06-01
10/18/94

Fac/Perm/Co ID #	Date	Doc ID#
BC	6/4/08	DIN

X-methods
X-blanks

Larry,
They probably need a response from us on MW-1. What do you think? Maybe some of the other questions can be resolved at that time. OK

ENGINEERING TECTONICS, P.A.
ENGINEERS • GEOLOGISTS • HYDROLOGISTS
P.O. Box I, Winston-Salem, NC 27108 (910) 724-6994

06-01
10/18/94

ENGINEERING TECTONICS, P.A.
ENGINEERS • GEOLOGISTS • HYDROLOGISTS
P.O. Box I, Winston-Salem, NC 27108 (910) 724-6994

Fac/Perm/Co ID #	Date	Doc ID#
6	6 14 1678	DIN

RECEIVED
Solid Waste
JAN 30 1995
MANAGEMENT

January 18, 1995

North Carolina Department of Environment, Health and Natural Resources
Solid Waste Division
PO Box 27687
Raleigh, North Carolina 27611-7687

Attention: Mr. Bill Myers

Subject: Groundwater Sampling Report
Avery County Landfill
Newland, North Carolina
Project No. 90-247.01-E

Mr. Myers:

On October 18, 1994 Engineering Tectonics, P.A. (ETPA) personnel mobilized to the Avery County Landfill in Newland, North Carolina to sample two groundwater monitoring wells, MW-2 and MW-3. A copy of the report for this sampling event is attached. Through operations associated with the closure of the landfill, MW-1 has been damaged. ETPA recommends that MW-1 either be abandoned, or repaired/replaced and sampled during the April 1995 sampling event.

If you have any questions concerning the above, please contact me at (910) 724-6994 or (800) 394-8807. Thank you.

Sincerely,

ENGINEERING TECTONICS, P.A.

Dan Bowser
Geologist

JAN 1995
Received
Solid Waste
Section

cc: Randall Fletcher, Avery County Manager

Enc.

Groundwater Sampling Report

Avery County Landfill

Newland, North Carolina

Project No. 90-247.01-E

Prepared for:

Avery County
PO Box 356
Newland, North Carolina 28657

Prepared by:

Engineering Tectonics, P.A.
Winston-Salem, North Carolina

January 18, 1995

Groundwater Monitoring Well Sampling

On October 18, 1994, Engineering Tectonics, P.A. (ETPA) personnel mobilized to the Avery County Landfill to sample three groundwater monitoring wells (MW-1 through MW-3). However, due to operations associated with the closure of the Avery County Landfill, MW-1 was buried under approximately two feet of soil and could not be located. Mr. Randall Fletcher, Manager of Avery County was contacted and provisions were made to uncover MW-1.

Groundwater monitoring wells MW-2, and MW-3 were located and sampled as per the subject site's NCDEHNR permit. Depth to water was measured in each monitoring well, and each well was developed prior to sampling with a new disposable bailer. A minimum of three volumes of water was purged from each well, and water samples collected according to EPA sampling protocols. The sar analytical laboratory, using EPA approved cha were submitted for analysis using EPA method specific conductance, chloride, fluoride, nitrate, barium, cadmium, chromium, copper, iron , lea and zinc.

what kind of bailer?

2/17/95

- Purged + Sampled w/ disposable HDPE bailers
- Same as w/ DEM SAMPLING
- Instructed to use Teflon or SS in future sampling events
- If disposable - provide proof of cleaning protocol.

LR.

On November 29, 1994 ETPA personnel mob sample MW-1. However, during operations ass of MW-1, the monitoring well was damaged and

Water Levels

Static water levels were measured as 6.46, and 5.15 feet for monitoring wells MW-2, and MW-3 respectively. Static water levels could not be obtained for MW-1 during the October 1994 sampling event.

Laboratory Results

Laboratory results for water samples collected from MW-2 and MW-3 are presented in Tables 1, 2, and 3. Copies of the laboratory results are included in Attachment A

Limitations

This report has been prepared for the exclusive use of **Avery County** for specific application to the subject site. The report was prepared in accordance with generally accepted standards of practice for environmental services. No other warranty, either expressed or implied, is made. This report is not to be reproduced, either in whole or in part, without written consent from ENGINEERING TECTONICS, P.A.

Our on-site observations pertain only to specific locations, at specific times, on specific dates. Our observations and conclusions do not reflect variations in unverified and/or subsurface conditions that may exist at or between sampling and/or observation locations, or at times other than those represented by our observations.

In providing this report, ENGINEERING TECTONICS, P.A. does not assume any responsibilities of the party, or parties, deemed legally responsible for the subject site. It is not the responsibility of ENGINEERING TECTONICS, P.A. to report our findings to any other person or persons, including conditions that may present a potential danger to public health, safety, or the environment, as may be required by law.

Certification

I certify this 25th day of January, 1995 this report was prepared by me or under my direct supervision.

by: _____

Dan Bowser
Geologist

reviewed by: _____

Tony Gillispie
Environmental Manager

Tables

Table 1

Avery County Landfill
Groundwater Monitoring Well Laboratory Results

Analysis	MW-1 *	MW-2	MW-3
BOD		2.4	2.4
COD		177	165
Specific Conductivity		215 umhos	221 umhos
Chloride		25.6	13.2
Fluoride		<0.50	<0.50
Nitrate		0.14	0.11
pH		6.6 standard units	6.2 standard units
TDS		114.0	87.0
TOC		7.3	60.0
TOX		0.055	0.093
Sulfate		6.4	<1.0
Arsenic		<0.010	<0.010
Barium		0.110	0.203
Cadmium		0.002	0.007
Chromium		0.010	0.022
Copper		0.367	0.012
Iron		21.505	56.415
Lead		0.053	0.046
Mercury		<0.0002	<0.0002
Selenium	?	<0.010	<0.010
Magnesium — Manganese.		5.802	5.981
Silver		<0.005	<0.005
Zinc		0.058	0.025

Results are presented in parts per million (ppm) unless specified
* MW-1 not sampled

Methods X

Table 2

Avery County Landfill
EPA Method 8240

Compound	MW-1*	MW-2	MW-3
Acetone		BDL	BDL
Acrolein		BDL	BDL
Acrylonitrile		BDL	BDL
Benzene		BDL	BDL
Bromodichloromethane		BDL	BDL
Bromoform		BDL	BDL
Bromomethane		BDL	BDL
2-Butanone		BDL	BDL
Carbon Disulfide		BDL	BDL
Carbon tetrachloride		BDL	BDL
Chlorobenzene		BDL	BDL
Chloroethane		BDL	BDL
2-Chloro ethyl vinyl ether		BDL	BDL
Chloroform		BDL	BDL
Chloromethane		BDL	BDL
Dibromochloromethane		BDL	BDL
Dibromomethane		BDL	BDL
1,4-Dichloro-2-Butane		BDL	BDL
Dichlorodifluoromethane		BDL	BDL
1,2-Dichlorobenzene		BDL	BDL
1,3-Dichlorobenzene		BDL	BDL
1,4-Dichlorobenzene		BDL	BDL
1,1-Dichloroethane		BDL	BDL
1,2-Dichloroethane		BDL	BDL
1,1-Dichloroethene		BDL	BDL
Trans-1,2-Dichloroethene		BDL	BDL
1,2-Dichloropropane		BDL	BDL
cis-1,3-Dichloropropene		BDL	BDL
Trans-1,3-Dichloropropene		BDL	BDL
Ethanol		BDL	BDL
Ethylbenzene		BDL	BDL
Ethyl Methacrylate		BDL	BDL
2-Hexanone		BDL	BDL
Iodomethane		BDL	BDL
Methylene Chloride		BDL	BDL

BDL=below detectable limit
* MW-1 not sampled

Table 2 (cont.)

Avery County Landfill
EPA Method 8240

Compound	MW-1*	MW-2	MW-3
4-Methyl-2-Pentanone		BDL	BDL
Styrene		BDL	BDL
1,1,2,2-tetrachloroethane		BDL	BDL
Tetrachloroethylene		BDL	BDL
Toluene		BDL	BDL
1,1,1-Trichloroethane		BDL	BDL
1,1,2-Trichloroethane		BDL	BDL
Trichloroethylene		BDL	BDL
Trichlorofluoromethane		BDL	BDL
Vinyl Chloride		BDL	BDL
Xylene (total)		BDL	BDL

BDL=below detectable limit
* MW-1 not sampled

Table 3

Avery County Landfill
EPA Method 8270

Compound	MW-1*	MW-2	MW-3
Acenaphthene		BDL	BDL
Acenaphthylene		BDL	BDL
Aniline		BDL	BDL
Anthracene		BDL	BDL
Benzidine		BDL	BDL
Benzoic Acid		BDL	BDL
Benzo(a)Anthracene		BDL	BDL
Benzo(b)Fluoranthene		BDL	BDL
Benzo(k)Fluoranthene		BDL	BDL
Benzo(g,h,i)Perylene		BDL	BDL
Benzo(a)Pyrene		BDL	BDL
Benzyl Alcohol		BDL	BDL
Bis(2-Chloroethoxy)Methane		BDL	BDL
Bis(2-Chloroethyl)Ether		BDL	BDL
Bis(2-Chloroisopropyl)Ether		BDL	BDL
Bis(2-Ethylhexyl)Phthalate		BDL	BDL
4-Bromophenyl Phenyl Ether		BDL	BDL
Butyl Benzyl Phthalate		BDL	BDL
4-Chloroaniline		BDL	BDL
1-Chloronapthalene		BDL	BDL
2-Chloronaphthalene		BDL	BDL
4-Chloro-3-Methyl Phenol		BDL	BDL
2-Chlorophenol		BDL	BDL
4-Chlorophenol Phenyl Ether		BDL	BDL
Chrysene		BDL	BDL
Dibenz(a,h)Anthracene		BDL	BDL
Dibenzofuran		BDL	BDL
Di-N-Butylphthalate		BDL	BDL
1,3-Dichlrobenzene		BDL	BDL
1,4-Dichlrobenzene		BDL	BDL
1,2-Dichlrobenzene		BDL	BDL
3,3-Dichlorobenzidine		BDL	BDL
2,4-Dichorophenol		BDL	BDL
2,6-Dichorophenol		BDL	BDL
Diethylphthalate		BDL	BDL

BDL=below detectable limit

* MW-1 not sampled

Table 3(cont.)

Avery County Landfill
EPA Method 8270

Compound	MW-1*	MW-2	MW-3
A, A-Dimethylphenethylamine		BDL	BDL
2,4-Dimethylphenol		BDL	BDL
Dimethylphthalate		BDL	BDL
4,6-Dinitro-2-Mehtylphenol		BDL	BDL
2,4-Dinitrophenol		BDL	BDL
2,4-Dinitrotoluene		BDL	BDL
2,6-Dinitrotoluene		BDL	BDL
Diphenylamine		BDL	BDL
Di-N-Octylphthalate		BDL	BDL
Fluoranthene		BDL	BDL
Fluorene		BDL	BDL
Hexachlrobenzene		BDL	BDL
Hexachlorobutadiene		BDL	BDL
Hexachlorocyclopentadiene		BDL	BDL
Hexachloroethane		BDL	BDL
Indeno(1,2,3-od)Pyrene		BDL	BDL
Isophorone		BDL	BDL
2-Mehylnaphthalene		BDL	BDL
2-Methylphenol		BDL	BDL
4-Methylphenol		BDL	BDL
Naphthalene		BDL	BDL
2-Nitroaniline		BDL	BDL
3-Nitroaniline		BDL	BDL
4-Nitroaniline		BDL	BDL
Nitrobenzene		BDL	BDL
2-Nitrophenol		BDL	BDL
4-Nitrophenol		BDL	BDL
N-Nitroso-Di-N-Butylamine		BDL	BDL
N-Nitrosodimethylamine		BDL	BDL
N-Nitrosodiphenylamine		BDL	BDL

BDL=below detectable limit
* MW-1 not sampled

Table 3(cont.)

Avery County Landfill
EPA Method 8270

Compound	MW-1*	MW-2	MW-3
N-Nitrosodipropylamine		BDL	BDL
Pentachlorophenol		BDL	BDL
Phenanthrene		BDL	BDL
Phenol		BDL	BDL
Pyrene		BDL	BDL
1,2,4,5-Tetrachlorobenzene		BDL	BDL
2,3,4,6-Tetrachlorophenol		BDL	BDL
1,2,4-Trichlorobenzene		BDL	BDL
2,4,5-Trichlorophenol		BDL	BDL
2,4,6-Trichlorophenol		BDL	BDL

BDL=below detectable limit
* MW-1 not sampled

Attachment A
Laboratory Results

FINAL REPORT OF ANALYSES

ENGINEERING TECTONICS
PO BOX I
WINSTON SALEM, NC 27108-
Attn: DAN BOWSER

PROJECT NAME: 90-247.01 AVERY
REPORT DATE: 10/31/94

SAMPLE NUMBER- 52022 SAMPLE ID- MW-2
DATE SAMPLED- 10/18/94
DATE RECEIVED- 10/19/94 SAMPLER- DAN
TIME RECEIVED- 1030 DELIVERED BY- FEDEX

SAMPLE MATRIX- WW
TIME SAMPLED- 1130
RECEIVED BY- PLB

ANALYSIS	METHOD	SAMPLE PREP DATE	BY	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
PH,LAB	EPA 150.1			10/19/94	LJP	6.6	std units	
BOD	507			10/20/94	MGN	2.4	mg/l	0.10
TOTAL DISSOLVED SOLIDS	EPA160.1			10/20/94	KHJ	114.0	mg/l	1.0
SPECIFIC CONDUCTIVITY	EPA 120.1			10/25/94	KHJ	215	umhos	
CHLORIDE	EPA 325.3			10/26/94	LJP	25.6	mg/l	0.50
CHEMICAL OXYGEN DEMAND	EPA 410.4			10/27/94	PSH	177	mg/l	10.0
TOTAL ORGANIC CARBON	EPA 415.1			10/21/94	HBT	7.3	mg/l	1.0
FLUORIDE	EPA 340.2			10/27/94	APT	< 0.50	mg/l	0.5
NITRATE	EPA 352.1			10/20/94	APT	0.14	mg/l	0.10
SULFATE	EPA 375.4			10/31/94	SLM	6.4	mg/l	1.0
MERCURY, TOTAL	245.1			10/21/94	LJP	< 0.0002	mg/l	0.0002
TOTAL ORGANIC HALIDES				10/21/94	HBT	0.055	MG/L	
SILVER,TOTAL	200.7	10/20/94	LJP	10/25/94	LJP	< 0.005	mg/l	0.005
ARSENIC, TOTAL	200.7	10/20/94	LJP	10/28/94	LJP	< 0.010	mg/l	0.010
BARIUM, TOTAL	200.7	10/20/94	LJP	10/21/94	LJP	0.110	mg/l	0.005
CADMIUM, TOTAL	200.7	10/20/94	LJP	10/24/94	LJP	0.002	mg/l	0.001
CHROMIUM, TOTAL	200.7	10/20/94	LJP	10/21/94	LJP	0.010	mg/l	0.005
COPPER, TOTAL	200.7	10/20/94	LJP	10/21/94	LJP	0.367	mg/l	0.005
IRON, TOTAL	200.7	10/20/94	LJP	10/21/94	LJP	21.505	mg/l	0.010
LEAD, TOTAL	6010	10/20/94	LJP	10/24/94	LJP	0.053	mg/l	0.010
MAGNESIUM, TOTAL	200.7	10/20/94	LJP	10/25/94	LJP	5.802	mg/l	0.010

CONTINUATION OF DATA FOR SAMPLE NUMBER 52022

ANALYSIS	METHOD	SAMPLE PREP. DATE	BY	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
SELENIUM, TOTAL	200.7	10/20/94	LJP	10/27/94	LJP	< 0.010	mg/l	0.010
ZINC, TOTAL	200.7	10/20/94	LJP	10/24/94	LJP	0.058	mg/l	0.010

LABORATORY DIRECTOR _____

P.O. BOX 18029 ASHEVILLE, NC 28814 122 LYMAN STREET ASHEVILLE, NC 28801 (704) 254-5169 FAX: [illegible]

FINAL REPORT OF ANALYSES

ENGINEERING TECTONICS
PO BOX I
WINSTON SALEM, NC 27108-
Attn: DAN BOWSER

PROJECT NAME: 90-247.01 AVERY
REPORT DATE: 10/31/94

SAMPLE NUMBER- 52023 SAMPLE ID- MW-3
DATE SAMPLED- 10/18/94
DATE RECEIVED- 10/19/94 SAMPLER- DAN
TIME RECEIVED- 1030 DELIVERED BY- FEDEX

SAMPLE MATRIX- WW
TIME SAMPLED- 1230
RECEIVED BY- PLB

ANALYSIS	METHOD	SAMPLE PREP DATE	BY	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
PH,LAB	EPA 150.1			10/19/94	LJP	6.2	std units	
BOD	507			10/20/94	MGN	2.4	mg/l	0.10
TOTAL DISSOLVED SOLIDS	EPA160.1			10/20/94	KHJ	87.0	mg/l	1.0
SPECIFIC CONDUCTIVITY	EPA 120.1			10/25/94	KHJ	221	umhos	
CHLORIDE	EPA 325.3			10/26/94	LJP	13.2	mg/l	0.50
CHEMICAL OXYGEN DEMAND	EPA 410.4			10/27/94	PSH	165	mg/l	10.0
TOTAL ORGANIC CARBON	EPA 415.1			10/21/94	HBT	60.0	mg/l	1.0
FLUORIDE	EPA 340.2			10/27/94	APT	< 0.50	mg/l	0.5
NITRATE	EPA 352.1			10/20/94	APT	0.11	mg/l	0.10
SULFATE	EPA 375.4			10/31/94	SLM	< 1.0	mg/l	1.0
MERCURY, TOTAL	245.1			10/21/94	LJP	< 0.0002	mg/l	0.0002
TOTAL ORGANIC HALIDES				10/21/94	HBT	0.093	MG/L	
SILVER,TOTAL	200.7	10/20/94	LJP	10/25/94	LJP	< 0.005	mg/l	0.005
ARSENIC, TOTAL	200.7	10/20/94	LJP	10/28/94	LJP	< 0.010	mg/l	0.010
BARIUM, TOTAL	200.7	10/20/94	LJP	10/21/94	LJP	0.203	mg/l	0.005
CADMIUM, TOTAL	200.7	10/20/94	LJP	10/24/94	LJP	0.007	mg/l	0.001
CHROMIUM, TOTAL	200.7	10/20/94	LJP	10/21/94	LJP	0.022	mg/l	0.005
COPPER, TOTAL	200.7	10/20/94	LJP	10/21/94	LJP	0.012	mg/l	0.005
IRON, TOTAL	200.7	10/20/94	LJP	10/21/94	LJP	56.415	mg/l	0.010
LEAD, TOTAL	6010	10/20/94	LJP	10/24/94	LJP	0.046	mg/l	0.010
MAGNESIUM, TOTAL	200.7	10/20/94	LJP	10/25/94	LJP	5.981	mg/l	0.010

CONTINUATION OF DATA FOR SAMPLE NUMBER 52023

ANALYSIS	METHOD	SAMPLE PREP DATE	BY	ANALYSIS DATE	BY	RESULT	UNITS	DET. LIMIT
SELENIUM, TOTAL	200.7	10/20/94	LJP	10/27/94	LJP	< 0.010	mg/l	0.010
ZINC, TOTAL	200.7	10/20/94	LJP	10/24/94	LJP	0.025	mg/l	0.010

LABORATORY DIRECTOR

H Y D R O L O G I C , I N C .

October 26, 1994

REPORTING:

Hydrologic-Asheville, Inc
122 Lyman Street
Asheville, NC 28801

Attention: Melissa Shook

INVOICING:

Hydrologic-Asheville, Inc
122 Lyman Street
Asheville, NC 28801

PROJECT NUMBER: FL9432235

DATE COMPLETED: October 26, 1994
DATE RECEIVED: October 20, 1994

PROJECT DESCRIPTION:

Engineering Tectonics--2 water samples analyzed for 8240/8270.

Enclosed is the laboratory report for the project described above. If you have any questions or if we can be of further assistance, please feel free to contact Jamie Fore. We appreciate your business and look forward to serving you again soon.

Respectfully,

Benjamin Carl Esterle
Laboratory Director

1491 Twilight Trail ☐ Frankfort, KY 40601 ☐ 502/223-0251 ☐ FAX 502/875-8016 ☐ Toll Free 1-800/728-2251

COMPANY NAME: Hydrologic-Asheville, Inc
COMPANY PROJECT NUMBER: ENGINEERING TECTONICS

HYDROLOGIC PROJECT NUMBER: FL9432235
HYDROLOGIC SAMPLE NUMBER: 32235
HYDROLOGIC LAB I.D.#: 399
SAMPLE IDENTIFICATION: MW-2
DATE SAMPLED: 10/18/94
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 10/24/94

METHOD SW 846 8240

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
Acetone	67-64-1	100.0	BDL
Acrolein	107-02-8	50.0	BDL
Acrylonitrile	107-13-1	50.0	BDL
Benzene	71-43-2	5.0	BDL
Bromodichloromethane	75-27-4	5.0	BDL
Bromoform	75-25-2	5.0	BDL
Bromomethane	74-83-9	10.0	BDL
2-Butanone	78-93-3	100.0	BDL
Carbon Disulfide	75-15-0	5.0	BDL
Carbon Tetrachloride	56-23-5	5.0	BDL
Chlorobenzene	108-90-7	5.0	BDL
Chloroethane	75-00-3	10.0	BDL
2-Chloro Ethyl Vinyl Ether	110-75-8	10.0	BDL
Chloroform	67-66-3	5.0	BDL
Chloromethane	74-87-3	10.0	BDL
Dibromochloromethane	124-48-1	5.0	BDL
Dibromomethane	74-95-3	5.0	BDL
1,4-Dichloro-2-Butane		5.0	BDL
Dichlorodifluoromethane	75-71-8	10.0	BDL
1,2-Dichlorobenzene	95-50-1	5.0	BDL
1,3-Dichlorobenzene	541-73-1	5.0	BDL
1,4-Dichlorobenzene	106-46-7	5.0	BDL
1,1-Dichloroethane	75-34-3	5.0	BDL
1,2-Dichloroethane	107-06-2	5.0	BDL
1,1-Dichloroethene	75-35-4	5.0	BDL

COMPANY NAME: Hydrologic-Asheville, Inc
COMPANY PROJECT NUMBER: ENGINEERING TECTONICS

HYDROLOGIC PROJECT NUMBER: FL9432235
HYDROLOGIC SAMPLE NUMBER: 32235
SAMPLE IDENTIFICATION: MW-2
DATE SAMPLED: 10/18/94

METHOD SW 846 8240

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
trans-1,2-Dichloroethene	156-60-5	5.0	BDL
1,2-Dichloropropane	78-87-5	5.0	BDL
cis-1,3-Dichloropropene	10061-01-5	5.0	BDL
trans-1,3-Dichloropropene	10061-02-6	5.0	BDL
Ethanol	64-17-5	100.0	BDL
Ethylbenzene	100-41-4	5.0	BDL
Ethyl Methacrylate	97-63-2	10.0	BDL
2-Hexanone	591-78-6	50.0	BDL
Iodomethane	74-88-4	10.0	BDL
Methylene Chloride	75-09-2	5.0	BDL
4-Methyl-2-Pentanone	108-10-1	50.0	BDL
Styrene	100-42-5	10.0	BDL
1,1,2,2-Tetrachloroethane	79-34-5	10.0	BDL
Tetrachloroethylene	127-18-4	10.0	BDL
Toluene	108-88-3	5.0	BDL
1,1,1-Trichloroethane	71-55-6	5.0	BDL
1,1,2-Trichloroethane	79-00-5	5.0	BDL
Trichloroethylene	79-01-6	5.0	BDL
Trichlorofluoromethane	75-69-4	5.0	BDL
Vinyl Chloride	75-01-4	10.0	BDL
Xylene (Total)	1330-20-7	5.0	BDL
Surrogate Recoveries:			
1,2-Dichloroethane-D4			97%
Toluene-D8			96%
Bromofluorobenzene			92%

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

COMPANY NAME: Hydrologic-Asheville, Inc
COMPANY PROJECT NUMBER: ENGINEERING TECTONICS

HYDROLOGIC PROJECT NUMBER: FL9432235
HYDROLOGIC SAMPLE NUMBER: 32235
HYDROLOGIC LAB I.D.#: 399
SAMPLE IDENTIFICATION: MW-2
DATE SAMPLED: 10/18/94
DATE EXTRACTED: 10/20/94
DATE/TIME ANALYZED: 10/25/94

METHOD SW 846 8270

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
Acenaphthene	83-32-9	10.0	BDL
Acenaphthylene	208-96-8	10.0	BDL
Aniline	62-53-3	10.0	BDL
Anthracene	120-12-7	10.0	BDL
Benzidine	92-87-5	10.0	BDL
Benzoic Acid	65-85-0	50.0	BDL
Benzo(a)Anthracene	56-55-3	10.0	BDL
Benzo(b)Fluoranthene	205-99-2	10.0	BDL
Benzo(k)Fluoranthene	207-08-9	10.0	BDL
Benzo(g,h,i)Perylene	191-24-2	10.0	BDL
Benzo(a)Pyrene	50-32-8	10.0	BDL
Benzyl Alcohol	100-51-6	20.0	BDL
Bis(2-Chloroethoxy)Methane	111-91-1	10.0	BDL
Bis(2-Chloroethyl)Ether	111-44-4	10.0	BDL
Bis(2-Chloroisopropyl)Ether	39638-32-9	10.0	BDL
Bis(2-Ethylhexyl)Phthalate	117-81-7	10.0	BDL
4-Bromophenyl Phenyl Ether	101-55-3	10.0	BDL
Butyl Benzyl Phthalate	85-68-7	10.0	BDL
4-Chloroaniline	106-47-8	20.0	BDL
1-Chloronaphthalene		10.0	BDL
2-Chloronaphthalene	91-58-7	10.0	BDL
4-Chloro-3-Methyl Phenol	59-50-7	10.0	BDL
2-Chlorophenol	95-57-8	10.0	BDL
4-Chlorophenyl Phenyl Ether	7005-72-3	10.0	BDL
Chrysene	218-01-9	10.0	BDL

COMPANY NAME: Hydrologic-Asheville, Inc
COMPANY PROJECT NUMBER: ENGINEERING TECTONICS

HYDROLOGIC PROJECT NUMBER: FL9432235
HYDROLOGIC SAMPLE NUMBER: 32235
SAMPLE IDENTIFICATION: MW-2
DATE SAMPLED: 10/18/94

METHOD SW 846 8270

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
Dibenz(a,h)Anthracene	53-70-3	10.0	BDL
Dibenzofuran	132-64-9	10.0	BDL
Di-N-Butylphthalate	84-74-2	10.0	BDL
1,3-Dichlorobenzene	541-73-1	10.0	BDL
1,4-Dichlorobenzene	106-46-7	10.0	BDL
1,2-Dichlorobenzene	95-50-1	10.0	BDL
3,3'-Dichlorobenzidine	91-94-1	20.0	BDL
2,4-Dichlorophenol	120-83-2	10.0	BDL
2,6-Dichlorophenol	87-65-0	10.0	BDL
Diethylphthalate	84-66-2	10.0	BDL
A,A-Dimethylphenethylamine	122-09-8	10.0	BDL
2,4-Dimethylphenol	105-67-9	10.0	BDL
Dimethylphthalate	131-11-3	10.0	BDL
4,6-Dinitro-2-Methylphenol	534-52-1	50.0	BDL
2,4-Dinitrophenol	51-28-5	10.0	BDL
2,4-Dinitrotoluene	121-14-2	10.0	BDL
2,6-Dinitrotoluene	606-20-2	10.0	BDL
Diphenylamine	122-39-4	20.0	BDL
Di-N-Octylphthalate	117-84-0	10.0	BDL
Fluoranthene	206-44-0	10.0	BDL
Fluorene	86-73-7	10.0	BDL
Hexachlorobenzene	118-74-1	10.0	BDL
Hexachlorobutadiene	87-68-3	10.0	BDL
Hexachlorocyclopentadiene	77-47-4	10.0	BDL

COMPANY NAME: Hydrologic-Asheville, Inc
COMPANY PROJECT NUMBER: ENGINEERING TECTONICS

HYDROLOGIC PROJECT NUMBER: FL9432235
HYDROLOGIC SAMPLE NUMBER: 32235
SAMPLE IDENTIFICATION: MW-2
DATE SAMPLED: 10/18/94

METHOD SW 846 8270

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
Hexachloroethane	67-72-1	10.0	BDL
Indeno(1,2,3-cd)Pyrene	193-39-5	10.0	BDL
Isophorone	78-59-1	10.0	BDL
2-Methylnaphthalene	91-57-6	10.0	BDL
2-Methylphenol	95-48-7	10.0	BDL
4-Methylphenol	106-44-5	10.0	BDL
Naphthalene	91-20-3	10.0	BDL
2-Nitroaniline	88-74-4	50.0	BDL
3-Nitroaniline	99-09-2	50.0	BDL
4-Nitroaniline	100-01-6	50.0	BDL
Nitrobenzene	98-95-3	10.0	BDL
2-Nitrophenol	88-75-5	10.0	BDL
4-Nitrophenol	100-02-7	10.0	BDL
N-Nitroso-Di-N-Butylamine	924-16-3	50.0	BDL
N-Nitrosodimethylamine	62-75-9	10.0	BDL
N-Nitrosodiphenylamine	86-30-6	10.0	BDL
N-Nitrosodipropylamine	621-64-7	10.0	BDL
Pentachlorophenol	87-86-5	50.0	BDL
Phenanthrene	85-01-8	10.0	BDL
Phenol	108-95-2	10.0	BDL
Pyrene	129-00-0	10.0	BDL
1,2,4,5-Tetrachlorobenzene	95-94-3	10.0	BDL
2,3,4,6-Tetrachlorophenol	58-90-2	10.0	BDL
1,2,4-Trichlorobenzene	120-82-1	10.0	BDL

COMPANY NAME: Hydrologic-Asheville, Inc
COMPANY PROJECT NUMBER: ENGINEERING TECTONICS

HYDROLOGIC PROJECT NUMBER: FL9432235
HYDROLOGIC SAMPLE NUMBER: 32235
SAMPLE IDENTIFICATION: MW-2
DATE SAMPLED: 10/18/94

METHOD SW 846 8270

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
2,4,5-Trichlorophenol	95-95-4	10.0	BDL
2,4,6-Trichlorophenol	88-06-2	10.0	BDL
Surrogate Recovery:			
2-Fluorobiphenyl			88%
Nitrobenzene-d5			94%
4-Terphenyl-D14			102%
2-Fluorophenol			100%
Phenol-D5			104%
2,4,6-Tribromophenol			86%

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

COMPANY NAME: Hydrologic-Asheville, Inc
COMPANY PROJECT NUMBER: ENGINEERING TECTONICS

HYDROLOGIC PROJECT NUMBER: FL9432235
HYDROLOGIC SAMPLE NUMBER: 32236
HYDROLOGIC LAB I.D.#: 399
SAMPLE IDENTIFICATION: MW-3
DATE SAMPLED: 10/18/94
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 10/24/94

METHOD SW 846 8240

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
Acetone	67-64-1	100.0	BDL
Acrolein	107-02-8	50.0	BDL
Acrylonitrile	107-13-1	50.0	BDL
Benzene	71-43-2	5.0	BDL
Bromodichloromethane	75-27-4	5.0	BDL
Bromoform	75-25-2	5.0	BDL
Bromomethane	74-83-9	10.0	BDL
2-Butanone	78-93-3	100.0	BDL
Carbon Disulfide	75-15-0	5.0	BDL
Carbon Tetrachloride	56-23-5	5.0	BDL
Chlorobenzene	108-90-7	5.0	BDL
Chloroethane	75-00-3	10.0	BDL
2-Chloro Ethyl Vinyl Ether	110-75-8	10.0	BDL
Chloroform	67-66-3	5.0	BDL
Chloromethane	74-87-3	10.0	BDL
Dibromochloromethane	124-48-1	5.0	BDL
Dibromomethane	74-95-3	5.0	BDL
1,4-Dichloro-2-Butane		5.0	BDL
Dichlorodifluoromethane	75-71-8	10.0	BDL
1,2-Dichlorobenzene	95-50-1	5.0	BDL
1,3-Dichlorobenzene	541-73-1	5.0	BDL
1,4-Dichlorobenzene	106-46-7	5.0	BDL
1,1-Dichloroethane	75-34-3	5.0	BDL
1,2-Dichloroethane	107-06-2	5.0	BDL
1,1-Dichloroethene	75-35-4	5.0	BDL

COMPANY NAME: Hydrologic-Asheville, Inc
COMPANY PROJECT NUMBER: ENGINEERING TECTONICS

HYDROLOGIC PROJECT NUMBER: FL9432235
HYDROLOGIC SAMPLE NUMBER: 32236
SAMPLE IDENTIFICATION: MW-3
DATE SAMPLED: 10/18/94

METHOD SW 846 8240

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
trans-1,2-Dichloroethene	156-60-5	5.0	BDL
1,2-Dichloropropane	78-87-5	5.0	BDL
cis-1,3-Dichloropropene	10061-01-5	5.0	BDL
trans-1,3-Dichloropropene	10061-02-6	5.0	BDL
Ethanol	64-17-5	100.0	BDL
Ethylbenzene	100-41-4	5.0	BDL
Ethyl Methacrylate	97-63-2	10.0	BDL
2-Hexanone	591-78-6	50.0	BDL
Iodomethane	74-88-4	10.0	BDL
Methylene Chloride	75-09-2	5.0	BDL
4-Methyl-2-Pentanone	108-10-1	50.0	BDL
Styrene	100-42-5	10.0	BDL
1,1,2,2-Tetrachloroethane	79-34-5	10.0	BDL
Tetrachloroethylene	127-18-4	10.0	BDL
Toluene	108-88-3	5.0	BDL
1,1,1-Trichloroethane	71-55-6	5.0	BDL
1,1,2-Trichloroethane	79-00-5	5.0	BDL
Trichloroethylene	79-01-6	5.0	BDL
Trichlorofluoromethane	75-69-4	5.0	BDL
Vinyl Chloride	75-01-4	10.0	BDL
Xylene (Total)	1330-20-7	5.0	BDL
Surrogate Recoveries:			
1,2-Dichloroethane-D4			94%
Toluene-D8			98%
Bromofluorobenzene			96%

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

COMPANY NAME: Hydrologic-Asheville, Inc
COMPANY PROJECT NUMBER: ENGINEERING TECTONICS

HYDROLOGIC PROJECT NUMBER: FL9432235
HYDROLOGIC SAMPLE NUMBER: 32236
HYDROLOGIC LAB I.D.#: 399
SAMPLE IDENTIFICATION: MW-3
DATE SAMPLED: 10/18/94
DATE EXTRACTED: 10/20/94
DATE/TIME ANALYZED: 10/25/94

METHOD SW 846 8270

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
Acenaphthene	83-32-9	10.0	BDL
Acenaphthylene	208-96-8	10.0	BDL
Aniline	62-53-3	10.0	BDL
Anthracene	120-12-7	10.0	BDL
Benzidine	92-87-5	10.0	BDL
Benzoic Acid	65-85-0	50.0	BDL
Benzo(a)Anthracene	56-55-3	10.0	BDL
Benzo(b)Fluoranthene	205-99-2	10.0	BDL
Benzo(k)Fluoranthene	207-08-9	10.0	BDL
Benzo(g,h,i)Perylene	191-24-2	10.0	BDL
Benzo(a)Pyrene	50-32-8	10.0	BDL
Benzyl Alcohol	100-51-6	20.0	BDL
Bis(2-Chloroethoxy)Methane	111-91-1	10.0	BDL
Bis(2-Chloroethyl)Ether	111-44-4	10.0	BDL
Bis(2-Chloroisopropyl)Ether	39638-32-9	10.0	BDL
Bis(2-Ethylhexyl)Phthalate	117-81-7	10.0	BDL
4-Bromophenyl Phenyl Ether	101-55-3	10.0	BDL
Butyl Benzyl Phthalate	85-68-7	10.0	BDL
4-Chloroaniline	106-47-8	20.0	BDL
1-Chloronaphthalene		10.0	BDL
2-Chloronaphthalene	91-58-7	10.0	BDL
4-Chloro-3-Methyl Phenol	59-50-7	10.0	BDL
2-Chlorophenol	95-57-8	10.0	BDL
4-Chlorophenyl Phenyl Ether	7005-72-3	10.0	BDL
Chrysene	218-01-9	10.0	BDL

COMPANY NAME: Hydrologic-Asheville, Inc
COMPANY PROJECT NUMBER: ENGINEERING TECTONICS

HYDROLOGIC PROJECT NUMBER: FL9432235
HYDROLOGIC SAMPLE NUMBER: 32236
SAMPLE IDENTIFICATION: MW-3
DATE SAMPLED: 10/18/94

METHOD SW 846 8270

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
Dibenz(a,h)Anthracene	53-70-3	10.0	BDL
Dibenzofuran	132-64-9	10.0	BDL
Di-N-Butylphthalate	84-74-2	10.0	BDL
1,3-Dichlorobenzene	541-73-1	10.0	BDL
1,4-Dichlorobenzene	106-46-7	10.0	BDL
1,2-Dichlorobenzene	95-50-1	10.0	BDL
3,3'-Dichlorobenzidine	91-94-1	20.0	BDL
2,4-Dichlorophenol	120-83-2	10.0	BDL
2,6-Dichlorophenol	87-65-0	10.0	BDL
Diethylphthalate	84-66-2	10.0	BDL
A,A-Dimethylphenethylamine	122-09-8	10.0	BDL
2,4-Dimethylphenol	105-67-9	10.0	BDL
Dimethylphthalate	131-11-3	10.0	BDL
4,6-Dinitro-2-Methylphenol	534-52-1	50.0	BDL
2,4-Dinitrophenol	51-28-5	10.0	BDL
2,4-Dinitrotoluene	121-14-2	10.0	BDL
2,6-Dinitrotoluene	606-20-2	10.0	BDL
Diphenylamine	122-39-4	20.0	BDL
Di-N-Octylphthalate	117-84-0	10.0	BDL
Fluoranthene	206-44-0	10.0	BDL
Fluorene	86-73-7	10.0	BDL
Hexachlorobenzene	118-74-1	10.0	BDL
Hexachlorobutadiene	87-68-3	10.0	BDL
Hexachlorocyclopentadiene	77-47-4	10.0	BDL

COMPANY NAME: Hydrologic-Asheville, Inc
COMPANY PROJECT NUMBER: ENGINEERING TECTONICS

HYDROLOGIC PROJECT NUMBER: FL9432235
HYDROLOGIC SAMPLE NUMBER: 32236
SAMPLE IDENTIFICATION: MW-3
DATE SAMPLED: 10/18/94

METHOD SW 846 8270

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
Hexachloroethane	67-72-1	10.0	BDL
Indeno(1,2,3-cd)Pyrene	193-39-5	10.0	BDL
Isophorone	78-59-1	10.0	BDL
2-Methylnaphthalene	91-57-6	10.0	BDL
2-Methylphenol	95-48-7	10.0	BDL
4-Methylphenol	106-44-5	10.0	BDL
Naphthalene	91-20-3	10.0	BDL
2-Nitroaniline	88-74-4	50.0	BDL
3-Nitroaniline	99-09-2	50.0	BDL
4-Nitroaniline	100-01-6	50.0	BDL
Nitrobenzene	98-95-3	10.0	BDL
2-Nitrophenol	88-75-5	10.0	BDL
4-Nitrophenol	100-02-7	10.0	BDL
N-Nitroso-Di-N-Butylamine	924-16-3	50.0	BDL
N-Nitrosodimethylamine	62-75-9	10.0	BDL
N-Nitrosodiphenylamine	86-30-6	10.0	BDL
N-Nitrosodipropylamine	621-64-7	10.0	BDL
Pentachlorophenol	87-86-5	50.0	BDL
Phenanthrene	85-01-8	10.0	BDL
Phenol	108-95-2	10.0	BDL
Pyrene	129-00-0	10.0	BDL
1,2,4,5-Tetrachlorobenzene	95-94-3	10.0	BDL
2,3,4,6-Tetrachlorophenol	58-90-2	10.0	BDL
1,2,4-Trichlorobenzene	120-82-1	10.0	BDL

COMPANY NAME: Hydrologic-Asheville, Inc
COMPANY PROJECT NUMBER: ENGINEERING TECTONICS

HYDROLOGIC PROJECT NUMBER: FL9432235
HYDROLOGIC SAMPLE NUMBER: 32236
SAMPLE IDENTIFICATION: MW-3
DATE SAMPLED: 10/18/94

METHOD SW 846 8270

ANALYSIS	CAS NO.	SDL (ug/l)	RESULT (ug/l)
2,4,5-Trichlorophenol	95-95-4	10.0	BDL
2,4,6-Trichlorophenol	88-06-2	10.0	BDL
Surrogate Recovery:			
2-Fluorobiphenyl			86%
Nitrobenzene-d5			100%
4-Terphenyl-D14			101%
2-Fluorophenol			109%
Phenol-D5			104%
2,4,6-Tribromophenol			83%

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

52022 – 52023

HydroLogic

COMPANY NAME Engineering Tectonics CONTACT NAME Dan Bowser TELEPHONE NO. 910-784-6994

Samplers: Print Name Dan Bowser Signature [signature]

Project No: 90-247.01 Avery Co.

SAMPLE ID	SAMPLE LOCATION	Composite	Grab	Date	Time	Sample Type: Water	Liquid	Oil	Solid	No. of Containers	8240	8270	PH	TOC	TDS	SPEC. CONDUCTIVITY	COD	CHLORIDE	FLUORIDE	BOD	NITRATE → NO3	REMARKS
MW-2			X	10/18	11:30	X				7	X	X	X	X	X	X	X	X	X	X	XX	TOX
MW-3			X	10/18	12:30	X				7	X	X	X	X	X	X	X	X	X	X	XX	SULPHATES
																					XX	ARSENIC
																					XX	BARIUM
																					XX	CADMIUM
																					XX	CHROMIUM
																					XX	COPPER
																					XX	IRON
																					XX	LEAD
																					XX	MERCURY

SELENIUM
MAGNESIUM
SILVER
ZINC

COMMENTS: Price as agreed upon with Dave Roman (xx → MW-2 & MW3)
(check previous billing)

Relinquished by: (Signature) [signature]			Received by: (Signature) [signature]	Date 10/19	Time 1:30
Relinquished by: (Signature)			Received by: (Signature)	Date	Time
Dispatched by: (Signature)	Date	Time	Received for Laboratory by:	Date	Time
Method of Shipment:				Date	Time

P. O. Box 4204 • 1003 Twilight Trail • Frankfort, Ky 40604 • (502) 223-0251 Work • (502) 875-8016 Fax