
State
ZIP *Zip Code of Street Address Required

SERVICES CHECK ONLY ONE BOX	DELIVERY AND SPECIAL HANDLING CHECK SERVICES REQUIRED	PACKAGES	DWEIGHT	DECLARED VALUE (See Rates)	COD $
1 PRIORITY 1 Overnight Delivery using Your Packaging	1 HOLD FOR PICK-UP Give the Federal Express address where you want package held in Section II at right.	1	46		
2 OVERNIGHT DELIVERY USING OUR PACKAGING Courier-Pak Overnight Envelope 12" x 15½"	2 DELIVER WEEKDAY				
3 Overnight Box 12½" x 17½" x 3" A	3 DELIVER SATURDAY (Extra charge applies)				
4 Overnight Tube 38" x 6" x 6" B	4 RESTRICTED ARTICLES SERVICE (P-1 and Standard Air Packages only. Extra charge applies.)				
STANDARD AIR 5 Delivery not later than second business day	5 DOCUMENTS SECURITY SERVICE (888) (Extra charge applies.)				
OVERNIGHT LETTER 6 (Our Packaging 9"x12")	6 CITY USE _____ Use				
SERVICE COMMITMENT	7 OTHER SPECIAL SERVICE _____				
PRIORITY 1 Delivery is scheduled early next business morning in most locations. It may take two or more business days to or from Hawaii, or if the destination is outside our primary service areas.	8				
STANDARD AIR - Delivery is generally next business day or not later than second business day. It may take three or more business days to or from Hawaii, or if the destination is outside our primary service areas.	9 SATURDAY PICK-UP OR SATURDAY DROP-OFF (Extra charge applies)				
	Total	Total 1	Total 46	Total	

Received At
Shipper's Door
Regular Stop
On-Call Stop
FedEx Loc.

Federal Express-Corp. Employee No.: 25571

Date/Time For Federal Express Use: 3/6 4:37

YOUR DECLARED VALUE

RATES AND LIMITS

We are liable for no more than $100 per package in the event of physical loss or damage, unless you list on a higher Declared Value to the left and document higher actual loss in the event of a claim. We charge 30¢ for each additional $100 of declared value up to the maximum shown in our Service Guide. Declared value restrictions are shown on the back of the Shipper's Copy of this airbill. We make no express or implied warranties.

DELAY

There is always a risk of late delivery or non-delivery. In the event of a late delivery Federal Express will, at your request, refund all transportation charges paid. See back of Shipper's Copy of this airbill for further information.

CONSEQUENTIAL DAMAGES

We will not be responsible or liable for any loss or damage resulting from delay, non-delivery or damage to a package, except as noted above. This includes loss of sales, income, interest, profits, attorney's fees and other costs, but is not limited to these items. Such damages are called "consequential damages."

Federal Express Use	
Base Charges	
Declared Value Charge	
Origin Agent Charge	
Other	
Total Charges	

PART #2041738901
FEC-S-751-1000
REVISION DATE 10/84 GBF
PRINTED U.S.A.

SHIPPER'S COPY

000618

FEDERAL EXPRESS

Sender's Federal Express Account Number

Date: Feb 85

201 Wynnes

From (Your Name): Tom Johnson — Your Phone Number (Very Important): 214 742-6601

Company: ECOLOGY & ENVIRONMENT INC — Department/Floor No.:

Street Address: 1200 MAIN ST STE 1111

City: DALLAS — State: TX

AIRBILL NO. 5984626500 — ZIP *Zip Code Required For Correct Invoicing: 7 5 2 0 1

To (Recipient's Name): Stan Schatzow — Recipient's Phone Number (Very Important): 212 255-2100

Company: Clean Tech Consulting Group — Department/Floor No.:

Street Address: 350 West 42nd Street

City: NY — State: NY — ZIP: 10036

YOUR BILLING REFERENCE INFORMATION (FIRST TWENTY CHARACTERS WILL APPEAR ON INVOICE): Dana 2-6-84 W-10

Street Address (See Service Guide or Call 800-238-5355):

City: — State: — ZIP *Zip Code of Street Address Required:

PAYMENT: ☐ Bill Shipper ☐ Cash ☐ Bill Recipient's FedEx Acct. No. Fill in box below ☐ Bill 3rd Party FedEx Acct. No. 0960-7751-3 ☐ Bill Credit Card Fill in box below

FedEx Acct. No. or Major Credit Card No.

Federal Express Use

Base Charges

Declared Value Charge

Origin Agent Charge

Other

Total Charges

SERVICES — CHECK ONLY ONE BOX

PRIORITY 1 — 1 ☒ Overnight Delivery Using Your Packaging

OVERNIGHT LETTER — 6 ☐ (Our Packaging 9"x12")

OVERNIGHT DELIVERY USING OUR PACKAGINGS

2 ☐ Courier-Pak Overnight Envelope 12" x 15½"

3 ☐ Overnight Box 12½" x 17½" x 3" A ☐

4 ☐ Overnight Tube 38" x 6" x 6" B ☐

STANDARD AIR

5 ☐ Delivery not later than second business day

SERVICE COMMITMENT

PRIORITY 1 - Delivery is scheduled same next business morning to most locations. It may take two or more business days to or from Hawaii, or if the destination is outside our primary service areas.

STANDARD AIR - Delivery is generally next business day or not later than second business day. It may take three or more business days to or from Hawaii, or if the destination is outside our primary service area.

DELIVERY AND SPECIAL HANDLING — CHECK SERVICES REQUIRED

1: ☐ HOLD PICK-UP Give the Federal Express address where you want package held in Section 3 at right.

2: ☒ SAVER DELIVERY

3 ☐ SATURDAY (Extra charge applies.)

4 ☐ RESTRICTED ARTICLES SERVICE (P-1 and Standard Air Packages only. Extra charge applies.)

5 ☐ SECURITY SERVICE (SSS) (Extra charge applies.)

6 ☐ C.O.D. FEE _____ Lbs

7 ☐ OTHER SPECIAL SERVICE _____

8 ☐

9 ☐ SATURDAY PICK-UP ☐ SATURDAY DROP-OFF (Extra charge applies.)

PACKAGES	CREDIT	DECLARED VALUE (See rate)	GUIDE SIZE
1	0		
Total 1	Total 0	Total	

Received At: ☐ Shipper's Door ☐ Regular Stop ☐ On-Call Stop ☐ FedEx Loc.

Federal Express Corp. Employee No.: 7-071

Date/Time For Federal Express Use: 2-7 0?

YOUR DECLARED VALUE

CHARGE IS LOW

We are liable for no more than $100 per package in the event of physical loss or damage, unless you fill in a higher Declared Value to the left and document higher actual loss in the event of a claim. We charge 30¢ for each additional $100 of declared value up to the maximum shown in our Service Guide. Declared value packages are shown on the back of the Shipper's Copy of this airbill. We make no express or implied warranties.

DELAY

There is always a risk of late delivery or non-delivery. In the event of a late delivery Federal Express will, at your request, refund all transportation charges paid. See back of Shipper's Copy of this airbill for further information.

CONSEQUENTIAL DAMAGES

We will not be responsible or liable for any loss or damage resulting from delay, non-delivery or damage to a package except as noted above. This includes loss of sales, income, interest, profits, attorney's fees and other costs, but is not limited to these items. Such damages are called "consequential damages."

SHIPPER'S COPY

PART #2041738901
FEC-S-751-1000
REVISION DATE 10/84 GBF
PRINTED U.S.A.

000619

FEDERAL EXPRESS

SENDER'S FEDERAL EXPRESS ACCOUNT NUMBER

DATE 31 Jan 95

561 Inorganic [illegible]

From (Your Name) Tom Smith | Your Phone Number (Very Important) (214) 742-6501

Company ECOLOGY & ENVIRONMENT INC | Department/Floor No

Street Address 4849 MAIN ST SUN-010

City DALLAS | State TX

To (Recipient's Name) [illegible] Schultz | Recipient's Phone Number (Very Important) 817 255-2100

Company Chem Tech Consulting Group Ltd. | Department/Floor No

Street Address (Do not use P.O. Box or P.O. Route) 350 West Pipe Street

City [illegible] NY | State NY

AIRBILL NO 558462905

ZIP *Zip Code Required For Correct Invoicing 75201

ZIP Street Address Zip Required (Do not use P.O. Box or P.O. Route) 10014

YOUR BILLING REFERENCE INFORMATION (FIRST TWELVE CHARACTERS WILL APPEAR ON INVOICE) SAM 1684-1010

FedEx Hold Service AT FedEx Regional Customer Center Address (See Service Guide or Call 800-238-5355)

City | State

ZIP *Zip Code of Street Address Required

PAYMENT ☐ Bill Shipper ☐ Bill Recipient's FedEx Acct No. Fill in line below ☐ Bill 3rd Party FedEx Acct No. Fill in line below 0260-7791-X ☐ Bill Credit Card Fill in line below ☐ Cash FedEx Acct No. or Major Credit Card No.

SERVICES CHECK ONLY ONE BOX

1 ☒ PRIORITY 1 Overnight Delivery (Using Your Packaging)

OVERNIGHT DELIVERY USING OUR PACKAGING

2 ☐ Courier-Pak Overnight Envelope 12" x 15½"

3 ☐ Overnight Box 12½" x 17½" x 3" A ☐

4 ☐ Overnight Tube 38" x 6" x 6" x 6" B ☐

STANDARD AIR

5 ☐ Delivery not later than second business day

SERVICE COMMITMENT

PRIORITY 1 - Delivery is scheduled early next business morning in most locations. It may take two or more business days to or from Hawaii, or if the destination is outside our common service areas.

STANDARD AIR - Delivery is generally next business day or not later than second business day. It may take three or more business days to or from Hawaii, or if the destination is outside our common service areas.

OVERNIGHT LETTER

6 ☐ (Our Packaging) 9"x12"

DELIVERY AND SPECIAL HANDLING CHECK SERVICES REQUIRED

1 ☐ HOLD FED EX PICK-UP Give the Federal Express address where you want package held in Section II at right.

2 ☒ DELIVER SATURDAY

3 ☐ DELIVER SATURDAY (Extra charge applies)

4 ☐ RESTRICTED ARTICLES SERVICE (P-1 and Standard Air Packages only Extra charge applies)

5 ☐ SATURDAY SECURITY SERVICE (Extra charge applies)

6 ☐ DRY ICE _____ Lbs

7 ☐ OTHER SPECIAL SERVICE _____

8 ☐

9 ☐ SATURDAY PICK-UP ☐ SATURDAY DROP-OFF (Extra charge applies)

PACKAGES	WEIGHT	FEDEX DECLARED VALUE (See right)	OVER SIZE
1	1		
Total 1	Total 1	Total	

Received At ☐ Shipper's Door ☐ Regular Stop ☐ On-Call Stop ☒ FedEx Loc LGT

Federal Express Corp. Employee No. 12557

Date/Time For Federal Express Use 1/31/95

YOUR DECLARED VALUE

PACKAGE ☐ LOSS

We are liable for no more than $100 per package in the event of physical loss or damage, unless you fill in a higher Declared Value to the left and document higher actual loss in the event of a claim. We charge 30¢ for each additional $100 of declared value up to the maximum shown in our Service Guide. Declared value exceptions are shown on the back of the Shipper's Copy of this airbill. We make no express or implied warranties.

DELAY

There is always a risk of late delivery or non-delivery. In the event of a late delivery Federal Express will, at your request, refund all transportation charges paid. See back of Shipper's Copy of this airbill for further information.

CONSEQUENTIAL DAMAGES

We will not be responsible or liable for any loss or damage resulting from delay, non-delivery or damage to a package except as noted above. This includes loss of sales, income, interest, profits, attorneys fees and other costs, but is not limited to these items. Such damages are called "consequential damages."

Federal Express Use	
Base Charges	
Declared Value Charge	
Origin Agent Charge	
Other	
Total Charges	

PART #2041738901
FEC-S-751-1000
REVISION DATE 10/94 GBF
PRINTED U.S.A.

SHIPPER'S COPY

000620

FEDEX DOCUMENTS

SENDER'S FEDERAL EXPRESS ACCOUNT NUMBER | DATE

DGI OBAMA'S OCT 2 10 07 31 Jan 05

From (Your Name)	Your Phone Number (Very Important)	To (Recipient's Name)	Recipient's Phone Number (Very Important)
Lisa Smith	214 742-4521	Bill Vick	(619) 453-6277
Company	**Department/Floor No.**	**Company**	**Department/Floor No.**
ECOLOGY & ENVIRONMENT INC		Science Applications (SAIC)	
Street Address		**Street Address** (P.O. Box / P.O. Box / Bldg / Room)	
1800 MAIN ST STE 610		476 Prospect Street	
City	**State**	**City**	
DALLAS	TX	La Jolla	CA
AIRBILL NO 598482883	**ZIP** *Zip Code Required For Correct Invoicing 75201		**ZIP** Street Address Zip Required (No P.O. Box / No Zip Code) 92038

YOUR BILLING REFERENCE INFORMATION (FIRST TWELVE CHARACTERS WILL APPEAR ON INVOICE)
SAM Rb 8410-10

Cold Pick Front-Of at Non-Federal Express Address
Street Address (See Service Guide or Call 800-238-5355)
City State
ZIP *Zip Code of Street Address Required

PAYMENT BY: ☐ Bill Shipper ☐ Bill Recipient's FedEx Acct No. Fill in box below ☐ Bill 3rd Party FedEx Acct. No ☐ Bill Credit Card Fill in box below ☐ Cash FedEx Acct. No. or Major Credit Card No. 0260-7791-4

SERVICES CHECK ONLY ONE BOX	DELIVERY AND SPECIAL HANDLING CHECK SERVICES REQUIRED	PACKAGES	WEIGHT	DECLARED VALUE (See rules)	COD AMT.
1 ☒ PRIORITY 1 Overnight Delivery Using Your Packaging	1 ☐ HOLD FOR PICK-UP Give the Federal Express address where you want package held in Section II at right.	1	14		
2 ☐ OVERCIGHT DELIVERY USING OUR PACKAGING Courier-Pak Overnight Envelope 12" x 15½"	2 ☒ DELIVER EVERYDAY				
3 ☐ Overnight Box 12½" x 17½" x 3" A ☐	3 ☐ DELIVER SATURDAY (Extra charge applies.)				
4 ☐ Overnight Tube 38" x 6" x 6" B ☐	4 ☐ RESTRICTED ARTICLES SERVICE (P-1 and Standard Air Packages only. Extra charge applies.)				
STANDARD AIR	5 ☐ BROKERAGE SECURITY SERVICE (SSS) (Extra charge applies.)				
5 ☐ Delivery not later than second business day	6 ☐ DRY ICE ____ Lbs				
SERVICE COMMITMENT	7 ☐ OTHER SPECIAL SERVICE ____				
PRIORITY 1 Delivery is scheduled early next business morning in most locations. It may take two or more business days to or from Hawaii, or if the destination is outside our primary service areas. STANDARD AIR Delivery is generally next business day or not later than second business day. It may take three or more business days to or from Hawaii, or if the destination is outside our primary service areas.	8 ☐				
	9 ☐ SATURDAY PICK-UP ☐ SATURDAY DELIVERY (Extra charge applies.)	Total 1	Total 14	Total	

Received At: Shipper's Door ☐ Regular Stop ☐ On-Call Stop ☒ FedEx Loc. 1 PP
Federal Express Corp. Employee No. 1755
Date/Time For Federal Express Use 1-15

YOUR DECLARED VALUE
DAMAGE OR LOSS
We are liable for no more than $100 per package in the event of physical loss or damage unless you list on a higher Declared Value to the left and document higher actual loss in the event of a claim. We charge 30¢ for each additional $100 of declared value up to the maximum shown in our Service Guide. Declared value restrictions are shown on the back of the Shipper's Copy of this airbill. We make no express or implied warranties.

DELAY
There is always a risk of late delivery or non-delivery. In the event of a late delivery Federal Express will, at your request, refund all transportation charges paid. See back of Shipper's Copy of this airbill for further information.

CONSEQUENTIAL DAMAGES
We will not be responsible or liable for any loss or damage resulting from delay, non-delivery or damage to a package, except as noted above. This includes loss of sales, income, interest, profits, attorneys fees and other costs, but is not limited to these items. Such damages are called "consequential damages."

Federal Express Use	
Base Charges	
Declared Value Charge	
Origin Agent Charge	
Other	
Total Charges	

PART #2041738901
FED-S-751-1000
REVISION DATE 10/94 GBF
PRINTED U.S.A

SHIPPER'S COPY

000621

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 6
First International Bldg., 1201 Elm St.
Dallas, Texas 75270

CHAIN OF CUSTODY RECORD

PROJ. NO.: AR 1902 | PROJECT NAME: Midland Products

SAMPLERS: (Signature)

STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	Analysis Inorganics	REMARKS
01	1/29/85	1120	X		well #1, 10-15' depth	1	X	Tag # 6-09378, MF 1964
01	1/29/85	1330	X		well #1, 40-42' depth	1	X	Tag # 6-09381, MF 1965
3	1-30-85	1102	X		well #3, 10-12' depth	1	X	Tag # 6-09384, MF 1982
03	1-30-85	1120	X		well #3, 30-32' depth	1	X	Tag # 6-09465, MF 1983
Blank	1-30-85	1400		X	Blank #1	1	X	Tag # 6-09471, MF 1984

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	1-31-85 1300	Federal express # 598482905			
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	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

000622

6—3047

Office of Enforcement

REGION 6
First International Bldg., 1201 Elm St.
Dallas, Texas 75270

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
AR1902	Midland Products

SAMPLERS: (Signature) Thom Ladd

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Analysis: metals	cyanide				REMARKS
04	2-585	1447	X		well #4, 10-12' Depth	1	✓	✓				Tags # 6-09486; MF 1985
04	2.585	1505	X		well #4, 40-42' Depth	1	✓	✓				Tag # 6-09600 MF 1996
1	2-685	0952	X		well #2, 10-12' depth	1	✓	✓				Tag 6-09603 MF 1997
02	2-685	1010	X		well #2, 30-32' Depth	1	✓	✓				Tag 6-09606 MF 1998
Blank	2685	1200		X	Blank #2	1	✓	✓				Tag 6-09609 MF 1999

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Thom Ladd	2-7-85 1200	Federal Express # 598482850			

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

000623

6 — 3051

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

Organics

CHAIN OF CUSTODY RECORD

REGION 6
First International Bldg., 1201 Elm St.
Dallas, Texas 75270

PROJ. NO.	PROJECT NAME
AR1902	Midland Products

SAMPLERS: (Signature) [signature]

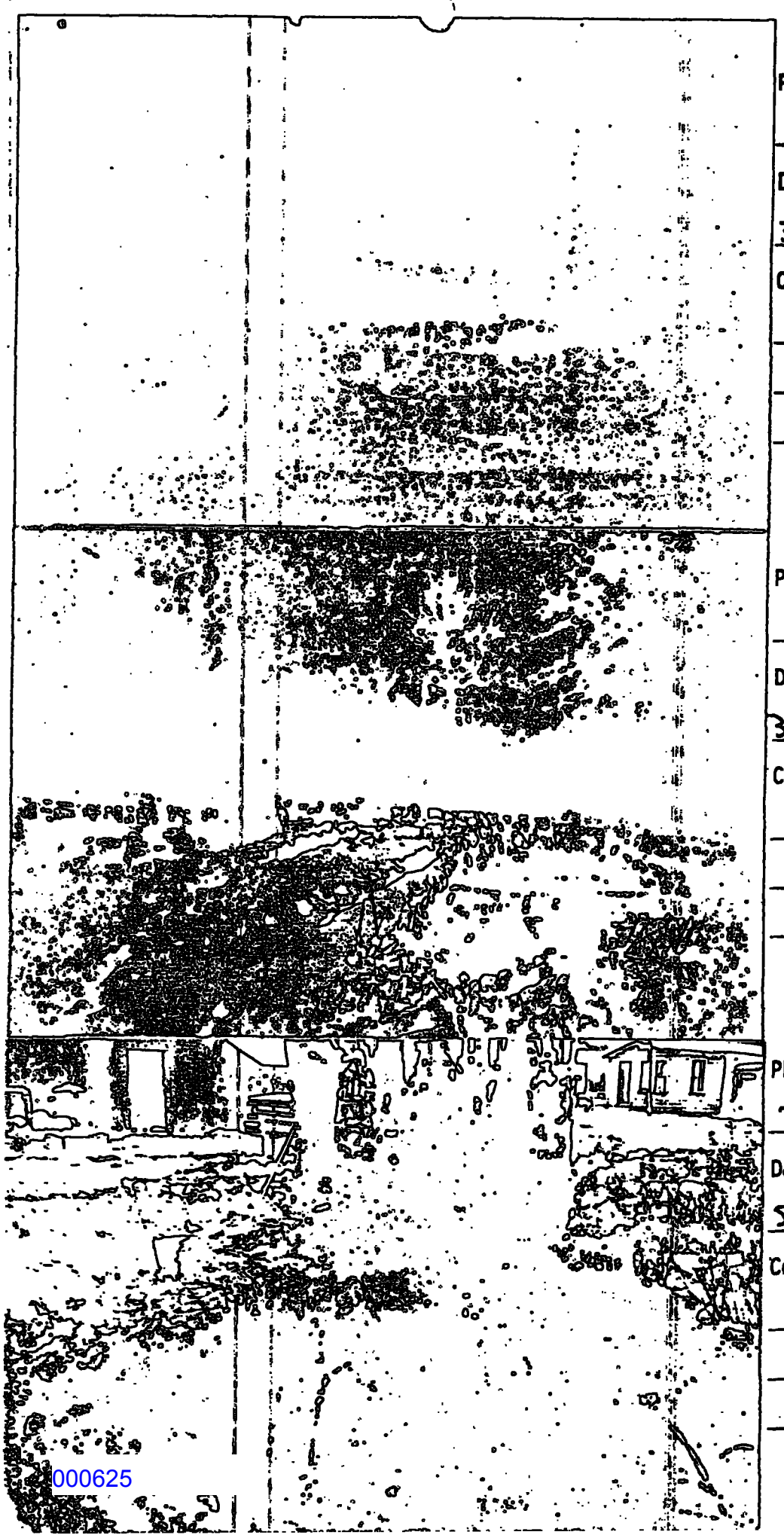
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Analysis: ext.	Analysis: VOA	REMARKS
04	2-5-85	1447	X		well #4 10-12' depth	3	✓	✓	Togs # 6-09484 (ext) 6-09485 (VOA) FB 016
04	2-5-85	1505	X		well #4 40-42' depth	3	✓	✓	Togs # 6-09487 (ext) 6-09488 (VOA) FB 032
02	2-6-85	0952	X		well #2 10-12' depth	3	✓	✓	Togs 6-09601 (ext) 6-09602 (VOA) FB 033
02	2-6-85	1010			well #2 30-32' depth	3	✓	✓	Togs 6-09604 (ext) 6-09605 (VOA) FB 034
Blank	2-6-85	1200		X	Blank #2	3	✓	✓	Togs 6-09607 (ext) 6-09608 (VOA) FB 035

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	2-7-85 1200	Federal Express # 598 482 846			
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	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

000624

6—3062



1

Photographer / Witness

Tom Smith / L. Ross

Date / Time / Direction

31 Jan 85 / 0920 / South

Comments:

Wells #9, #15

immediately after installation.

2

Photographer / Witness

Tom Smith / L. Ross

Date / Time / Direction

31 Jan 85 / 0930 / North

Comments:

Wells #3, #35

immediately after installation

3

Photographer / Witness

Tom Smith / L. Ross

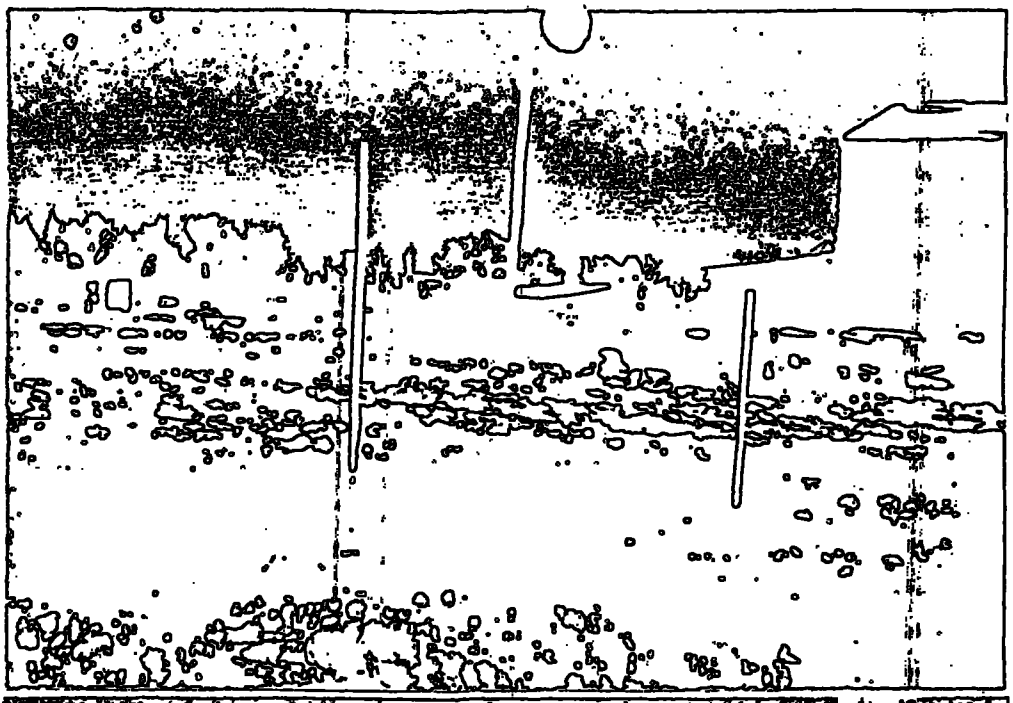
Date / Time / Direction

5 Feb 85 / 1515 / South

Comments:

Well #45 being drilled

with air rotary



4

Photographer / Witness

Tom Smith / L. Ross

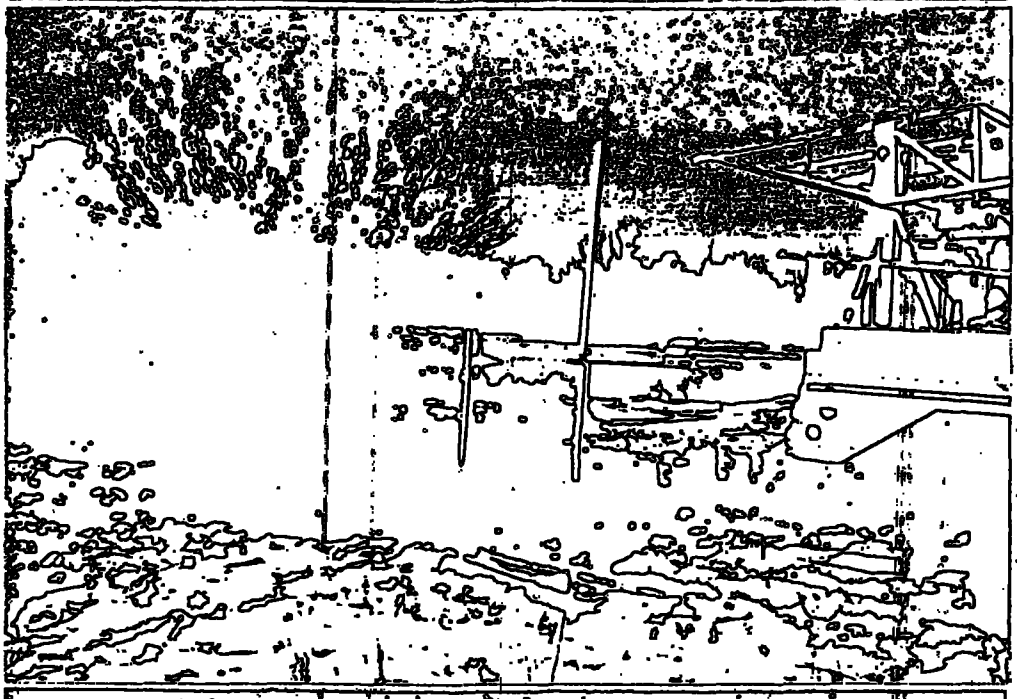
Date / Time / Direction

6 Feb 85 / 1347 / Northeast

Comments:

Wells #4, #4s

immediately after installation



5

Photographer / Witness

Tom Smith / L. Ross

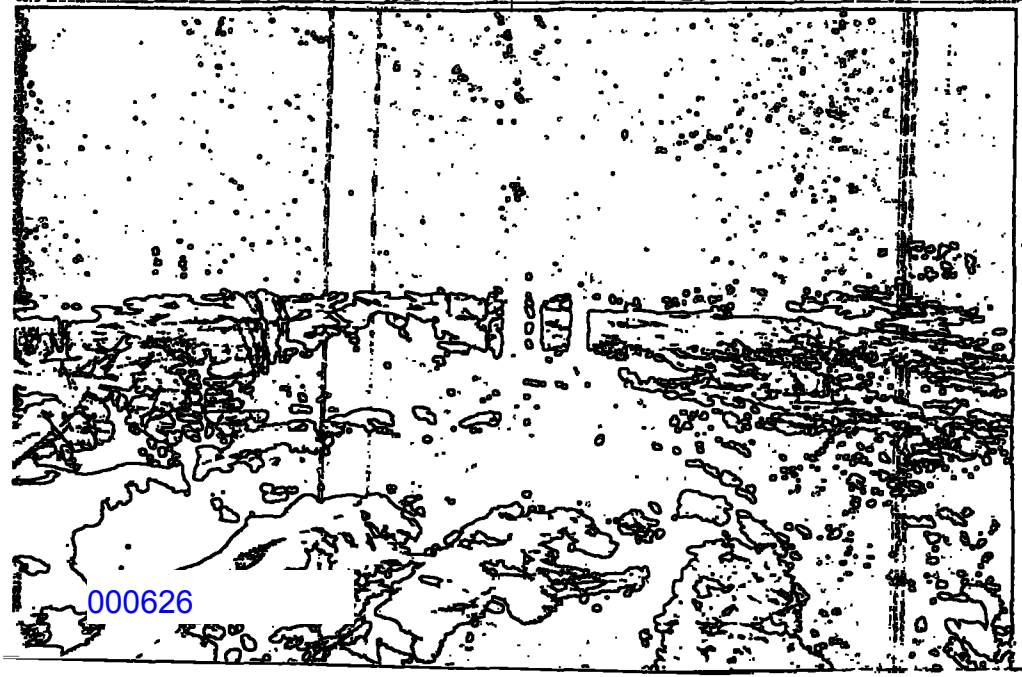
Date / Time / Direction

6 Feb 85 / 1433 / Northwest

Comments:

Wells #2, #2s

immediately after installation



7

Photographer / Witness

Tom Smith / L. Ross

Date / Time / Direction

7 Feb 85 / 1050 / North

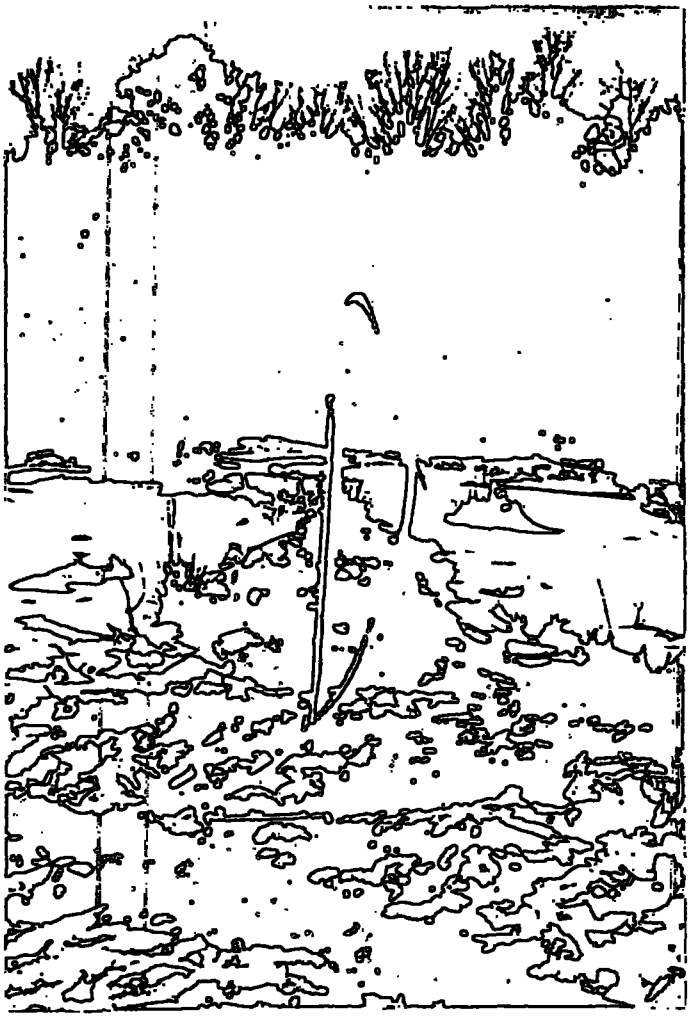
Comments:

Wells #3 (background),

#3s (foreground)

Midland 3 of 7

6



Photographer / Witness

Tom Smith / L. Ross

Date / Time / Direction

6 Feb 85 / 1539 / west

Comments:

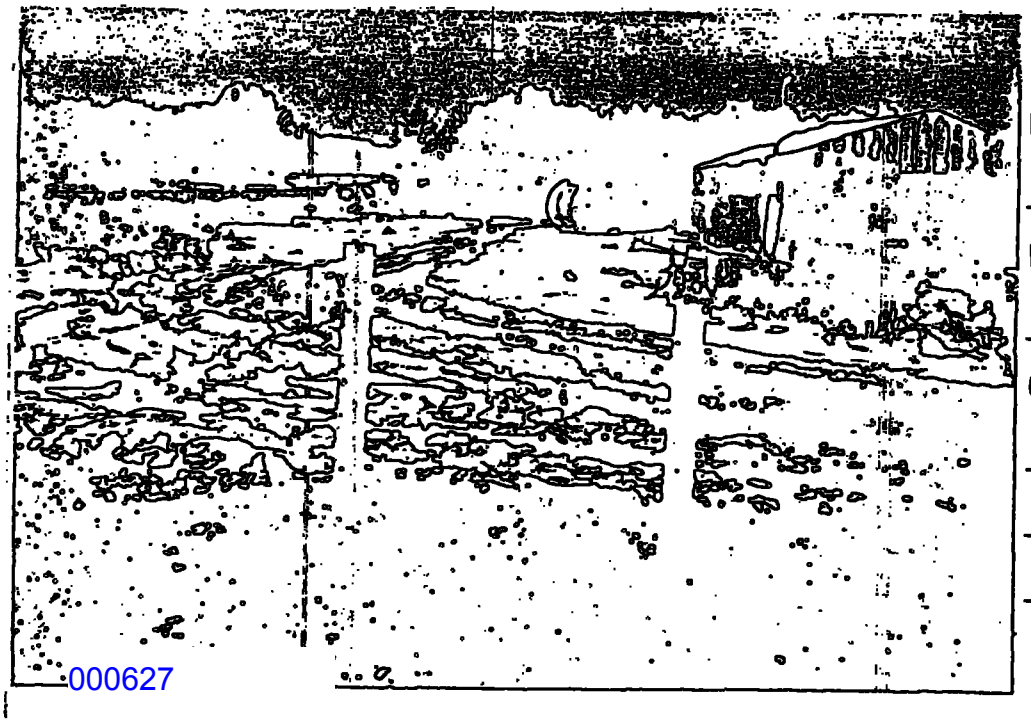
Well # 3s being grouted (cemented)

Photographer / Witness

Date / Time / Direction

Comments:

8



Photographer / Witness

Tom Smith / L. Ross

Date / Time / Direction

7 Feb 85 / 1110 / west

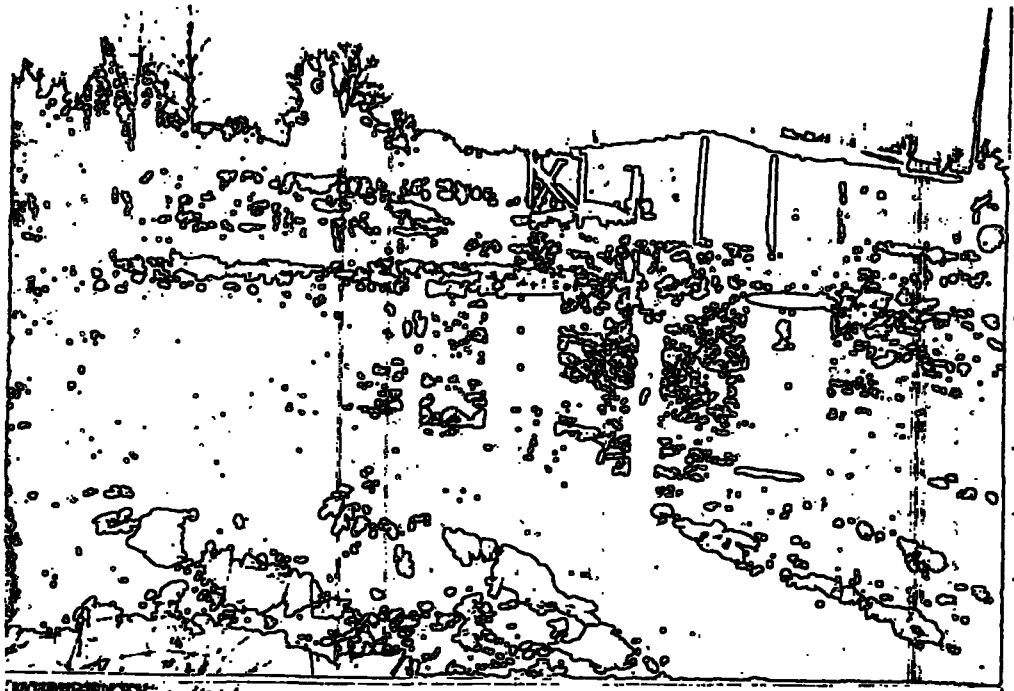
Comments:

Wells # 1 (right)
2s (left)

Photographer / Witness

Date / Time / Direction

Comments:

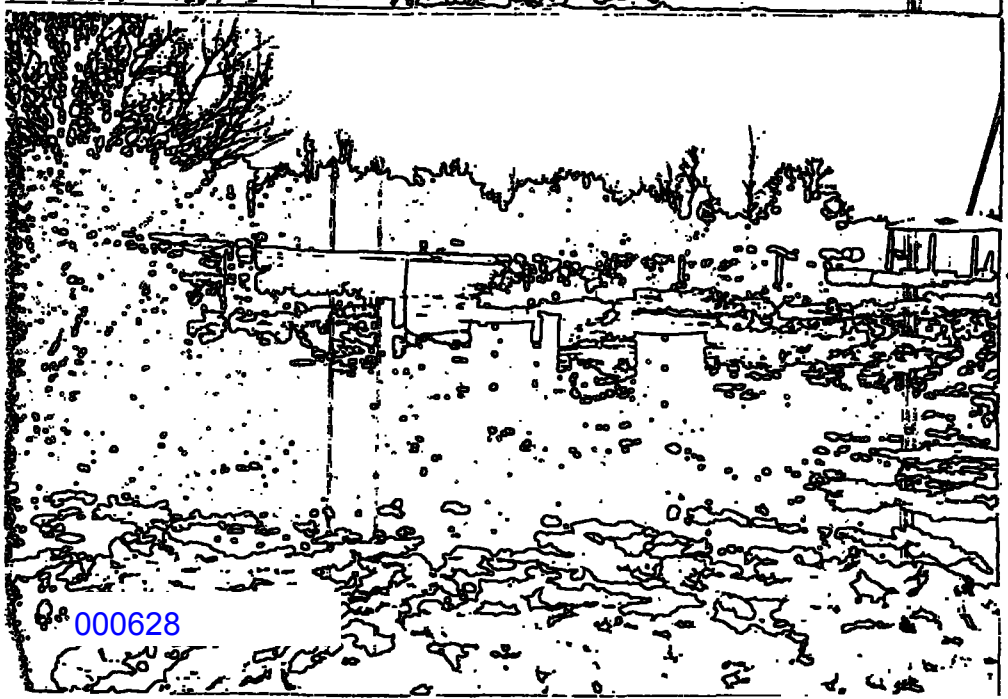


9

Photographer / Witness
Tom Smith / L. Ross

Date / Time / Direction
7 Feb 85 / 1300 / Northwest

Comments:
Wells # 4 (left)
4s (right)



10

Photographer / Witness
Tom Smith / L. Ross

Date / Time / Direction
7 Feb 85 / 1310 / Northwest

Comments:
Wells # 2 (left)
2s (right)

ATOMIC ABSORPTION SPECTROPHOTOMETRY BENCH SHEET

Document No. _____ Element Sn Analyst MR²

Date 1-27-96

Commercial: Contract Laboratory Program: ✓ Instrument 30305

SOP # _____

Work Order Number: _____ Case Number: 5445, 5453

CRDL 40 ppb IDL 9.6 ppb

Note: Use proper data flags for final concentrations.

Cup #	Sample ID	Avg. Peak Height	CV	Calc. Conc.: Units	Dilution Factor	Dig. Fact. Wt or Vol/ Final Vol.	Spike Added or True Value Units:	% Rec.	Notes	Final Conc.: Units	
15	01 "Analyst Spike		1.4	98 ug/l		1		123% 70-130	MR²		
16	PDdup01		—	<9.6	1.05	100ml/100ml				10 ug/l U	Q
17	"Analyst Spike		6.1	94		1		118%			
18	8601106-03	MAC992	—	<9.6	1.05	100ml/100ml				10 ug/l U	
19	"Analyst Spike		13	89		1		111%			
20	CCCS-SAM2126-4 MR²		7.8	113		1	100 ug/l	113%		113 ug/l	
21	calblank		—	<9.6		1				9.6 ug/l U	
22	PDspk03		3.4	43	1:10	100ml/100ml	400 ug/l	108%		430 ug/l	
23	8601106-05	MAC994	—	<9.6	1.05	100ml/100ml				10 ug/l U	Q
24	"Analyst Spike		0.5	96		1		120%			
25	8601106-07	MAC995	—	<9.6	1.05	100ml/100ml				10 ug/l U	Q
26	"Analyst Spike		3.1	99		1		124%			
27	purgeblank (soils)		—	<9.6		100ml/500ml			MR 48U	0.05 mg/kg U	MR
28	LCS		1.2	55	1:10	100ml/100ml	500 ug/l	110%		550 ug/l	

I hereby certify that all analyses and quality control procedures were followed according to current standard operating procedures except as follows:

Notes: MR² 1:5 dilution (digestion) included in results

Mary Riddle

Signature of Analyst

ATOMIC ABSORPTION SPECTROPHOTOMETRY BENCH SHEET

Document No. _____ Element Sn

Analyst Mary Riddle
Date 1-27-86
Instrument 30305
SOP 0

Commercial: Contract Laboratory Program: ✓

Work Order Numbers _____ Case Numbers 5445, 5453

CRDL 40 ppb IDL 9.6 ppb

Note: Use proper data flags for final concentrations.

Cup #	Sample ID	Avg. Peak Height	CV	Calc. Conc.: Units	Dilution Factor	Dig. Fact. Wt or Vol/ Final Vol.	Spike Added or True Value Units:	% Rec.	Notes	Final Conc.: Units
29	Sludge		0.5	112 ug/l	1:2	1.00g/100 ml				112 mg/kg *
30	CCCS-SLM 212-4		0.2	115		1	100 ug/l	115%		115 ug/l
31	cal blank		—	9.6		1			9.6 u cb	DL mg/kg
						1				
						1				
						1				
						1				
						1				
						1				
						1				
						1				
						1				
						1				
						1				
						1				

I hereby certify that all analyses and quality control procedures were followed according to current standard operating procedures except as follows:

Notes: * 1:5 dilution (digestion) included in results

Mary Riddle
Signature of Analyst

000630

RADIAN

Element Sn SOP # _____

Date 1-27-86 Time On 8 AM Time Off 4:30 pm

Instrument Setup

Wavelength 224 nm Lamp: EDL ☐ Vendor _____ Power ____

Slit 0.7 Bkg Corr ☑ Y ☐ N HCL ☑ Serial # 306364

☐ Flame; Fuel _____ Oxid _____ ☐ Hydride ☐ Cold Vapor

☑ HGA Program mg/L 500

Step	1	2	3	4	5
Temp °C	150	~~1000~~ 2100	2600	20	
Ramp	1	1	0	1	1
Hold	30	30	5	3	10
Read			✓		
Int. Flow			5		

Sample Vol (ul) 20

Gas Flow 5-300

Matrix Mod: Vol (ul) 5

Type $Mg(NO_3)_2$

Conc 0.4%

Platform Used ☑ Y ☐ N

Standard Prep

Source Spex Lot # 0385DHB Exp. Date 5-3-86

Conc 40 Abs ~~.101~~ .110 QC Source SRM2126 mg/L

80 (Pk.Ht.) ~~.208~~ .228 Corr. Coef .999

120 ~~.295~~ .336 Slope ~~.002~~ .003

_____ _____ Intercept ~~.002~~ .0004 -0.001 AA

Blank ~~.0028~~ -0.002

Preventative Maintenance

check system

Consummables (Approx.)

Sampler Cups 30 Pipet Tips small 60

Graphite Tubes 1 med _____

Platforms 1 large 30

Other _____

Remarks _____

Analyst Name Mary Riddle

000631

RADIAN

Element Sn

Date 1-27-86

Daily Run Log

List all standards, samples, etc. in the order run.

1		Blank	prepblank (matrix spike)	860106-07				1
2		40	recalibrate	SPK				2
3		80	Blank	prepblank (5453 mid)				3
4		120	80	LCS				4
5		ICCS	80	sludge				5
6		Blank	120	CCCS				6
7		40	ICCS	cal blank				7
8		80	cal blank prepblank 5415					8
9		120	CCS					9
10		ICCS	860106 blank 2					10
11		Blank	SPK					11
12		40	8601048-01					12
13		80	SPK					13
14		120	PDdup01					14
15		ICCS	SPK					15
16		Blank	PD spk01					16
17		40	CCCS					17
18		80	calblank					18
19		120	prepblank 5453					19
20		ICCS	LCS					20
21	calblank		8601106-01					21
22	prepblank (5415)		SPK					22
23	LCS		PDdup01					23
24	8601106-01		SPK					24
25		SPK	8601106-03					25
26	PDdup01		SPK					26
27		SPK	CCCS					27
28	PDspk01		calblank					28
29	CCCS		PDspk03					29
30	calblank		8601106-05					30
31			SPK					31

000632

Sn 80305 IDL = 9.6 ppb

HCl # 306364 CRDL = 40 ppb

Stnd. source = Spex # 0385DHB Exp: 5-3-86

40/80/120 ppb prep. date: 1-27-86

analytical spike: 1.9 ml sample + 0.100 ml 1600 ppb Sn

LOS DF on each sample

corr. .999 slope .003 int ~.0004 -0.0018 BB

Cal. verification = SRM 2126, 100 µg/l theo.

Mary Riddle 1-27-86

LCS = 400 µg/l theo.

SN

	AA	AA-BG	BG
EAK HEIGHT (ABSORBANCE)	0.082	0.034	0.098
EAK AREA (ABS-SECONDS)	0.085	-0.001	0.085

0.001

	AA	AA-BG	BG
EAK HEIGHT (ABSORBANCE)	0.086	0.036	0.084
EAK AREA (ABS-SECONDS)	0.100	-0.002	0.102

0.000

EAN= 0.001 STD.DEV.= 0.001 COEF.VAR.= 99.99 %

0.000 AUTOZERO

SN

	AA	AA-BG	BG
EAK HEIGHT (ABSORBANCE)	0.360	0.302	0.100
EAK AREA (ABS-SECONDS)	0.208	0.100	0.108

0.101

	AA	AA-BG	BG
EAK HEIGHT (ABSORBANCE)	0.406	0.346	0.102
EAK AREA (ABS-SECONDS)	0.229	0.119	0.110

0.121

EAN= 0.111 STD.DEV.= 0.014 COEF.VAR.= 12.42 %

40.0 STANDARD 1

SN

	AA	AA-BG	BG
EAK HEIGHT (ABSORBANCE)	0.656	0.592	0.092
EAK AREA (ABS-SECONDS)	0.352	0.232	0.119

84.2

	AA	AA-BG	BG
BSORBANCE)	0.758	0.702	0.122
-SECONDS)	0.349	0.223	0.126

000634

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.656	0.592	0.092
PEAK AREA (ABS-SECONDS)	0.352	0.232	0.119

84.2

	AA	AA-BG	BG
HEIGHT (ABSORBANCE)	0.758	0.702	0.122
PEAK AREA (ABS-SECONDS)	0.349	0.223	0.126

80.9

MEAN= 82.5 STD.DEV.= 2.3 COEF.VAR.= 2.84 %

82.5 E-25: READING GREATER THAN HIGHEST STANDARD.

80.0 STANDARD 2

SN

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	1.170	1.094	0.106
PEAK AREA (ABS-SECONDS)	0.459	0.337	0.122

115.1

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.997	0.928	0.100
PEAK AREA (ABS-SECONDS)	0.446	0.334	0.113

114.0

MEAN= 114.6 STD.DEV.= 0.7 COEF.VAR.= 0.60 %

114.6 E-25: READING GREATER THAN HIGHEST STANDARD.

119.7 STANDARD 3

SN 0018

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.971	0.918	0.112
PEAK AREA (ABS-SECONDS)	0.437	0.307	0.130

109.4 ICCS SRM2126-4(100) ppb 110% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.784	0.702	0.102
PEAK AREA (ABS-SECONDS)	0.450	0.309	0.141

110.3

MEAN= 109.8 STD.DEV.= 0.6 COEF.VAR.= 0.58 %

PEAK HEIGHT (ABSORBANCE)	0.784	0.702	0.102
PEAK AREA (ABS-SECONDS)	0.450	0.309	0.141

110.3

MEAN= 109.8 STD.DEV.= 0.6 COEF.VAR.= 0.58 %

SN 0002

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.093	0.035	0.092
PEAK AREA (ABS-SECONDS)	0.121	0.009	0.112

3.7 cal blank

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.087	0.030	0.092
PEAK AREA (ABS-SECONDS)	0.124	0.003	0.120

1.7

MEAN= 2.7 STD.DEV.= 1.4 COEF.VAR.= 53.41 %

SN 0003

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.105	0.035	0.112
PEAK AREA (ABS-SECONDS)	0.134	0.001	0.132

1.0 prep blank case 5445

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.115	0.037	0.098
PEAK AREA (ABS-SECONDS)	0.127	-0.008	0.135

2.5

MEAN= -0.8 STD.DEV.= 2.5 COEF.VAR.= 99.99 %

SN 0004

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.454	0.367	0.125
PEAK AREA (ABS-SECONDS) (400) ppb	0.273	0.130	0.143

46.2 LCS 1:10 120% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.451	0.366	0.113
PEAK AREA (ABS-SECONDS)	0.297	0.138	0.159

MEAN= 47.6 STD.DEV.= 2.0 COEF.VAR.=

49.1

MEAN= 47.6 STD.DEV.= 2.0 COEF.VAR.= 4.28 %

SN 0005

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.231	0.037	0.244
PEAK AREA (ABS-SECONDS)	0.262	-0.011	0.273

-3.5 ~~Stock01~~ ~~Stock~~ 860148-01 MF0005

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.212	0.054	0.235
PEAK AREA (ABS-SECONDS)	0.242	0.019	0.222

7.2

MEAN= 1.9 STD.DEV.= 7.6 COEF.VAR.= 99.99 %

SN 0006

0006 (CONTINUED)

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.840	0.696	0.241
PEAK AREA (ABS-SECONDS)	0.546	0.224	0.323

79.6 1.9 ml sample + 0.100 ml 1600 ppb Se 105% recovery

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.870	0.730	0.238
PEAK AREA (ABS-SECONDS)	0.557	0.249	0.309

88.4

MEAN= 84.0 STD.DEV.= 5.3 COEF.VAR.= 7.54 %

SN 0007

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.238	0.053	0.232
PEAK AREA (ABS-SECONDS)	0.336	0.049	0.287

17.6 redo - large CV

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.246	0.067	0.251
PEAK AREA (ABS-SECONDS)	0.327	0.007	0.320

2.9

MEAN= 10.3 STD.DEV.= 10.4 COEF.VAR.= 99.99 %

SN 0007

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.222	0.041	0.233
PEAK AREA (ABS-SECONDS)	0.321	-0.006	0.327

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.246	0.067	0.251
PEAK AREA (ABS-SECONDS)	0.327	0.007	0.320

2.9

MEAN= 10.3 STD.DEV.= 10.4 COEF.VAR.= 99.99 %

SN 0007 PDdup01 MF 0004 PD dup

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.222	0.041	0.233
PEAK AREA (ABS-SECONDS)	0.321	-0.006	0.327

1.05 DF

-1.7

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.231	0.042	0.240
PEAK AREA (ABS-SECONDS)	0.330	-0.001	0.331

0.2

MEAN= -0.8 STD.DEV.= 1.3 COEF.VAR.= 99.99 %

SN 0008 spkPDdup01 MF 0004

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.888	0.732	0.226
PEAK AREA (ABS-SECONDS)	0.543	0.228	0.315

80.9 1.9 ml sample + 0.100 ml 1600 ppb Sa 106% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.865	0.738	0.234
PEAK AREA (ABS-SECONDS)	0.561	0.249	0.312

88.7

MEAN= 84.8 STD.DEV.= 5.5 COEF.VAR.= 6.53 %

SN 0009

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE) MF 0004	0.467	0.387	0.126
PEAK AREA (ABS-SECONDS)	0.314	0.127	0.187

45.2 PDspk01 1:10 (100) 118%

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.452	0.367	0.139
PEAK AREA (ABS-SECONDS)	0.326	0.136	0.189

48.5

MEAN= 46.8 STD.DEV.= 2.3 COEF.VAR.= 4.93 %

000638 O

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.796		

48.5

MEAN= 46.8 STD.DEV.= 2.3 COEF.VAR.= 4.93 %

SN 0010

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.796	0.744	0.108
PEAK AREA (ABS-SECONDS)	0.460	0.309	0.151

110.2

CCCS - SRM2126-4(100) 111.2% discovery

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.779	0.716	0.120
PEAK AREA (ABS-SECONDS)	0.478	0.318	0.160

113.4

MEAN= 111.8 STD.DEV.= 2.3 COEF.VAR.= 2.05 %

SN 0011

0011 (CONTINUED)

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.106	0.031	0.104
PEAK AREA (ABS-SECONDS)	0.146	-0.011	0.157

-3.5

Oral blank

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.104	0.032	0.134
PEAK AREA (ABS-SECONDS)	0.152	-0.015	0.167

-4.7

MEAN= -4.1 STD.DEV.= 0.9 COEF.VAR.= 21.35 %

SN 0012

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.119	0.038	0.134
PEAK AREA (ABS-SECONDS)	0.161	-0.011	0.172

-3.3

Prep blank over 5453 waters

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.130	0.039	0.106
PEAK AREA (ABS-SECONDS)	0.151	0.001	0.150

1.0

MEA 000639 STD.DEV.= 3.0 COEF.VAR.= 99.99 %

SN 0013

-3.3 prep blank conc 5453 waters

	AA	AA-BG	BG
'EAK HEIGHT (ABSORBANCE)	0.130	0.039	0.106
'EAK AREA (ABS-SECONDS)	0.151	0.001	0.150

1.0

IEAN= -1.1 STD.DEV.= 3.0 COEF.VAR.= 99.99 %

SN 0013

	AA	AA-BG	BG
'EAK HEIGHT (ABSORBANCE)	0.491	0.409	0.124
'EAK AREA (ABS-SECONDS)	0.296	0.131	0.165

46.7 LCS (400) ug/L 1:10 113% recovery

	AA	AA-BG	BG
'EAK HEIGHT (ABSORBANCE)	0.500	0.435	0.138
'EAK AREA (ABS-SECONDS)	0.288	0.124	0.164

44.1

IEAN= 45.4 STD.DEV.= 1.9 COEF.VAR.= 4.16 %

SN 0014

	AA	AA-BG	BG
'EAK HEIGHT (ABSORBANCE)	0.137	0.041	0.146
'EAK AREA (ABS-SECONDS)	0.197	-0.005	0.201

-1.3 860106-01 MAC 879 1.050=

	AA	AA-BG	BG
'EAK HEIGHT (ABSORBANCE)	0.149	0.038	0.141
'EAK AREA (ABS-SECONDS)	0.227	0.001	0.226

0.7

IEAN= -0.3 STD.DEV.= 1.4 COEF.VAR.= 99.99 %

SN 0015

0015 (CONTINUED)

	AA	AA-BG	BG

MAC 879

apk 01

EAK HEIGHT (ABSORBANCE)	0.812	0.713	0.154
'EAK AREA (ABS-SECONDS)	0.478	0.272	0.206

96.9 1.9 ml sample + 0.100 ml 1600 ppb Sn 123% recovery

000640

	AA	AA-BG	BG
'EAK HEIGHT (ABSORBANCE)	0.753	0.674	0.157
'EAK AREA (ABS-SECONDS)	0.494	0.277	0.217

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.812	0.713	0.154
PEAK AREA (ABS-SECONDS)	0.478	0.272	0.206

96.9 1.9ml sample + 0.100ml 1600 ppb Sn 123% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.753	0.674	0.157
PEAK AREA (ABS-SECONDS)	0.494	0.277	0.217

98.8

MEAN= 97.8 STD.DEV.= 1.4 COEF.VAR.= 1.39 %

SN 0016

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.150	0.039	0.140
PEAK AREA (ABS-SECONDS)	0.196	-0.017	0.213

MAC 879

-5.3 PDdup01 1.05 DF

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.156	0.037	0.149
PEAK AREA (ABS-SECONDS)	0.222	-0.017	0.239

-5.4

MEAN= -5.4 STD.DEV.= 0.1 COEF.VAR.= 1.35 %

SN 0017

MAC 879

spk PDdup01

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.757	0.654	0.139
PEAK AREA (ABS-SECONDS)	0.513	0.274	0.239

97.7 1.9ml sample + 0.100ml 1600ppb Sn 118% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.741	0.658	0.136
PEAK AREA (ABS-SECONDS)	0.442	0.252	0.190

89.7

MEAN= 93.7 STD.DEV.= 5.7 COEF.VAR.= 6.10 %

SN 0018

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.148	0.039	0.141
PEAK AREA (ABS-SECONDS)	0.210	-0.009	0.219

-2.7 8601106-03 MAC882 1.05 DF

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.136	0.041	0.128
PEAK AREA (ABS-SECONDS)	0.207	0.012	0.195

4.5

MEAN= 0.9 STD.DEV.= 5.1 COEF.VAR.= 99.99 %

SN 0019

spk03

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.765	0.672	0.142
PEAK AREA (ABS-SECONDS)	0.472	0.253	0.219

MAC 882

MEAN= 0.9 STD.DEV.= 5.1 COEF.VAR.= 99.99 %

SN 0019

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.765	0.672	0.142
PEAK AREA (ABS-SECONDS)	0.472	0.253	0.219

90.1

1.9ml sample + 0.100 ml 1600ppb Sn 111% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.681	0.614	0.146
PEAK AREA (ABS-SECONDS)	0.486	0.248	0.238

88.4

MEAN= 89.2 STD.DEV.= 1.2 COEF.VAR.= 1.31 %

SN 0020

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.868	0.799	0.120
PEAK AREA (ABS-SECONDS)	0.517	0.334	0.184

119.0

CCCS- SRM2126-4(100) ml 113% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.731	0.662	0.107
PEAK AREA (ABS-SECONDS)	0.490	0.299	0.190

106.7

MEAN= 112.8 STD.DEV.= 8.9 COEF.VAR.= 7.84 %

SN 0021

0021 (CONTINUED)

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.098	0.035	0.114
PEAK AREA (ABS-SECONDS)	0.163	-0.013	0.176

-3.9

cal blank

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.110	0.041	0.106
PEAK AREA (ABS-SECONDS)	0.142	-0.013	0.155

-4.0

MEAN= 0 STD.DEV.= 0.1 COEF.VAR.= 1.65 %

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.110	0.041	0.106
PEAK AREA (ABS-SECONDS)	0.142	-0.013	0.155

-4.0

MEAN= -4.0 STD.DEV.= 0.1 COEF.VAR.= 1.63 %

SN 0022

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.478	0.406	0.126
PEAK AREA (ABS-SECONDS)	0.272	0.118	0.154

MAC 880

42.0 PDspk03 (600) 1:10 108% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.460	0.376	0.151
PEAK AREA (ABS-SECONDS)	0.289	0.124	0.165

44.1

MEAN= 43.1 STD.DEV.= 1.5 COEF.VAR.= 3.41 %

SN 0023

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.143	0.028	0.133
PEAK AREA (ABS-SECONDS)	0.195	-0.003	0.198

-0.7

860106-05 MAC 884 1.050F

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.137	0.041	0.146
PEAK AREA (ABS-SECONDS)	0.207	-0.002	0.210

-0.4

MEAN= -0.5 STD.DEV.= 0.2 COEF.VAR.= 38.16 %

SN 0024

spk05 MAC 884

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.800	0.718	0.134
PEAK AREA (ABS-SECONDS)	0.500	0.269	0.232

95.7 1.9ml sample to 0.100ml 1600ppb Sn 120% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.789	0.714	0.144
PEAK AREA (ABS-SECONDS)	0.505	0.271	0.234

96.3

EA... STD.DEV.= 0.4 COEF.VAR.= 0.45 %

PEAK HEIGHT (ABSORBANCE)	0.789	0.714	0.144
PEAK AREA (ABS-SECONDS)	0.505	0.271	0.234

96.3

MEAN= 96.0 STD.DEV.= 0.4 COEF.VAR.= 0.45 %

SN 0025

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.129	0.035	0.127
PEAK AREA (ABS-SECONDS)	0.167	0.001	0.166

0.9

860106-07 MAC 886 1.05 DF

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.115	0.032	0.114
PEAK AREA (ABS-SECONDS)	0.163	-0.008	0.171

2.2

MEAN= -0.7 STD.DEV.= 2.2 COEF.VAR.= 99.99 %

SN 0026

ppb 07

MAC 886

SN 0026 (CONTINUED)

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.723	0.663	0.110
PEAK AREA (ABS-SECONDS)	0.470	0.283	0.188

100.6

1.9ml sample + 0.100ml 1600ppb Sn 12% recovery

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.707	0.644	0.111
PEAK AREA (ABS-SECONDS)	0.465	0.271	0.194

96.4

MEAN= 98.5 STD.DEV.= 3.1 COEF.VAR.= 3.10 %

SN 0027

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.115	0.053	0.106
PEAK AREA (ABS-SECONDS)	0.196	-0.002	0.198

-0.2

prep blank 5453 - soil

	AA	AA-BC	BC
PEAK HEIGHT (ABSORBANCE)	0.127	0.046	0.122
PEAK AREA (ABS-SECONDS)	0.197	-0.011	0.208

000644

-3.3

-0.2 prep blank 5453 - soil

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.127	0.046	0.122
PEAK AREA (ABS-SECONDS)	0.197	-0.011	0.208

3.3

MEAN= -1.8 STD.DEV.= 2.2 COEF.VAR.= 99.99 %

SN 0028

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.439	0.363	0.117
PEAK AREA (ABS-SECONDS)	0.329	0.152	0.177

54.0 LCS soil (500) 1:10 110% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.473	0.410	0.103
PEAK AREA (ABS-SECONDS)	0.332	0.155	0.177

55.0

MEAN= 54.5 STD.DEV.= 0.7 COEF.VAR.= 1.20 %

SN 0029

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	1.462	1.392	0.115
PEAK AREA (ABS-SECONDS)	0.734	0.538	0.196

193.1 Sludge

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	1.485	1.409	0.114
PEAK AREA (ABS-SECONDS)	0.751	0.544	0.207

195.3 redo W/ pre dilution RB

MEAN= 194.2 STD.DEV.= 1.6 COEF.VAR.= 0.83 %

194.2 E-25: READING GREATER THAN HIGHEST STANDARD.

SN 0029

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	1.111	1.039	0.106
PEAK AREA (ABS-SECONDS)	0.463	0.312	0.151

111.2 Sludge 1:2

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.915	0.867	0.112
PEAK AREA (ABS-SECONDS)	0.464	0.314	0.150

112.1

MEAN= 111.6 STD.DEV.= 0.6 COEF.VAR.= 0.54 %

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.915	0.867	0.112
PEAK AREA (ABS-SECONDS)	0.464	0.314	0.150

112.1

MEAN= 111.6 STD.DEV.= 0.6 COEF.VAR.= 0.54 %

SN 0030

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.838	0.771	0.104
PEAK AREA (ABS-SECONDS)	0.533	0.342	0.191

122.0 Void data wrong solution mix

SN 0030

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.743	0.680	0.092
PEAK AREA (ABS-SECONDS)	0.460	0.323	0.137

115.2 CCCS-SEM426-9(100) all 115% recovery

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.824	0.771	0.080
PEAK AREA (ABS-SECONDS)	0.449	0.324	0.125

115.5

MEAN= 115.3 STD.DEV.= 0.2 COEF.VAR.= 0.20 %

SN 0031

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.095	0.038	0.075
PEAK AREA (ABS-SECONDS)	0.130	-0.008	0.138

-2.3 cal blank

	AA	AA-BG	BG
PEAK HEIGHT (ABSORBANCE)	0.077	0.036	0.074
PEAK AREA (ABS-SECONDS)	0.110	-0.006	0.116

-1.7

MEAN= -2.0 STD.DEV.= 0.5 COEF.VAR.= 24.25 %

~~DOC# 5421-6-80-7~~

DOC# 5445-6-80-7

MERCURY AAS BENCH SHEET

Date 1-20-86 Instrument 403 Analyst dl Method # CVAA

Sample #	Peak Ht	µg	Digestion Blank	Corrected µg	Aliquot (m/or g)	[illegible]	Dup. or Spk Info
BLANK	12	< IDL			100 mL	< IDL RB	
.4 STD	322	0.40					
.2 STD	175	0.20					
.1 STD	97	0.10					
.05 STD	60	0.05					
BLANK	18	< IDL <0.05			100 mL	< IDL	
LCS WP283 #1	185	0.22	2.5 µg/l thes		100 ml	2.2 µg/l	88% Recvry
LCS WP283 #2	293	0.36	3.0 µg/l thes		100 ml	3.6 µg/l	120% Recvry
[illegible]	196	0.23			0.0194 g	12 µg/g	
B601047-01 MFC-020	25	0.009 <.01			0.21 g	[illegible]	<0.050 µg/g w
B601047-02 MFC-038	150	0.18 data not used			0.20 g	0.90 µg/g	
B601047-02 Dup MFC-038	27	0.01 rerun 1-30-86 RB 39			0.23 g	[illegible]	
B601047-03 MFC-039	20	0.002 <0.01			0.20 g	[illegible]	<0.050 µg/g w
B601047-02 Spk MFC-039	60	0.054	0.22 µg/g	spike added	0.25 g	[illegible]	0.29 µg/g 105% R.
B601047-04 MFC-040	19	0.001 <0.01			0.27 g	[illegible]	<0.037 µg/g
B601047-05 MFC-041	[illegible]	0.05	data not	RB	0.22 g	0.23 µg/g	
B601047-06 MFC-042	138	0.16	used. rerun	1-30-86 39	0.21 g	0.76 µg/g	
BLANK	27	0.01			100 mL	< IDL <0.05	<0.05 µg/l w 20
LCCS WP283 #1	185	0.22	2.5 µg/l thes		100 ml	2.2 µg/l	88% Recvry
DUPLICATE-01 MF-0004	32	0.010 [illegible] RB	data not used.		50 ml	[illegible]	0.36 µg/l RB
B601048-01 Dup MF-0004	33	0.019 0.02 RB	rerun	1-30-86 39		[illegible]	0.38 µg/l
B601048-01 Spk MF-0004	146	0.17	1.0 µg/l	spike added		1-30-86 0.003 g/l	3.4 µg/l
BLANK	22	0.003 <0.01			100 mL	< IDL = 0.10	µg/l w
LCCS WP283 #1	187	0.22	2.5 µg/l thes.		100 ml	2.2 µg/l	88% Recvry

I hereby certify that all analyses and quality control procedures were followed according to current SOP's for this procedure except as follows:

Comments: B601047-02, B601047-02 Dup, B601047-05, B601047-06 MFC-038 MFC-038 MFC-041 MFC-042 TO BE REANALIZED dl 1-20-86

B601046-01, B601048-01 Spk MF 0004 MF 0004

David L Carnahan
Signature of Analyst

Spike source is RICCA 0680

RADIAN

Element Hg SOP # _____

Date 1-20-86 Time On 10.4m Time Off 1350

Instrument Setup

Wavelength 253.6nm Lamp: EDL ☐ Vendor _____ Power 8

Slit .4 Bkg Corr ☑ Y ☐ N HCL ☑ Serial # 323597

☐ Flame; Fuel _____ Oxid _____ ☐ Hydride ☑ Cold Vapor

☐ HGA Program

Step	1	2	3	4	5
Temp °C					
Ramp					
Hold					
Read					
Int. Flow					

Sample Vol (ul) _____

Gas Flow _____

Matrix Mod: Vol (ul) _____

Type _____

Conc _____

Platform Used ☐ Y ☐ N

Standard Prep

Source	Lot #	Exp. Date
Conc .4	Abs 322	QC Source WP283 #1
.2	(Pk.Ht.) 175	Corr. Coef 0.9993
.1	97	Slope ~~0.0015~~ 766 RB
.05	60	Intercept ~~0.0226~~ 18.3 RB
Blank	12	

Preventative Maintenance

_____

_____

_____

Consummables (Approx.)

Sampler Cups _____ Pipet Tips small _____

Graphite Tubes _____ med _____

Platforms _____ large _____

Other _____

Remarks _____

_____

_____

Analyst Name David C Hamilton

000648

RADIAN

Element Hg

Date 1-20-86

Daily Run Log

List all standards, samples, etc. in the order run.

1	BLANK								1
2	.4								2
3	.2								3
4	.1								4
5	.05								5
6	BLANK								6
7	ICCS								7
8	LCS								8
9	[illegible]								9
10	[illegible] MFC-020								10
11	[illegible] MFC-03E								11
12	[illegible] MFC-03B								12
13	[illegible] MFC-03B								13
14	[illegible] MFC-040								14
15	[illegible]								15
16	[illegible]								16
17	[illegible] Blank RB								17
18	[illegible] CCCS								18
19	[illegible]								19
20	[illegible]								20
21	[illegible]								21
22	[illegible] Blank								22
23	[illegible] CCCS RB								23
24									24
25									25
26									26
27									27
28									28
29									29
30									30
31									31

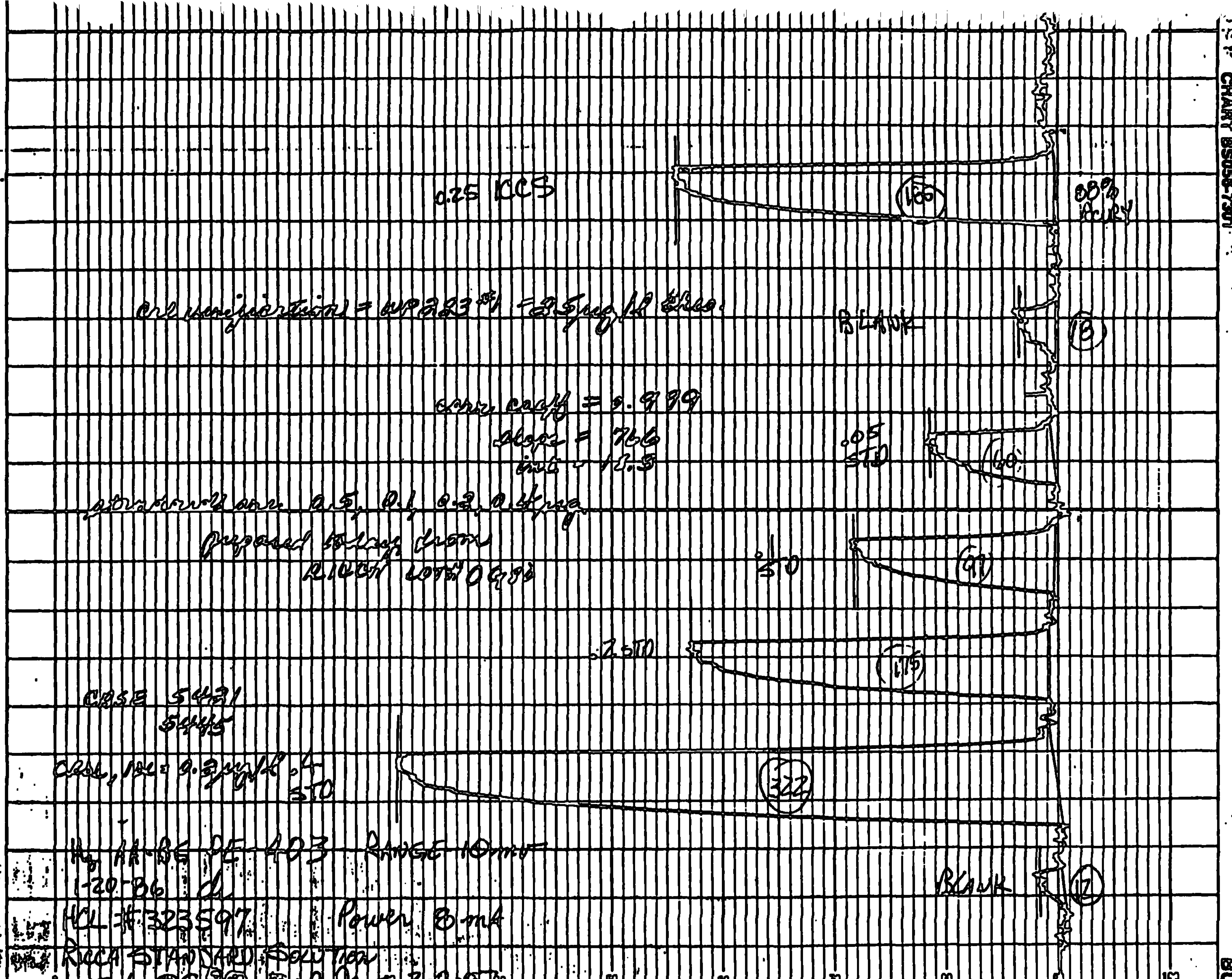
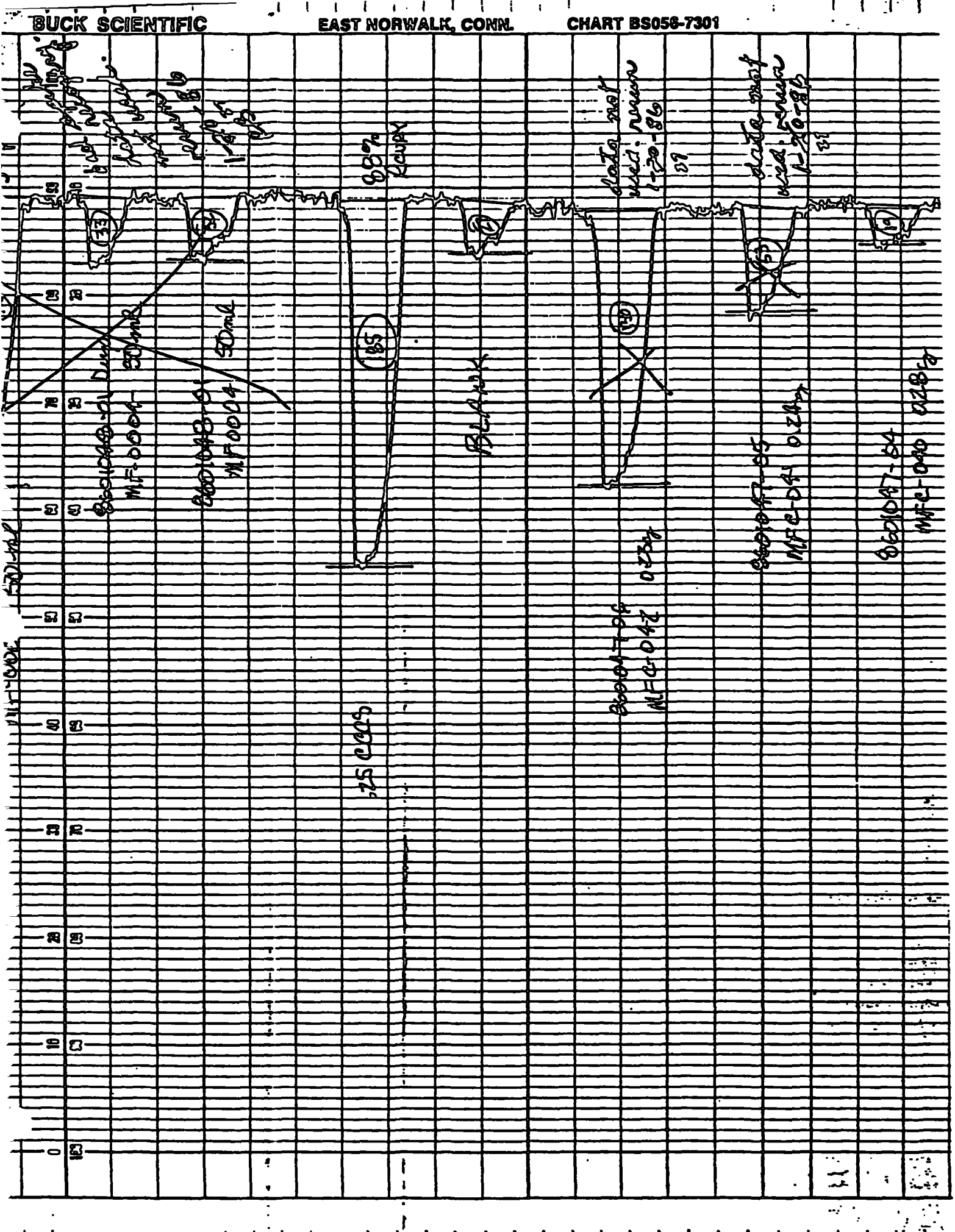


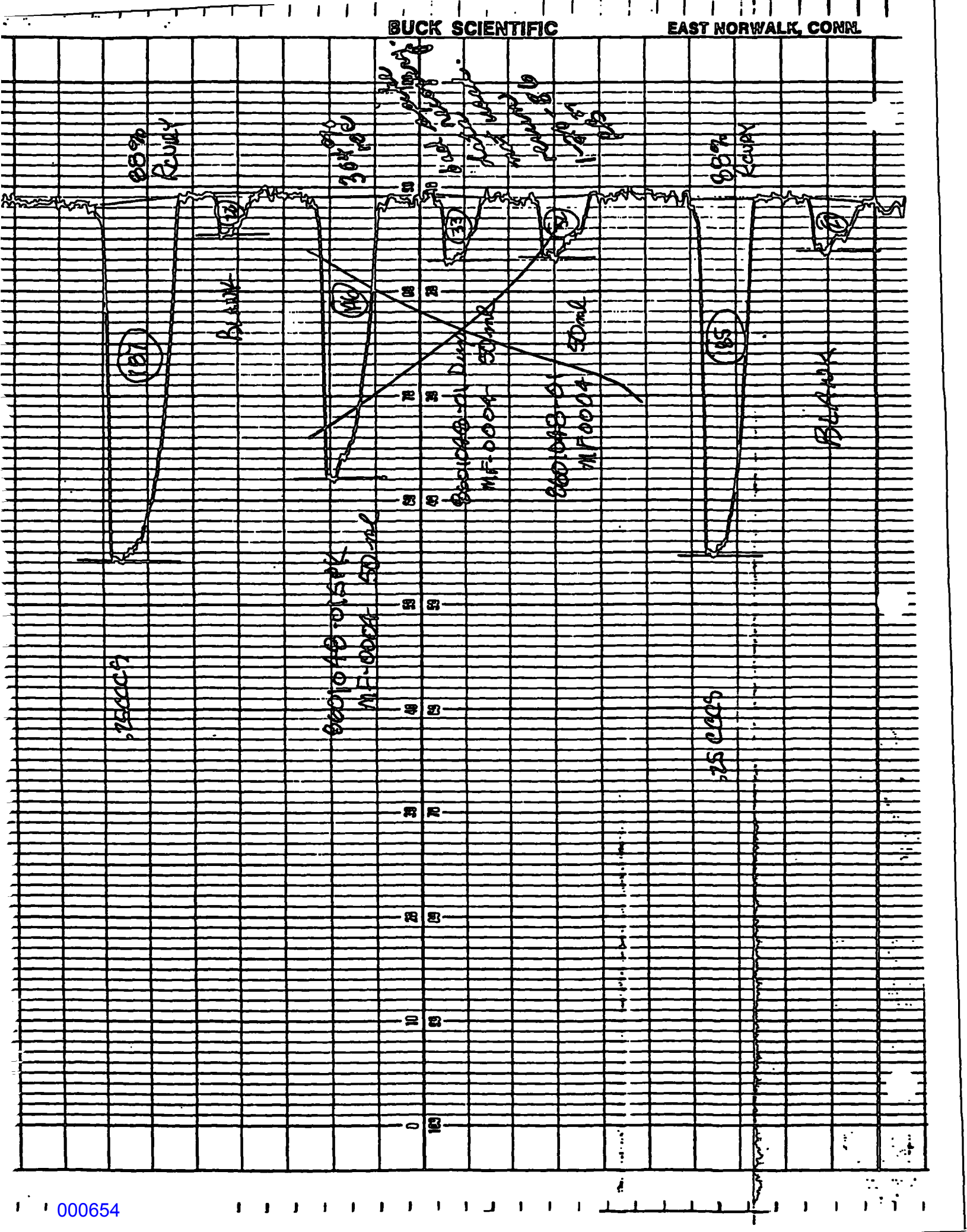
CHART BS058-7301
0.25 KCS
180
88% Rcvry
cal verification = WP323 #1 = 3.5 µg/l theo.
BLANK
18
corr coeff = 0.999
slope = 766
int = 11.5
.05 STD
60
standards are 0.5, 0.1, 0.2, 0.4 µg
prepared today from
RICCA LOT# 0698
.1 STD
91
.2 STD
175
CASE 5421
5445
cal. rec = 0.2 µg/l .4 STD
322
Hg AA-BG PE-403 RANGE 10mv
1-20-86
HCL #323597 Power 8 mA
RICCA STANDARD SOLUTION
BLANK
12

000651

BUCK SCIENTIFIC EAST NORWALK, CO

000652


BUCK SCIENTIFIC
EAST NORWALK, CONN.
CHART BS056-7301


BUCK SCIENTIFIC
EAST NORWALK, CONN.

5421-6-81
POC# 5445-6-81-11
5453-1-80
5478-1-80

MERCURY AAS BENCH SHEET

Date 1-27-86 Instrument 403 Analyst dc Method # CVAA

Sample #	Peak Ht	µg	Digestion Blank	Corrected µg	Aliquot (m/or g)	ppm	Dup. or Spk Info
BLANK	10	0.01			100 ml	0.10 µg/l	
.4	433	0.41					
.2	200	0.19			changes made by		
.1	95	0.09			R. Burris		2/7/86
.05	55	0.05					
BLANK	8	0.009			100 ml	x 0.10 µg/l 0.09 µg/l	
ICCS WP 283CH	251	0.24	2.5 µg/l thio		100 ml	2.4 µg/l	96% RECOVERY
LCS WP 283CH	322	0.30	3.0 µg/l thio		100 ml	3.0 µg/l	100% Recovery
Murphy Slough	364	0.34			0.0224g	15 µg/g	
B501047-02 MFC-038	55	0.053			0.23g	0.24 0.23 µg/g	
B501047-02 Dup MFC-038	56	0.034			0.20g	0.27 0.25 µg/g	
B501047-05 MFC-041	60	0.057 0.06			0.19g	0.30 0.32 µg/g	
B501047-06 MFC-042	193	0.18			0.18g	1.0 µg/g	
CCCS WP 283CH	254	0.24	2.5 µg/l thio		100 ml	2.4 µg/l	96% Recovery
BLANK	12	0.012			100 ml	[0.13] 0.12 µg/l	
B501043-01 MF0004	91	0.089 0.09			50 ml	0.00 1.8 µg/l	
B501048-01 Dup MF0004	108	0.10				2.0 µg/l	
B501048-01 SPK * MF0004	165	0.16	1.0 µg/l spike added			3.2 µg/l	140% rec thio 96% spike R
B501006-01 MAC-079	26	0.025 0.03				0.50 0.6 µg/l	
B501106-01 Dup MAC-079	20	0.020				0.40 µg/l	
B501106-03 MAC-082	23	0.023				0.46 µg/l	
B501106-03 SPK * MAC-082	59	0.056 0.06	1.0 µg/l	spike added		1.1 1.2 µg/l	64% rec R
B501106-05 MAC-084	208	0.20				4.0 µg/l	
B501106-07 MAC-086	24	0.024				0.48 µg/l	
CCCS WP 283 #1	256	0.24	2.5 µg/l thio		100 ml	2.4 µg/l	96% RECVRY
LCS WP 283 #2	309	0.29	3.0 µg/l thio		100 ml	2.9 µg/l	97% Recvry
BLANK	13	0.013			100 ml	[0.13] 0.13 µg/l	
B501100-02 MAC-081	186	0.18			0.24g	0.75 µg/g	

I hereby certify that all analyses and quality control procedures were followed according to current SOP's for this procedure except as follows:

Comments: *spike source is RICCA 6180

David L Carruthers
Signature of Analyst

MERCURY AAS BENCH SHEET

Ranges made by R Burris 2/7/86

Date 1-27-86 Instrument 403 Analyst L Method # CVAA

Sample #	Peak Ht	µg	Digestion Blank	Corrected µg	Aliquot (m/or g)	ppm	Dup. or Spk Info
BC01106-02 Dup GFAC-801	37	0.036 ~~0.04~~			0.23g	0.14 ~~0.16~~ ug/g	
BC01106-04 GFAC-803	43	0.041			0.21g	0.20 ~~0.19~~ ug/g	
BC01105-03 SPK GFAC-802	73	0.070 ~~0.07~~	0.28 µg/g	spike added	0.18g	0.39 ug/g	68% rec.
BC01100-05 GFAC-805	25	0.025 ~~0.03~~			0.25g	0.10 ~~0.12~~ ug/g	
BC01107-01 GFB-733	103	0.098 ~~0.10~~			0.24g	0.41 ~~0.42~~ ug/g	
BC01107-01 Dup GFB-737	33	0.032			0.24g	0.13 ug/g	
BC01107-02 GFB-734	32	0.031			0.25g	0.12 ug/g	
BC01107-02 SPK GFB-734	78	0.074	0.19 µg/g	spike added	0.27g	0.37 ~~0.26~~ ug/g	79% rec.
BC01107-03 GFB-735	29	0.028 ~~0.03~~			0.23g	0.12 ~~0.13~~ ug/g	
CCCS WP 283 #1	268	0.25	2.5 µg/l theo.		100ml	2.5 ug/l	100% Recovery
BLANK	10	0.010			100ml	[0.10] ug/l	

I hereby certify that all analyses and quality control procedures were followed according to current SOP's for this procedure except as follows:

Comments: _____

David Barnett
Signature of Analyst

RADIAN

Element H_2 SOP # _____

Date 1-27-86 Time On 1Pm Time Off 3Pm

Instrument Setup

Wavelength 253.8nm Lamp: EDL ☐ Vendor _____ Power _____

Slit .5 Bkg Corr ☑ Y ☐ N HCL ☑ Serial # 323597

☐ Flame; Fuel _____ Oxid _____ ☐ Hydride ☑ Cold Vapor

☐ HGA Program

Step	1	2	3	4	5
Temp °C					
Ramp					
Hold					
Read					
Int. Flow					

Sample Vol (ul) _____

Gas Flow _____

Matrix Mod: Vol (ul) _____

Type _____

Conc _____

Platform Used ☐ Y ☐ N

Standard Prep

Source RICCA Lot # OG 6080 Exp. Date 2-8-87

Conc	Abs (Pk.Ht.)
.4	433
.2	200
.1	95
.05	55
Blank	10

QC Source WP283#1

Corr. Coef 0.9980

Slope 0.0009 10k5 AB

Intercept 0.0015 -1.15 AB

Preventative Maintenance

_____

_____

_____

Consummables (Approx.)

Sampler Cups _____ Pipet Tips small _____

Graphite Tubes _____ med _____

Platforms _____ large _____

Other _____

Remarks _____

_____

_____

Analyst Name David Tannenbaum

000657

RADIAN

Element Hg

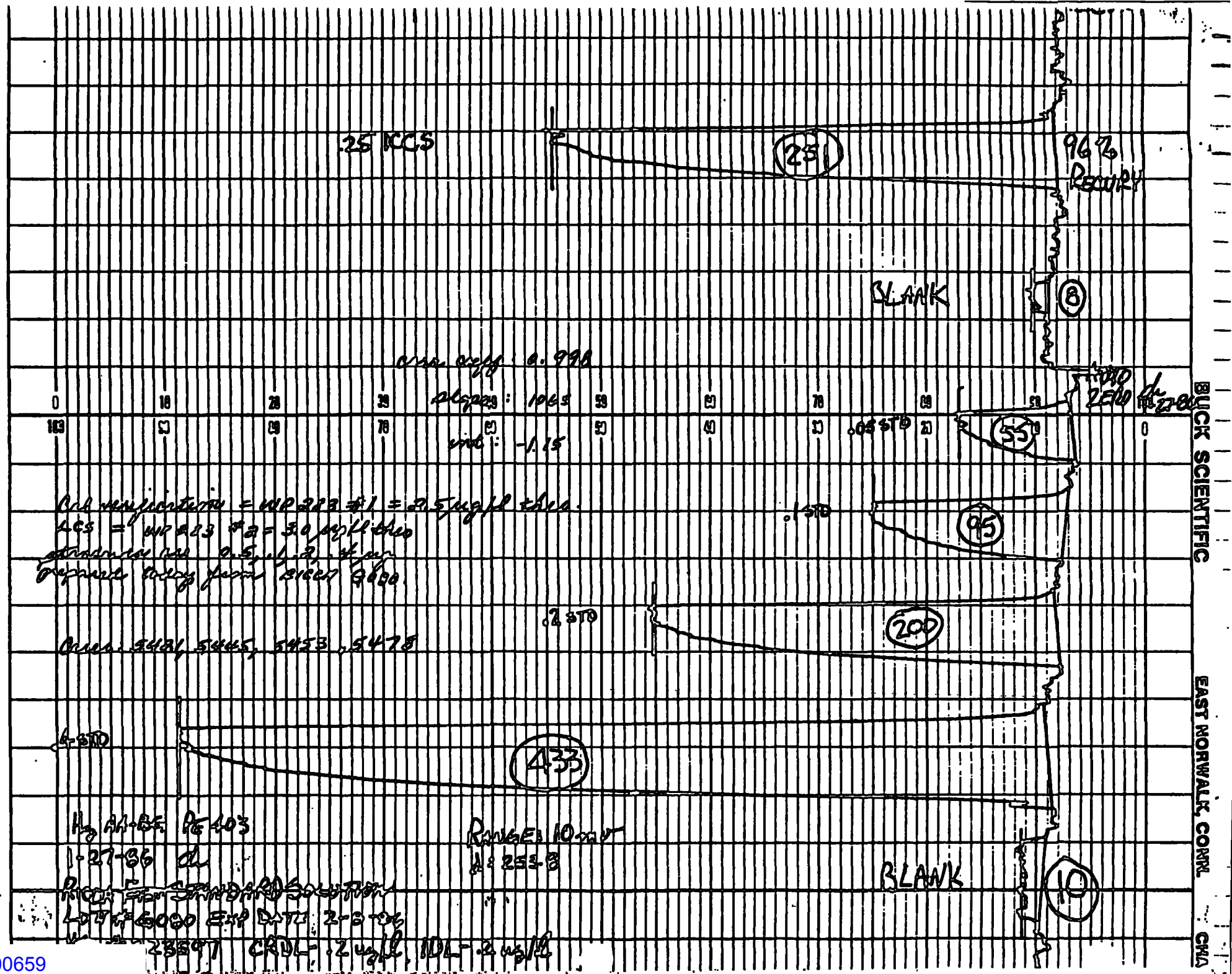
Date 1-27-86

Daily Run Log

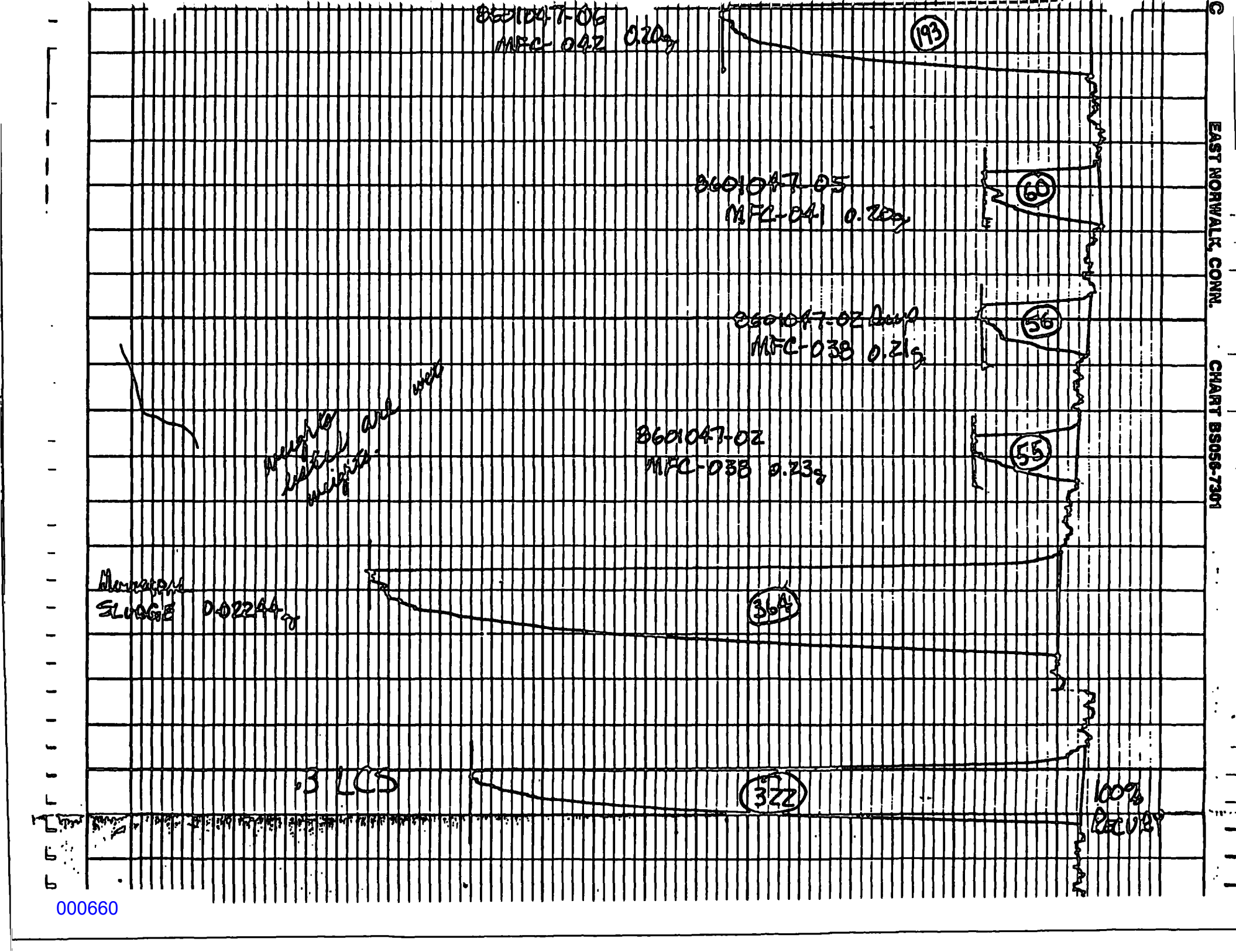
List all standards, samples, etc. in the order run.

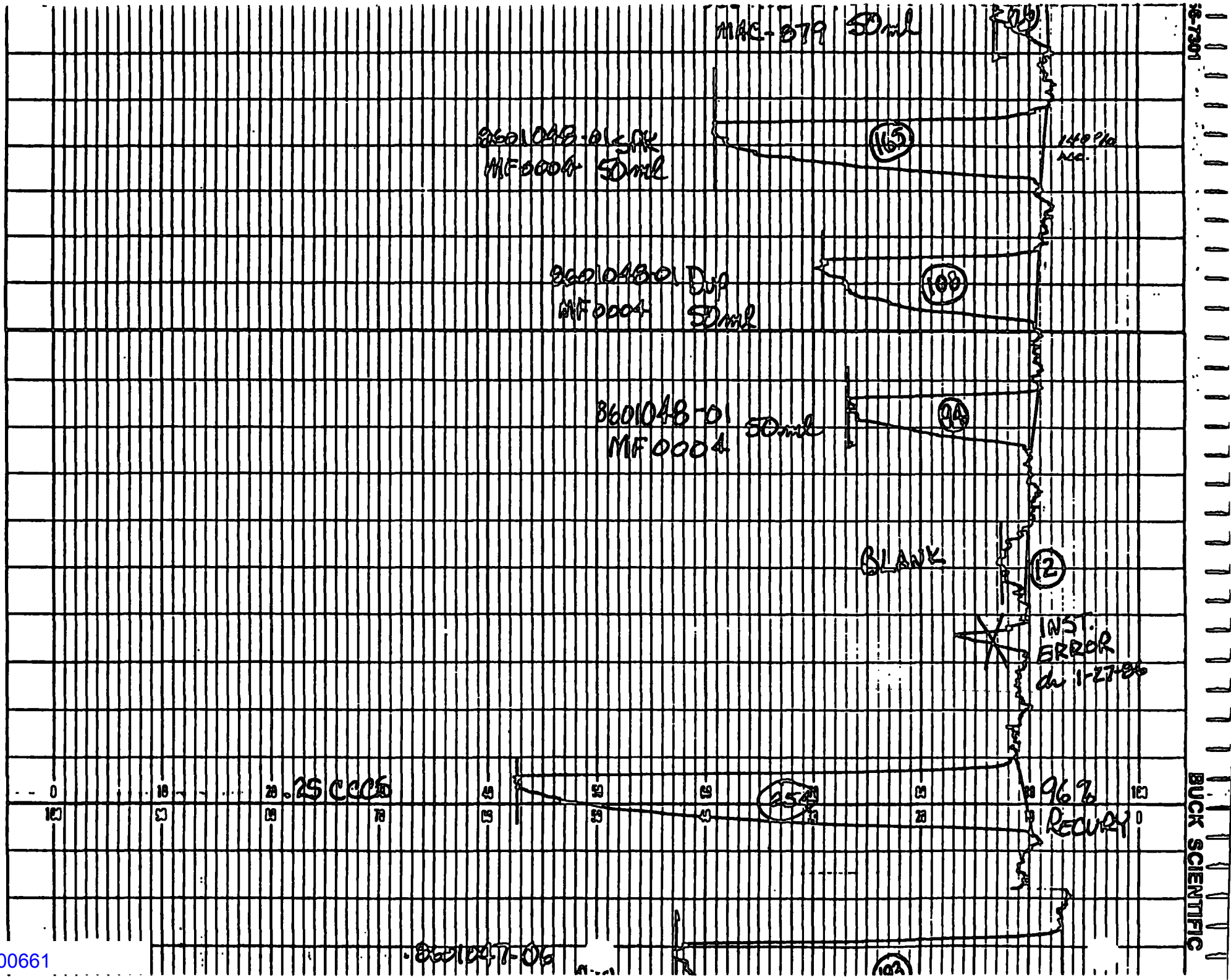
1	BLANK				8601106-06				1
2	.4				8601107-01				2
3	.2				8601107-01 Dup				3
4	.1				8601107-02				4
5	.05				8601107-02 SPK				5
6	BLANK				8601107-03				6
7	ICCS wp 283#1				CCCS wp 283#1				7
8	LCS wp 283#2				BLANK				8
9	MUNICIPAL SLUDGE								9
10	8601107 8601047-02								10
11	8601047-02 Dup								11
12	8601047-05								12
13	8601047-06								13
14	CCCS wp 283#1								14
15	BLANK								15
16	8601048-01								16
17	8601048-01 Dup								17
18	8601048-01 SPK								18
19	8601106-01								19
20	8601106-01 Dup								20
21	8601106-03								21
22	8601106-03 SPK								22
23	8601106-05								23
24	8601106-07								24
25	CCCS wp 283#1								25
26	LCS wp 283#2								26
27	BLANK								27
28	8601106-02								28
29	8601106-07 Dup								29
30	8601106-04								30
31	8601106-04 SPK								31

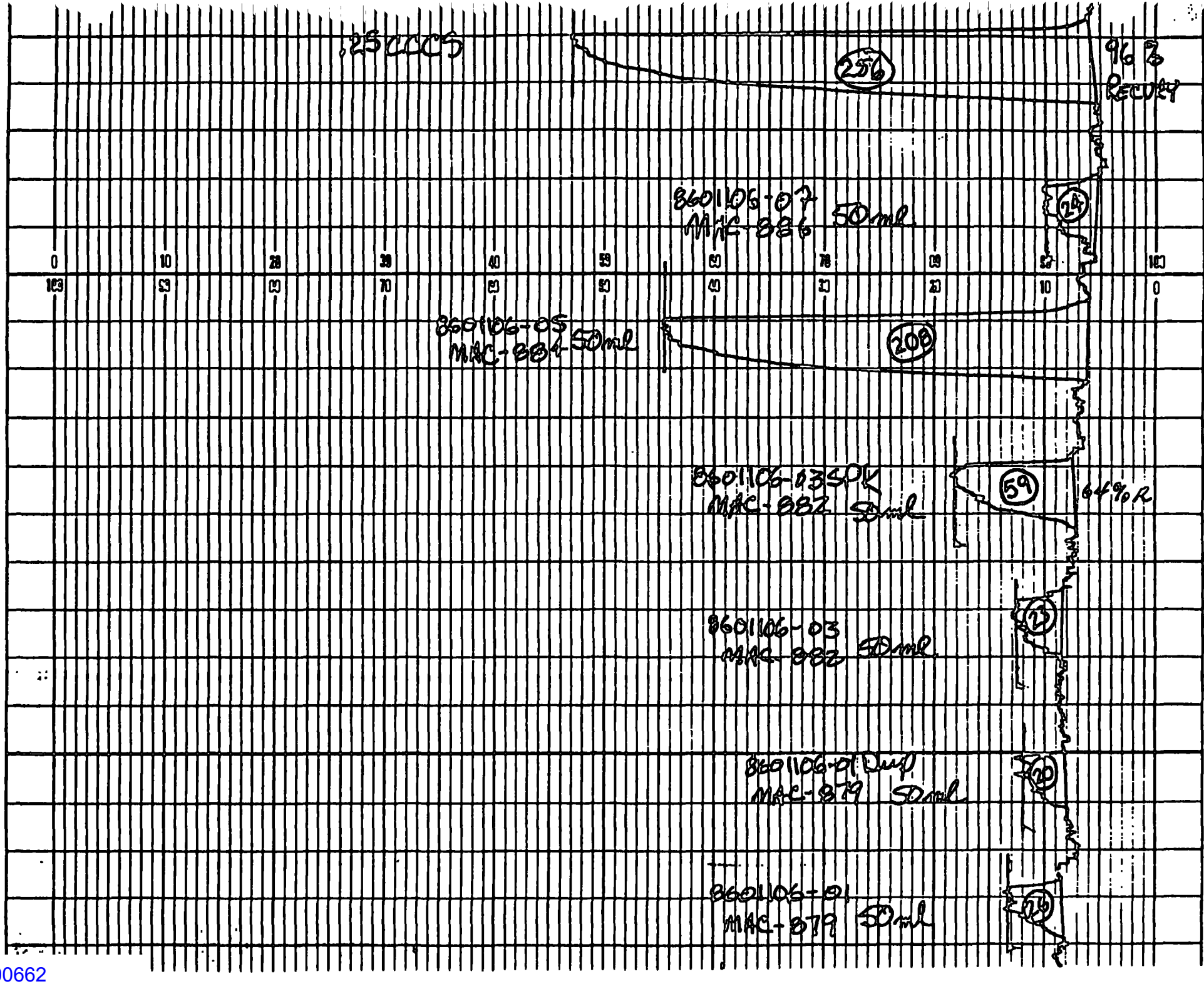
1-27-86

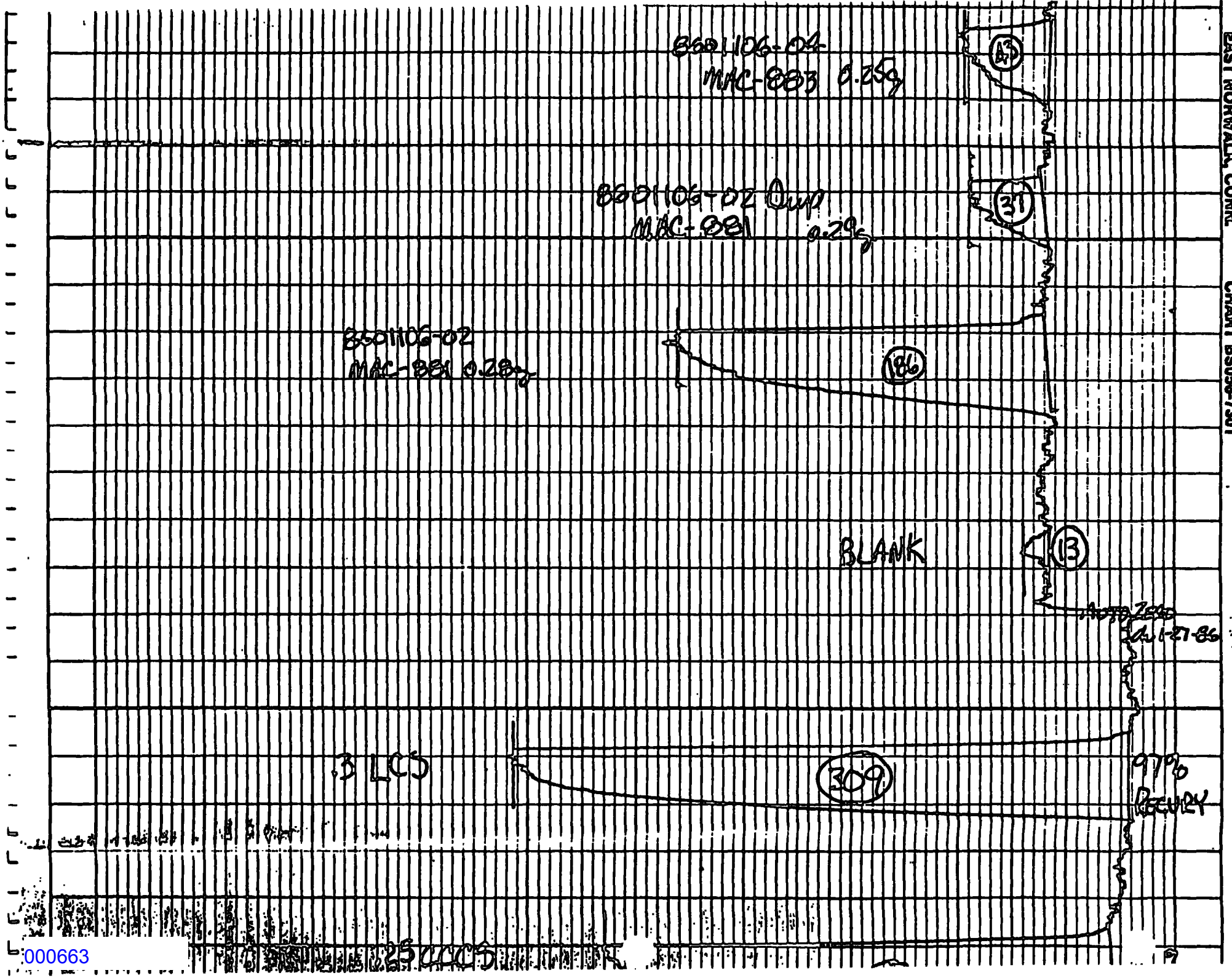

.25 ICCS
281
96% RECOVERY
BLANK
8
.05 STD
55
.1 STD
95
.2 STD
200
.4 STD
433
RANGE: 10 mV
A: 252-8
BLANK
10
BUCK SCIENTIFIC
EAST NORWALK, CONN.

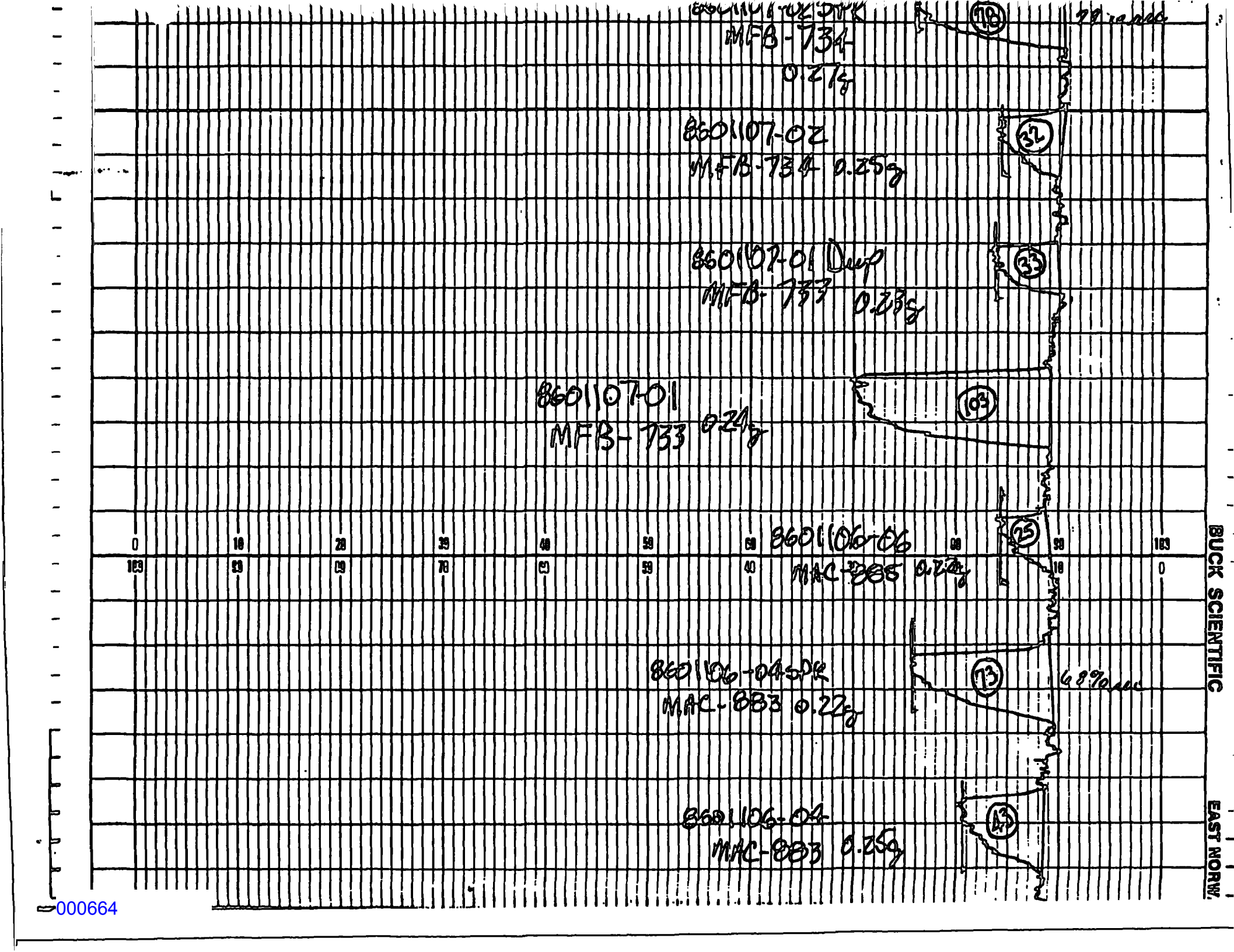
000659


8601047-06
MFC-042 0.20g
193
8601047-05
MFC-041 0.20g
68
8601047-02 Dup
MFC-038 0.21g
56
8601047-02
MFC-038 0.23g
55
weights
used
with
weights
used
Mannatech
SLUDGE 0.02244g
36A
3 LCS
322
100%
RECVD
EAST NORWALK, CONN.
CHART BS056-7301
000660


MAC-079 50mL
(76)
9601048-01 DUP
MF0004 50mL
(165)
140% Rec.
9601048-01 DUP
MF0004 50mL
(108)
9601048-01
MF0004 50mL
(94)
BLANK
(12)
INST. ERROR
dw 1-27-96
25 CCCS
(254)
96% RECOVERY
9601047-06
(103)
BUCK SCIENTIFIC


1,250 CCS
256
96 % RECOVERY
24
8601105-07
MAC-886 50 mL
0 10 20 30 40 50 60 70 80 90 100
163 53 53 70 53 53 53 53 53 53 0
8601106-05
MAC-884 50mL
208
59
64% R
8601106-03SPK
MAC-882 50mL
21
8601106-03
MAC-882 50mL
20
8601106-01 Dup
MAC-879 50mL
19
8601106-01
MAC-879 50mL
BUCK SCIENTIFIC
EAST NORWALK, CONN.
CHART BS056-7301


EAST NORWALK, CONN.
CHART BS056-7301
8501106-04
MAC-883 0.25g
(31)
8501106-02 Dup
MAC-881 0.29g
8501106-02
MAC-881 0.28g
(186)
BLANK
(13)
AUTOZERO
Jan 1-27-86
3 LCS
(309)
97%
RECVRY
25 CCCS


860107-02 DUP
MFB-734
0.21g
860107-02
MFB-734 0.25g
860107-01 Dup
MFB-733 0.23g
860107-01
MFB-733 0.24g
860106-06
MAC-885 0.20g
860106-04 SDK
MAC-883 0.22g
860106-04
MAC-883 0.25g
BUCK SCIENTIFIC
EAST NORW.

000664

EAST NORWALK, CONN. CHART BS056-7301

BLANK

10

.25 CORS

268

100% RECURY

8601107-03
MFB-735 0.23g

31

8601107-02SPK
MFB-734
0.21g

18

99% Recovery

8601107-02
MFB-734 0.25g

32

8601107-01 Dup
MFB-733 0.23g

33

DQC# 5445-6-100-8

WORK ORDER	SPLITS REMOVED	CHECK-OUT INFORMATION				RETURN INFORMATION		
		DATE	TIME	DESTINATION	INITIALS	DATE	TIME	INITIALS
8501047 8501048	1-6 1	1-15-86	8[30] Am	7S/196	dh	1-15-86	11 Am	dh
8501047	1A 2B-6B	1/15/86	0935	7S/194	KDW	1/15/86	1035	KDW
8501047	05B, 06B	1/15/86	1240	7S/194	KDW	1/15/86	1340	KDW
8601048	1	1-16-86	7 Am	7S/196	dh	1-16-86	8 Am	dh
8601047 8601048	1-6 1	1-17	930 Am	7S/196	dh	1-17-86	1120 Am	dh
8601106	1-7	1-21	8:10 Am	7S/196	dh	1-21-86	10:20 Am	dh
8601107	1-3	1-23	830 Am	7S/196	dh	1-23-86	1020 Am	dh
8601106	01B.	1/23	1040	7S/196	KDW	1/23	1150	KDW

7S/196 (Water and Prep. Labs.
7S/194 (Extraction & Water Lab
7S/180 (ICP and AA Labs)
7S/191 (TOX, TOC)
7S/195 (Technician)
7S/171 (GC)

[illegible] SAMPLE CHECK OUT LOG

WORK ORDER	SPLITS REMOVED	CHECK-OUT INFORMATION				RETURN INFORMATION		
		DATE	TIME	DESTINATION	INITIALS	DATE	TIME	INITIALS
8601106	02A, 03B, 04A, 05B	1/23	1245	75/196	KDW	~~11/30~~ ~~11/30~~ 1/23	1430	KDW
8601106 8601107 8601047 8601048	1-4 1-3 2,5,6 1	1/24/86	8:45 Am	75/196	d	1/24	9:10 Am	d
8601106	07B	1/24	0945	75/196	KDW	1/24	1125	KDW
8601106 8601107-B	06A 01A, 02A	1/24	1030	75/196	KDW	1/24	1125	KDW
8601114 8601115	1→5 1→5	1/24	1030	75/195	YKM	1/24	17:15	MF
8601106 8601107	01B, 02A, 03B 03A	1/24	1407	75/196	KDW	1/24	1436	KDW
8601163 8601167	1-10 1-3	1/20/86	8:32 Am	75/196	d	11/30/86	10:40 Am	d
8601182	01, 02	2/4/86	07:47	75/196	KCP	2/4/86	9:40	KCP

7S/196 (Water and Prep. Labs)

7S/194 (Extraction & Water Labs)

7S/180 (ICP and AA Labs)

7S/191 (TOX, TOC)

7S/195 (Technician)

7S/171 (GC)

RADIAN

DOC# 5445-6-101-2

~~DOC# 5421-6-101-2~~

CLP DIGESTED SAMPLE CHECK-OUT LOG

CASE #	SPLITS REMOVED	CHECK-OUT DATE/TIME/INITIALS	CHECK-IN DATE/TIME/INITIALS
5296	All	1-10-86/TAS/830A	1-10-86/TAS/430P
5315	All	1-11-86/JCO/10:30	1-11-86/2:30/JCO
5296	All	1-13-86/TAS/830A	1-13-86/500/TAS
5296	All	1-14-86/830A/TAS	1-14-86/10am/105
5296	all	1-15-86/8:45 AM/mk²	11AM/1-15-86/mk²
5315	all	1-15-86/11AM/mk²	1-15-86/5pm/mk²
5421	all	1-16-86/830A/TAS	1-16-86/4:30pm/mk²
5421 5445	all	1-17-86/8:30 AM/mk²	
5421	all	1-20-86/830M/TS	1-20-86/445P/TS
5296	all	1-20-86/8:45/JCO	1-20-86/3:00/JCO

000668

RADIAN
CORPORATION

CLP DIGESTED SAMPLE CHECK-OUT LOG

CASE #	SPLITS REMOVED	CHECK-OUT DATE/TIME/INITIALS	CHECK-IN DATE/TIME/INITIALS
5296 5445 5421	651233 03 only all all	1-21-86/8:45AM/JCO	1-21-86/12:30pm/JC
5445	all	1-22-86/9:30 AM/mk²	1/22/86/11AM/mk²
5296	~~all 2nd~~ wells 03	1-23/80 11AM/mk²	1-22 86/3pm/mk²
5453	all	1-23-86/8:15AM/JCO	1-23-86/5:00/JCO
5453 5445	all F only	1-24-86/9:00AM/JCO	1-24-86/4:00/Sel
5445 5453	all	1-27-86/10:20 AM/mk²	1-27-86/4:30pm/mk
5453 5478	all	1-28-86/10:26 AM/mk²	1-28-80/4:30pm/mk²
5453 ~~5453~~ 5478	all	1-30-86/10:26AM/mk²	1-30-86/4:45pm/mk²
5478	all	1-31-86/2:00 PM/JCO	1-31-86/4:15pm/JCO
mk² ~~5421~~ 5478	all	2-3-86/10:30 AM/mk²	2-3-86/4:40pm/mk²

DOC# 54445-6-103-1

CLP DIGESTION BENCH SHEET - WATERS

CASE #: 5445 RAS #: B601048 DATE: 1-16-96

SAMPLE CONCENTRATION: MEDIUM ☐ LOW ☑

DIGESTION TYPE: ICP/Sn ☐ FURNACE ☑ MERCURY ☐ CYANIDE ☐

SAMPLE #	ALIQUOT VOLUME	FINAL VOLUME	
BLANK	100 mL	100 mL	
LCS FURNACE			
B601048-01 MF0004			
B601048-01Dup MF0004			
B601048-01S/K MF0004			

ANALYST: dc

5421-B
DOC # 5445-6-104-2

CLP DIGESTION BENCH SHEET - SEDIMENTS

CASE #: ~~5421 SAS~~ ~~5445 7453~~ RAS #: B601047, B601048 B601106, B601107 DATE: 1-24-86

SAMPLE CONCENTRATION: MEDIUM ☐ LOW ☒

DIGESTION TYPE: ICP/Sn ☐ FURNACE ☐ MERCURY ☑ CYANIDE ☐

SAMPLE #	~~WET TARE~~ WT.	% ~~SAMPLE &~~ Solid ~~TARE~~	SAMPLE WT. OR MLS USED	FINAL VOLUME
BLANK			100 ml	
.4				
.2				
.1				
.05				
BLANK			100 ml	
ICCS WP263#1			100 ml	
LCS WP263#2			100 ml	
MUNICIPAL SLUDGE	0.02244g	100%	0.02244g	
B601047-02 MFC-038	0.23g	95%	0.22g	
B601047-02 Dup MFC-038	0.21g	95%	0.20g	
B601047-05 MFC-041	0.20g	93%	0.19g	
B601047-06 MFC-042	0.20g	90%	0.18g	
CCCS WP284#1			100 ml	
BLANK			100 ml	
B601048-01 MFC004			50 ml	
B601048-01 Dup MFC004				
B601048-01 SPK MFC004				
B601106-01 MAC-879				
B601106-01 Dup MAC-879				
B601106-03 MAC-881				
B601106-03 SPK MAC-881				
B601106-05 MAC-883				
B601106-07 MAC-885				
CCCS WP263#1			100 ml	
LCS WP263#2			100 ml	
BLANK			100 ml	

ANALYST: dh

CLP DIGESTION BENCH SHEET - SEDIMENTS

CASE #: 5421 5470 5485 5493 RAS #: B601047, B601048 B601106, B601107 DATE: 1-28-96

SAMPLE CONCENTRATION: MEDIUM ☐ LOW ☑

DIGESTION TYPE: ICP/Sn ☐ FURNACE ☑ MERCURY ☐ CYANIDE ☐

SAMPLE #	WET TARE WT.	% SAMPLE & SOLID TARE	SAMPLE WT. OR MLS USED	FINAL VOLUME
B601105-02 MAC-B01	0.28g	86%	0.24g	
B601105-02 DUP MAC-B01	0.29g	86%	0.25g	
B601106-01 MAC-B03	0.25g	84%	0.21g	
B601106-01 DUP MAC-B03	0.22g	84%	0.18g	
B601106-02 MAC-B05	0.22g	91%	0.25g	
B601107-01 MFB-733	0.21g	98%	0.24g	
B601107-01 DUP MFB-733	0.23g	98%	0.24g	
B601107-02 MFB-734	0.25g	99%	0.25g	
B601107-02 DUP MFB-734	0.27g	98%	0.27g	
B601107-05 MFB-735	0.23g	99%	0.23g	
CCCS WP 2633-1			100 ml	
BLANK		±	400 ml	

ANALYST: dc

5421-6

Doc# 5445-6-104.5-1

CLP DIGESTION BENCH SHEET - SEDIMENTS

CASE #: 5421 5445 RAS #: D601047 D601048 DATE: 1-17-86

SAMPLE CONCENTRATION: MEDIUM ☐ LOW ☑

DIGESTION TYPE: ICP/Sn ☐ FURNACE ☐ MERCURY ☑ CYANIDE ☐

SAMPLE #	~~WET WEIGHT~~ ~~TARE WT.~~	% ~~SAMPLE~~ ~~SOLID~~ ~~TARE~~	SAMPLE WT. OR MLS USED	FINAL VOLUME
BLANK			100 ml	
.4 STD				
.2 STD				
.1 STD				
.05 STD				
BLANK			100 ml	
ICCS WP 283#1			100 ml	
LCS WP 283#2			100 ml	
MUNICIPAL SLUDGE	0.01940g	100%	0.01940g	
D601047-01 MFC-037	0.21g	N/A	0.21	
D601047-02 MFC-038	0.21g	95%	0.20g	
D601047-02 Dup MFC-038	~~0.23g~~ 0.21g	95%	0.23g	
D601047-03 MFC-039	0.22g	92%	0.20g	
D601047-03 SPK MFC-039	0.25g	92%	0.23g	
D601047-04 MFC-040	0.28g	96%	0.27g	
D601047-05 MFC-041	0.24g	93%	0.22g	
D601047-06 MFC-042	0.23g	90%	0.21g	
CCCS WP 282#1			100ml	
BLANK			100 ml	
D601048-01 MF-0004			50 ml	
D601048-01 Dup MF-0004			↓	
D601048-01 SPK MF-0004			↓	
CCCS WP 284#1			100 ml	
BLANK			100 ml	

ANALYST: [signature]

DOC # 5445 - 6 - 105 - 1

CLP DIGESTION BENCH SHEET - WATERS

CASE #: 5445 RAS #: 8601048 DATE: 1-16-86

SAMPLE CONCENTRATION: MEDIUM ☐ LOW ☑

DIGESTION TYPE: ICP/Sn ☑ FURNACE ☐ MERCURY ☐ CYANIDE ☐

SAMPLE #	ALIQUOT VOLUME	FINAL VOLUME	
BLANK	100 ml	100 ml	
BLANK SPK			
LCS WP 284-02			
LCS MAJORS			
LCS Ag + Sb			
LCS Sn			
8601048-01 MF 0004			
8601048-01 Dup MF 0004			
8601048-01 SPK MF 0004			

ANALYST: [signature]

Book No. _____ TITLE CLP DOC# 5421-6-108 DOC# 5445-6-108

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PRE-DIGESTION SPIKE SOLN - ICP Waters

Into a 500 ml Volumetric, the following was added:

(1) 5 mls conc Ultrex HNO_3

(2) 10 mls, 1000 ppm Al Stnd # Fisher 744146-18
10 mls, 1000 ppm Ba Stnd # Fisher 744141-18

(3) 5 mls, 1000 ppm Fe Stnd # Am Sci 5160

(4) 25 mls. of a 100 ppm soln made from
- 1000 ppm Pb Fisher 852812-24
- 1000 ppm Co Spex 0585RS
- 1000 ppm V Spex 0985IDH

(5) 2 mls of 1000 ppm Ni Stnd # Spex 0585RS

(6) 5 mls of 250 ppm Cu Stnd # Spex 07550HB2

(7) 1 ml each of 1000 ppm Stnd
Cr 0185MP
Zn 0455IRS
Mn 0385DHB

(8) 1 ml of 250 ppm soln made from
Be 0184P
Cd 0285MP

(9) 1.25 grams dry $CaCO_3$ Spex # 07841R
1.25 grams dry NaCl " " 04841DM
0.42 " " MgO " " 05841P
0.48 " " KCl " " 06841DM

~ end ~

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Witnessed & Understood by me, _____ Date _____

Invented by _____

Recorded by _____ Date 12Dec85

000675

Pre-digestion Spike Solution for ICAP (CLP) SEDIMENTS

Into a 400 ml volumetric, the following was added

(1) 5 mls conc ultrex Nitric Acid

(2) 5 mls conc ultrex Hydrochloric Acid

(3) 40 mls Barium Std Spex 0485RS 1000 ppm exp Oct 86

(4) 10 mls each of 1000 ppm Std

- Pb Fisher 852812-24 exp July 87
- Co Spex 0585RS Aug 86
- Mn Spex 0885DH-4 Aug 86
- Ni Spex 0585RS " "
- V Spex 09851DH none
- Zn Spex 0485IRS Aug 86

(5) 5 mls Copper Spex 0285 OH82 (1000 ppm) exp Aug 86

(6) 4 mls Chromium Spex 0585RS " " "

(7) 1 ml ea of 1000 ppm Std

- Be Spex 0685 DH Aug 86
- Cd Spex 0285 MP May 86

— end —

For Spike, add 10 → 100 ml

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Recorded by

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Digestion Spike - Silver and Antimony

2.5 ppm Ag

25 ppm Sb

500 mls total, 20% HCl

for solids: add 10 mls to 100

for waters: add 2 mls to 100

Ag - Spex 0785DH Exp Aug 86

Sb - Spex 1184P Exp ?

Sanders 2 Dec 85

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		Recorded by	

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- Into a 1000 ml volumetric flask was added:

5 ml Baneo lot H1-17 1000ppm Se standard
5 ml Fisher lot 852812-24 1000ppm Pb standard
10 ml Ricca lot 2190 1000ppm Thallium Standard
10 ml Fisher lot 855087-24 1000ppm As standard
10 ml Ultrex Nitric acid
- contents diluted to volume with DI water
This solution now contains:
(1) 5ppm Se, Pb
10ppm As, Tl

- Into a 100 ml volumetric flask was added:

4 mls solution #1 above
- contents diluted to volume with DI water
This solution now contains:
(2) 200ppb Se, Pb
400ppb As, Tl

- Into a 1000 ml volumetric flask was added:

10 ml Fisher lot 743703-24 1000ppm Sn standard
10 ml Ultrex HCl
- contents diluted to volume with DI water
(3) This solution now contains 10ppm Sn

- Into a 100 ml volumetric flask was added:

16 ml solution #3 above
1 ml Ultrex HCl
- contents diluted to volume with DI water
(4) This solution contains 1.6ppm Sn.

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000678		Mary Riddle	11/27/85