



May 8, 1991  
P09199.36.20  
T.206



Fileable -  
#130003A

New York State Department of  
Environmental Conservation  
Bureau of Western Remedial Action  
Division of Hazardous Waste Remediation  
50 Wolf Road  
Albany, NY 12233-7010

Attention: Mr. John Barnes  
Project Manager

**NYSDEC PRP - Grumman Site  
Split Sample Analytical Results  
For RW-1A and BS-1**

Gentlemen:

Please find enclosed a copy of the sample analytical data summary package received from Recra Environmental, Inc. for the split water sample (#RW-1A) and split sediment composite sample (#BS-1) taken at recharge basin no. 1. A copy of the chain-of-custody record has also been included for your files.

The original data package will be kept on file at Acres office.

Should you have any questions regarding the results, please feel free to contact Recra or me.

Very truly yours,

Kenneth F. Litfin  
Project Manager

KFL:amd  
Enclosures

**ACRES INTERNATIONAL CORPORATION**  
Engineers, Scientists, and Planners  
140 John James Audubon Parkway  
Amherst, NY 14228-1180  
716-689-3737 Telex 91-6423  
Fax 716-689-3749



a18207.0

# RECRA ENVIRONMENTAL, INC.

Chemical and Environmental Analysis Services

April 23, 1991

Mr James Stachowski  
Acres International Corp.  
140 James Audobon Parkway  
Amherst, NY 14228

Re: Analytical Results

Dear Mr. Stachowski:

Please find enclosed results concerning the analyses of the samples recently submitted by your firm. The Pertinent Information regarding these analyses is listed below:

Quote #: NY91-308  
Project #: NY1A3172  
Matrix: Soil & Aqueous  
Samples Received: 3/6/91  
Sample Date: 3/5/91

If you have any questions concerning these data, please contact Mr. Robert Kissel, Project Manager at (716) 691-2600 and refer to the I.D. number listed below. It has been our pleasure to provide Acres International Corp. with Environmental Testing Services. We look forward to serving you in the future.

Sincerely,

RECRA ENVIRONMENTAL, INC.

Deborah J. Kinecki  
Vice President  
New York Environmental  
Testing Operations

AMK/DJK/gsd  
Enclosure

I.D. #91-0577/A  
#NY1A3172

PROJECT DEC. PRP <i>Crummer</i>			GRAND PATRON HELPING TO BRING THE WORLD TO BUFFALO 1993
FILE NO. P09199 <i>36.42</i>			
ACTION	INFORM.	DISTRIB.	INITIAL
		<i>F.199</i>	
		<i>JRS</i>	<i>JRS</i>
		<i>KFE</i>	<i>KFE</i>
PRG. SEC. CLERK <i>and</i>			



SAMPLE DATA SUMMARY PACKAGE



RECRA ENVIRONMENTAL, INC.

a18207.01

CASE NARRATIVE

Laboratory Name: Recra Environmental, Inc.

Laboratory Code: RECNY

Case Number: 3172

Contract Number: NY91-308

Sample Identifications:

BS-1

RW-1A

Trip Blank

GENERAL COMMENTS

All analyses were performed in accordance with New York State 1989 Analytical Services Protocol.

Results of the analysis of soils are corrected for moisture content and are reported on a dry weight basis.

Results are reported utilizing standard qualifiers as defined on the Organic & Inorganic Data Comment Pages.

VOLATILE DATA

Volatile sample and standard areas are listed on the corresponding data system printout.

Volatile data are processed utilizing Finnigan Autoquantitation and QA Formaster software. All compounds determined to be present by the computer-generated autoquantitation were subjected to a manual ion search for secondary and tertiary ions. Unedited Quantatition reports have been submitted in this data package.



RECRA ENVIRONMENTAL, INC.

1/17253.2

INORGANIC DATA

The extra zzzzz's on the Form 14's of the Flame Inorganic Data represents the re-zeroing of the instrument after each sample.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or her designee, as verified by the following signature."

*Deborah J. Kinecki*  
Deborah J. Kinecki

4/23/91  
Date



RECRE ENVIRONMENTAL, INC.

NEW YORK STATE  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION  
AND  
ANALYTICAL REQUIREMENT SUMMARY

CUSTOMER SAMPLE CODE	LABORATORY SAMPLE CODE	ANALYTICAL REQUIREMENTS*					
		VOA* GC/MS	BNA* GC/MS	VOA* GC	PEST* PCB	METALS*	OTHER*
BS-1	91-0577	-	-	-	-	HSL/ASP89	-
RW-1A	91-0577	TCL/ASP89	-	-	-	-	-
Trip Blank	91-0577	TCL/ASP89	-	-	-	-	-

NYSDEC-1



RECRA ENVIRONMENTAL, INC.

NEW YORK STATE  
DEPARTMENT OF ENVIRONMENTAL CONSERVATIONSAMPLE PREPARATION AND ANALYSIS SUMMARY  
VOA ANALYSES

SAMPLE IDENTIFICATION	MATRIX	DATE COLLECTED	DATE RECEIVED AT LAB	DATE EXTRACTED	DATE ANALYZED
RW-1A Trip Blank	Water Water	3/5/91 3/5/91	3/6/91 3/6/91	NA NA	3/7/91 3/7/91

NYSDEC-2



RECRA ENVIRONMENTAL, INC.



1/18207.4

NEW YORK STATE  
DEPARTMENT OF ENVIRONMENTAL CONSERVATIONSAMPLE PREPARATION AND ANALYSIS SUMMARY  
INORGANIC ANALYSES

SAMPLE IDENTIFICATION	MATRIX	METALS REQUESTED	DATE RECEIVED AT LAB	DATE DIGESTED	DATE ANALYZED
BS-1	Soil	HSL	3/6/91	3/11/91	3/11-20/91



RECRA ENVIRONMENTAL, INC.

NYSDEC-5

NEW YORK STATE  
DEPARTMENT OF ENVIRONMENTAL CONSERVATIONSAMPLE PREPARATION AND ANALYSIS SUMMARY  
ORGANIC ANALYSES

SAMPLE IDENTIFICATION	MATRIX	ANALYTICAL PROTOCOL	EXTRACTION METHOD	AUXILARY CLEAN UP	DIL/CONC FACTOR
RW-1A Trip Blank	Water Water	ASP 89 ASP 89	NA NA	As required As required	As required As required



RECRE ENVIRONMENTAL, INC.

NYSDEC-6

1/18207.6

NEW YORK STATE  
DEPARTMENT OF ENVIRONMENTAL CONSERVATIONSAMPLE PREPARATION AND ANALYSIS SUMMARY  
INORGANIC ANALYSES

LABORATORY SAMPLE CODE	MATRIX	ANALYTICAL PROTOCOL	DIGESTION PROCEDURE	MATRIX MODIFIER	DIL/CONC FACTOR
BS-1	Water	ASP 89	ASP 89	As required	As required



REGRA ENVIRONMENTAL, INC.

NYSDEC-7

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

RW1A

Lab Name: RECRA ENVIRON Contract: NY91-308  
 Lab Code: RECNY Case No.: 3172 SAS No.: \_\_\_\_\_ SDG No.: 0105  
 Matrix: (soil/water) WATER Lab Sample ID: RW1A  
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 3504H  
 Level: (low/med) LOW Date Received: 03/06/91  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 03/07/91  
 Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO. COMPOUND Q

74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	2	BJ
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

RW1A

Lab Name: RECRA ENVIRON Contract: NY91-308  
Lab Code: RECNY Case No.: 3172 SAS No.: \_\_\_\_\_ SDG No.: 0105  
Matrix: (soil/water) WATER Lab Sample ID: RW1A  
Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 3504H  
Level: (low/med) LOW Date Received: 03/06/91  
% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 03/07/91  
Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIPBLANK

Lab Name: RECRA ENVIRON Contract: NY91-308  
 Lab Code: RECNV Case No.: 3172 SAS No.: \_\_\_\_\_ SDG No.: 0105  
 Matrix: (soil/water) WATER Lab Sample ID: TRIPBLANK  
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 3503H  
 Level: (low/med) LOW Date Received: 03/06/91  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 03/07/91  
 Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	2	J
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	2	BJ
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

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1E  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIPBLANK

Lab Name: RECRA ENVIRON Contract: NY91-308  
 Lab Code: RECNY Case No.: 3172 SAS No.: \_\_\_\_\_ SDG No.: 0105  
 Matrix: (soil/water) WATER Lab Sample ID: TRIPBLANK  
 Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 3503H  
 Level: (low/med) LOW Date Received: 03/06/91  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 03/07/91  
 Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: RECRA\_ENVIRONMENTAL\_INC. Contract: NY91-308
Lab Code: RECNY Case No.: 3172 SAS No.: SDG No.:0105
SOW No.: 3/90

Table with 2 columns: EPA Sample No. (BS-1) and Lab Sample ID (4137). The table contains multiple rows of blank lines for data entry.

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

Comments:

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

Signature: Deborah J Kinecki Name: DEBORAH J. KINECKI

Date: 4/24/91 Title: VICE PRESIDENT NEW YORK TESTING OPERATIONS



U.S. EPA - CLP

1  
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

BS-1

Lab Name: RECRA\_ENVIRONMENTAL\_INC. Contract: NY91-308

Lab Code: RECNY Case No.: 3172 SAS No.: SDG No.: 0105

Matrix (soil/water): SOIL Lab Sample ID: 4137

Level (low/med): LOW Date Received: 03/06/91

% Solids: 75.2

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

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1340	-	E	P
7440-36-0	Antimony	1.3	U		F
7440-38-2	Arsenic	1.3	U	W	F
7440-39-3	Barium	13.3	U		P
7440-41-7	Beryllium	1.3	U		P
7440-43-9	Cadmium	1.3	U		P
7440-70-2	Calcium	217	B		P
7440-47-3	Chromium	84.2			P
7440-48-4	Cobalt	13.3	U		A
7440-50-8	Copper	134			P
7439-89-6	Iron	2300			P
7439-92-1	Lead	79.5			P
7439-95-4	Magnesium	199	B		P
7439-96-5	Manganese	12.8			P
7439-97-6	Mercury	0.31			CV
7440-02-0	Nickel	5.6	B		P
7440-09-7	Potassium	79.8	U		P
7782-49-2	Selenium	1.3	U	W	F
7440-22-4	Silver	16.5			A
7440-23-5	Sodium	105	B		P
7440-28-0	Thallium	1.3	U	W	F
7440-62-2	Vanadium	8.0	U		P
7440-66-6	Zinc	37.8			P
	Cyanide	1.33	U		C
	CR +6	0.81	U		A

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2A  
WATER VOLATILE SURROGATE RECOVERY

Lab Name: RECRA ENVIRON Contract: NY91-308

Lab Code: RECN Case No.: 3172 SAS No.: \_\_\_\_\_ SDG No.: 0105

	EPA SAMPLE NO.	S1 (TOL) #	S2 (BFB) #	S3 (DCE) #	OTHER	TOT OUT
	=====	=====	=====	=====	=====	=====
01	RW1A	102	102	88	0	0
02	TRIPBLANK	94	95	90	0	0
03	VBLK20	97	99	90	0	0

QC LIMITS

S1 (TOL) = Toluene-d8 ( 88-110)  
 S2 (BFB) = Bromofluorobenzene ( 86-115)  
 S3 (DCE) = 1,2-Dichloroethane-d4 ( 76-114)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D Surrogates diluted out

4A  
VOLATILE METHOD BLANK SUMMARY

Lab Name: RECRA ENVIRON Contract: NY91-308  
 Lab Code: RECNY Case No.: 3172 SAS No.: \_\_\_\_\_ SDG No.: 0105  
 Lab File ID: 3501H Lab Sample ID: VBLK20  
 Date Analyzed: 03/07/91 Time Analyzed: 1553  
 Matrix: (soil/water) WATER Level: (low/med) LOW  
 Instrument ID: I50H

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	RW1A	RW1A	3504H	1752
02	TRIPBLANK	TRIPBLANK	3503H	1714

COMMENTS: VBLK 20  
I50H

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK20

Lab Name: RECRA ENVIRON Contract: NY91-308

Lab Code: RECNY Case No.: 3172 SAS No.: \_\_\_\_\_ SDG No.: 0105

Matrix: (soil/water) WATER Lab Sample ID: VBLK20

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 3501H

Level: (low/med) LOW Date Received: \_\_\_\_\_

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 03/07/91

Column: (pack/cap) PACK Dilution Factor: 1.0

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

CAS NO. COMPOUND Q

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	0.6	J
67-64-1	Acetone	4	J
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	2	J
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK20

Lab Name: RECRA ENVIRON Contract: NY91-308  
Lab Code: RECNY Case No.: 3172 SAS No.: \_\_\_\_\_ SDG No.: 0105  
Matrix: (soil/water) WATER Lab Sample ID: VBLK20  
Sample wt/vol: 5.0 (g/mL) ML Lab File ID: 3501H  
Level: (low/med) LOW Date Received: \_\_\_\_\_  
% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 03/07/91  
Column (pack/cap) PACK Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====

8A  
VOLATILE INTERNAL STANDARD AREA SUMMARY

19

Lab Name: RECRA ENVIRON Contract: NY91-308  
 Lab Code: RECNY Case No.: 3172 SAS No.: \_\_\_\_\_ SDG No.: 0105  
 Lab File ID (Standard): 3498H Date Analyzed: 03/07/91  
 Instrument ID: I50H Time Analyzed: 1320  
 Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

	IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	24300	8.15	122000	18.40	108000	23.20
=====	=====	=====	=====	=====	=====	=====
UPPER LIMIT	48600		244000		216000	
=====	=====	=====	=====	=====	=====	=====
LOWER LIMIT	12150		61000		54000	
=====	=====	=====	=====	=====	=====	=====
EPA SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 RW1A	26600	8.12	129000	18.40	111000	23.19
02 TRIPBLANK	25500	8.10	133000	18.40	117000	23.19
03 VBLK20	26200	8.12	130000	18.40	114000	23.20

IS1 (BCM) = Bromochloromethane  
 IS2 (DFB) = 1,4-Difluorobenzene  
 IS3 (CBZ) = Chlorobenzene  
 UPPER LIMIT = + 100%  
 of internal standard area.  
 LOWER LIMIT = - 50%  
 of internal standard area.

# Column used to flag internal standard area values with an asterisk