

# American Environmental Network

## Certificate of Analysis

DOHS # 1172

AIHA Accreditation: 11134

PAGE 1

GEOMATRIX CONSULTANTS  
100 PINE STREET, 10TH FLOOR  
SAN FRANCISCO, CA 94111

ATTN: CHERI PAGE

CLIENT PROJ. ID: 2530A  
C.O.C. NO: 5787

REPORT DATE: 02/04/94

DATE SAMPLED: 01/20/94

DATE RECEIVED: 01/21/94

AEN JOB NO: 9401205

### PROJECT SUMMARY:

On January 21, 1994, this laboratory received one (1) water sample.

Client requested the sample be analyzed for inorganic parameters. Sample identification, methodologies, results and dates analyzed are summarized on the following pages.

All laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

If you have any questions, please contact Client Services at (510) 930-9090.

  
Larry Klein  
General Manager

## GEOMATRIX CONSULTANTS

SAMPLE ID: B1-M  
AEN LAB NO: 9401205-01  
AEN WORK ORDER: 9401205  
CLIENT PROJ. ID: 2530A

DATE SAMPLED: 01/20/94  
DATE RECEIVED: 01/21/94  
REPORT DATE: 02/04/94

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ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	01/27/94
Arsenic	EPA 7060	ND	0.002	mg/L	02/01/94
#Digestion, Metals by ICP	EPA 3010	-		Prep Date	01/27/94
Chromium	EPA 6010	ND	0.01	mg/L	01/28/94
Lead	EPA 6010	ND	0.04	mg/L	01/28/94
Thallium	EPA 6010	ND	0.1	mg/L	01/28/94

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ND = Not detected

\* = Indicates value above reporting limit

## QUALITY CONTROL DATA

MATRIX: WATER

AEN JOB NO: 9401205

CLIENT PROJ. ID: 2530A

DATE DIGESTED: 01/27/94

## METHOD SPIKE RECOVERY SUMMARY

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Compound	Inst./ Method	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits	
					% Rec. Limit	RPD Limit
As, Arsenic	4000/7060	0.04	98	<1	90-115	12
Cr, Chromium	ICP/6010	0.2	102	<1	85-114	6
Pb, Lead	ICP/6010	0.5	107	<1	87-115	6
Tl, Thallium	ICP/6010	0.5	101	6	77-118	6

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RPD = Relative Percent Difference  
< = Less Than

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

\*\*\* END OF REPORT \*\*\*

9401205

**Chain-of-Custody Record**      No 5787      Date: 1/21/94      Page 1 of 1

Project No: 2530A      ANALYSES      REMARKS

Samplers (Signatures):			EPA Method 8010	EPA Method 8020	EPA Method 8240	EPA Method 8270	TPH as gasoline	TPH as diesel	TPH as BTEX												Additional comments	
Date	Time	Sample Number																				
1/20	1620	B1-M																				

Turnaround time: STD      Results to: Chris Page      Total No. of containers: 1

Relinquished by: Signature: <i>[Signature]</i> Printed name: <b>Charire Crocker</b> Company: <b>Geomatrix</b>	Date: 1/21/94	Relinquished by: Signature: <i>[Signature]</i> Printed name: <b>K. E. W.</b> Company:	Date: 1/21/94	Relinquished by:	Date:	Relinquished by:	Date:
Received by: Signature: <i>[Signature]</i> Printed name: <b>AEN</b> Company:	Time: 1815	Received by: Signature: <i>[Signature]</i> Printed name: <b>DENISE HARRINGTON</b> Company:	Time: 1900	Received by:	Time:	Received by:	Time:

Method of shipment: *pick up*  
Laboratory comments and Log No.: 9401205

**Geomatrix Consultants**  
100 Pine St. 10th Floor  
San Francisco, CA 94111  
(415) 434-9400

01A

# American Environmental Network

## Certificate of Analysis

DOHS Division: 1172

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PAGE 1

GEOMATRIX CONSULTANTS  
100 PINE ST., 10TH FLOOR  
SAN FRANCISCO, CA 94111

ATTN: CHERI PAGE

CLIENT PROJ. ID: 2530A  
C.O.C. NO: 4185

REPORT DATE: 02/04/94  
DATE SAMPLED: 01/20/94  
DATE RECEIVED: 01/24/94  
ANALYSIS REQUESTED: 01/25-28/94  
AEN JOB NO: 9401226

### PROJECT SUMMARY:

On January 24, 1994, this laboratory received four (4) water samples.

On January 25, 1994, client requested two (2) samples be analyzed for organic parameters. On January 28, 1994, client requested one (1) sample be taken off hold and be analyzed for organic parameters. One (1) sample remains on hold. Sample identification, methodologies, results and dates analyzed are summarized on the following pages.

All laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

If you have any questions, please contact Client Services at (510) 930-9090.



Larry Klein  
General Manager

## GEOMATRIX CONSULTANTS

SAMPLE ID: P-2  
 AEN LAB NO: 9401226-02  
 AEN WORK ORDER: 9401226  
 CLIENT PROJ. ID: 2530A

DATE SAMPLED: 01/20/94  
 DATE RECEIVED: 01/24/94  
 REPORT DATE: 02/04/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	0.5	ug/L	02/01/94
Bromoform	75-25-2	ND	0.5	ug/L	02/01/94
Bromomethane	74-83-9	ND	0.5	ug/L	02/01/94
Carbon Tetrachloride	56-23-5	ND	0.5	ug/L	02/01/94
Chlorobenzene	108-90-7	ND	0.5	ug/L	02/01/94
Chloroethane	75-00-3	ND	0.5	ug/L	02/01/94
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5	ug/L	02/01/94
Chloroform	67-66-3	ND	0.5	ug/L	02/01/94
Chloromethane	74-87-3	ND	0.5	ug/L	02/01/94
Dibromochloromethane	124-48-1	ND	0.5	ug/L	02/01/94
1,2-Dichlorobenzene	95-50-1	ND	0.5	ug/L	02/01/94
1,3-Dichlorobenzene	541-73-1	ND	0.5	ug/L	02/01/94
1,4-Dichlorobenzene	106-46-7	ND	0.5	ug/L	02/01/94
Dichlorodifluoromethane	75-71-8	ND	0.5	ug/L	02/01/94
1,1-Dichloroethane	75-34-3	4 *	0.5	ug/L	02/01/94
1,2-Dichloroethane	107-06-2	ND	0.5	ug/L	02/01/94
1,1-Dichloroethene	75-35-4	ND	0.5	ug/L	02/01/94
cis-1,2-Dichloroethene	156-59-2	0.6 *	0.5	ug/L	02/01/94
trans-1,2-Dichloroethene	156-60-5	ND	0.5	ug/L	02/01/94
1,2-Dichloropropane	78-87-5	ND	0.5	ug/L	02/01/94
cis-1,3-Dichloropropene	10061-01-5	ND	0.5	ug/L	02/01/94
trans-1,3-Dichloropropene	10061-02-6	ND	0.5	ug/L	02/01/94
Methylene Chloride	75-09-2	ND	0.5	ug/L	02/01/94
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5	ug/L	02/01/94
Tetrachloroethene	127-18-4	ND	0.5	ug/L	02/01/94
1,1,1-Trichloroethane	71-55-6	ND	0.5	ug/L	02/01/94
1,1,2-Trichloroethane	79-00-5	ND	0.5	ug/L	02/01/94
Trichloroethene	79-01-6	ND	0.5	ug/L	02/01/94
Trichlorofluoromethane	75-69-4	ND	0.5	ug/L	02/01/94
1,1,2Trichlorotrifluoroethane	76-13-1	ND	0.5	ug/L	02/01/94
Vinyl Chloride	75-01-4	ND	0.5	ug/L	02/01/94

ND = Not detected

\* = Indicates value above reporting limit

## GEOMATRIX CONSULTANTS

SAMPLE ID: P-3  
 AEN LAB NO: 9401226-03  
 AEN WORK ORDER: 9401226  
 CLIENT PROJ. ID: 2530A

DATE SAMPLED: 01/20/94  
 DATE RECEIVED: 01/24/94  
 REPORT DATE: 02/04/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	0.5	ug/L	02/01/94
Bromoform	75-25-2	ND	0.5	ug/L	02/01/94
Bromomethane	74-83-9	ND	0.5	ug/L	02/01/94
Carbon Tetrachloride	56-23-5	ND	0.5	ug/L	02/01/94
Chlorobenzene	108-90-7	ND	0.5	ug/L	02/01/94
Chloroethane	75-00-3	ND	0.5	ug/L	02/01/94
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5	ug/L	02/01/94
Chloroform	67-66-3	ND	0.5	ug/L	02/01/94
Chloromethane	74-87-3	ND	0.5	ug/L	02/01/94
Dibromochloromethane	124-48-1	ND	0.5	ug/L	02/01/94
1,2-Dichlorobenzene	95-50-1	ND	0.5	ug/L	02/01/94
1,3-Dichlorobenzene	541-73-1	ND	0.5	ug/L	02/01/94
1,4-Dichlorobenzene	106-46-7	ND	0.5	ug/L	02/01/94
Dichlorodifluoromethane	75-71-8	ND	0.5	ug/L	02/01/94
1,1-Dichloroethane	75-34-3	0.6 *	0.5	ug/L	02/01/94
1,2-Dichloroethane	107-06-2	ND	0.5	ug/L	02/01/94
1,1-Dichloroethene	75-35-4	ND	0.5	ug/L	02/01/94
cis-1,2-Dichloroethene	156-59-2	ND	0.5	ug/L	02/01/94
trans-1,2-Dichloroethene	156-60-5	ND	0.5	ug/L	02/01/94
1,2-Dichloropropane	78-87-5	ND	0.5	ug/L	02/01/94
cis-1,3-Dichloropropene	10061-01-5	ND	0.5	ug/L	02/01/94
trans-1,3-Dichloropropene	10061-02-6	ND	0.5	ug/L	02/01/94
Methylene Chloride	75-09-2	ND	0.5	ug/L	02/01/94
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5	ug/L	02/01/94
Tetrachloroethene	127-18-4	ND	0.5	ug/L	02/01/94
1,1,1-Trichloroethane	71-55-6	ND	0.5	ug/L	02/01/94
1,1,2-Trichloroethane	79-00-5	ND	0.5	ug/L	02/01/94
Trichloroethene	79-01-6	ND	0.5	ug/L	02/01/94
Trichlorofluoromethane	75-69-4	ND	0.5	ug/L	02/01/94
1,1,2Trichlorotrifluoroethane	76-13-1	ND	0.5	ug/L	02/01/94
Vinyl Chloride	75-01-4	ND	0.5	ug/L	02/01/94

ND = Not detected

\* = Indicates value above reporting limit

## GEOMATRIX CONSULTANTS

SAMPLE ID: P-4  
 AEN LAB NO: 9401226-04  
 AEN WORK ORDER: 9401226  
 CLIENT PROJ. ID: 2530A

DATE SAMPLED: 01/20/94  
 DATE RECEIVED: 01/24/94  
 REPORT DATE: 02/04/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	0.5	ug/L	02/01/94
Bromoform	75-25-2	ND	0.5	ug/L	02/01/94
Bromomethane	74-83-9	ND	0.5	ug/L	02/01/94
Carbon Tetrachloride	56-23-5	ND	0.5	ug/L	02/01/94
Chlorobenzene	108-90-7	ND	0.5	ug/L	02/01/94
Chloroethane	75-00-3	ND	0.5	ug/L	02/01/94
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5	ug/L	02/01/94
Chloroform	67-66-3	ND	0.5	ug/L	02/01/94
Chloromethane	74-87-3	ND	0.5	ug/L	02/01/94
Dibromochloromethane	124-48-1	ND	0.5	ug/L	02/01/94
1,2-Dichlorobenzene	95-50-1	ND	0.5	ug/L	02/01/94
1,3-Dichlorobenzene	541-73-1	ND	0.5	ug/L	02/01/94
1,4-Dichlorobenzene	106-46-7	ND	0.5	ug/L	02/01/94
Dichlorodifluoromethane	75-71-8	ND	0.5	ug/L	02/01/94
1,1-Dichloroethane	75-34-3	ND	0.5	ug/L	02/01/94
1,2-Dichloroethane	107-06-2	ND	0.5	ug/L	02/01/94
1,1-Dichloroethene	75-35-4	ND	0.5	ug/L	02/01/94
cis-1,2-Dichloroethene	156-59-2	ND	0.5	ug/L	02/01/94
trans-1,2-Dichloroethene	156-60-5	ND	0.5	ug/L	02/01/94
1,2-Dichloropropane	78-87-5	ND	0.5	ug/L	02/01/94
cis-1,3-Dichloropropene	10061-01-5	ND	0.5	ug/L	02/01/94
trans-1,3-Dichloropropene	10061-02-6	ND	0.5	ug/L	02/01/94
Methylene Chloride	75-09-2	ND	0.5	ug/L	02/01/94
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5	ug/L	02/01/94
Tetrachloroethene	127-18-4	ND	0.5	ug/L	02/01/94
1,1,1-Trichloroethane	71-55-6	ND	0.5	ug/L	02/01/94
1,1,2-Trichloroethane	79-00-5	ND	0.5	ug/L	02/01/94
Trichloroethene	79-01-6	ND	0.5	ug/L	02/01/94
Trichlorofluoromethane	75-69-4	ND	0.5	ug/L	02/01/94
1,1,2Trichlorotrifluoroethane	76-13-1	ND	0.5	ug/L	02/01/94
Vinyl Chloride	75-01-4	ND	0.5	ug/L	02/01/94

ND = Not detected

\* = Indicates value above reporting limit



## QUALITY CONTROL DATA

INSTRUMENT: G

AEN JOB NO: 9401226

CLIENT PROJ. ID: 2530A

SURROGATE STANDARD RECOVERY SUMMARY  
 METHOD: EPA 8010  
 (WATER MATRIX)

Date Analyzed	SAMPLE IDENTIFICATION		SURROGATE RECOVERY (PERCENT)	
	Client Id.	Lab Id.	Bromochloro-methane	1-Bromo-2-chloro-propane
02/01/94	P-2	02	70	69
02/01/94	P-3	03	97	104
02/01/94	P-4	04	66	67

## CURRENT QC LIMITS

<u>ANALYTE</u>	<u>PERCENT RECOVERY</u>
Bromochloromethane	(65-138)
1-Bromo-2-chloropropane	(61-141)

## QUALITY CONTROL DATA

DATE ANALYZED: 01/31/94  
 SAMPLE SPIKED: 9401200-01  
 CLIENT PROJ. ID: 2530A

AEN JOB NO: 9401226

INSTRUMENT: G

MATRIX SPIKE RECOVERY SUMMARY  
 METHOD: EPA 8010  
 (WATER MATRIX)

ANALYTE	Spike Added (ug/L)	Average Percent Recovery	RPD
1,1-Dichloroethene	50.0	70	6
Trichloroethene	50.0	83	2
Chlorobenzene	50.0	68	2

## CURRENT QC LIMITS

Analyte	Percent Recovery	RPD
1,1-Dichloroethene	(45-120)	20
Trichloroethene	(60-120)	20
Chlorobenzene	(50-120)	20

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

\*\*\* END OF REPORT \*\*\*

9401226

### Chain-of-Custody Record

No. 4185

Date: 1/24/93

Page 1 of 1


Project No.: 2530A			ANALYSES										REMARKS												
Samplers (Signatures):			EPA Method 8010	EPA Method 8020	EPA Method 8240	EPA Method 8270	TPH as gasoline	TPH as diesel	TPH as BTEX												Additional comments				
Date	Time	Sample Number												Cooled	Soil (S) or water (W)	Acidified	Number of containers								
1/20	1045	P-1	X											X	W	X		Hold indefinitely wait for final authorization to analyze. P-3 hold indefinitely 1/28/93 - In Cheri Page, analyze P-2 & P-3. Sample P-1 & P-4 on hold. RB							
1/20	1200	P-2	X										X	W	X										
1/20	1340	P-3	X										X	W	X										
1/20	1540	P-4	X										X	W	X										
<del>Hold 1/28</del>																									

Turnaround time: STD Results to: Cheri Page Total No. of containers:

Relinquished by: *Cheri Page*  
 Signature: *Cheri Page*  
 Printed name:  
 Company: Geomatrix  
 Received by: *Loei L. Pruitt*  
 Signature: *Loei L. Pruitt*  
 Printed name: AEN  
 Company:

Date: 1/24/93  
 Relinquished by:  
 Signature:  
 Printed name:  
 Company:  
 Received by:  
 Signature: *Loei L. Pruitt*  
 Printed name:  
 Company:

Date:  
 Relinquished by:  
 Signature:  
 Printed name:  
 Company:  
 Received by:  
 Signature:  
 Printed name:  
 Company:

Date: Method of shipment: PICK UP  
 Laboratory comments and Log No.: 9401226  
 1/28/93 Take P-4 off hold and analyze Standard T.A.F. RB  
  
**Geomatrix Consultants**  
 100 Pine St. 10th Floor  
 San Francisco, CA. 94111  
 (415) 434-9400