Alexander County Administrative Office
255 Collins Road Taylorsville, N.C. 28681
Telephone 704-632-9232

FAX # (704) 632-0059

TELECOPIER COVER LETTER

PLEASE DELIVER THE FOLLOWING TO:

NAME: Larry Rose DATE: 10-19-93

FIRM: _____ FAX NO. 919-733-0692

THIS MESSAGE IS BEING SENT FROM:

NAME: Brenda Barnette

WE ARE TRANSMITTING 12 PAGE(S), INCLUDING THIS COVER LETTER.

IF TRANSMISSION IS NOT COMPLETE, PLEASE CALL.

MESSAGE:

Hope This is what you need, if I can be of any futher help Please Let me Know

Brenda

NO!

Alexander County Administrative Office

255 Liledoun Road, Taylorsville, N.C. 28681

Telephone 704-632-9332

July 12, 1993

Mr. Jimmy D. Woodie, P.E.
Municipal Engineering
Post Office Box 97
Garner, North Carolina

Dear Mr. Woodie:

According to the attached letter and documents the Alexander County landfill has some groundwater contamination that may need corrective action. Will you please review the data and advise our course of action.

Also, please note the suggestion regarding operations after October 9, 1993. We were aware of this pending deadline, but were not aware of the groundwater problem. We need to discuss our options on closing or not.

Please schedule a meeting as soon as your schedule permits.

Sincerely,

Charles

Charles S. Mashburn
County Administrator

cc: Board of County Commissioners
Earl Crouch

State of North Carolina
Department of Environment, Health, and Natural Resources
512 North Salisbury Street • Raleigh, North Carolina 27604
DIVISION OF SOLID WASTE MANAGEMENT
TELEPHONE: (919) 733-0692
James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary

July 6, 1993

Mr. Charles Mashburn
County Manager, Alexander County
Administrative Bldg. 255 Liledoun Rd.
Taylorsville, N.C. 28681

Re: Implementation Of Subtitle 'D' Ground-water Monitoring Program

Dear Mr. Mashburn,

The purpose of this correspondence is to provide information and clarification on the changes in ground-water monitoring requirements for MSWLF facilities that remain in operation after October 9, 1993. The proposed North Carolina Solid Waste Management Rules reflect significant changes for ground-water monitoring based on requirements of the E.P.A. Subtitle D Rules.

Attachment A to this letter provides a summary of important dates and significant activities that must be accomplished in order to be in compliance with the new rules. Attachment B contrasts existing and proposed ground-water monitoring and assessment requirements based on changes in the rules. Because of significant increases in costs that will be incurred in order to operate a MSWLF under the new Subtitle D Rules, including financial assurance and increased costs for ground-water monitoring and assessment, you may wish to seriously consider closing your sanitary landfill prior to October 9,1993, when the new rules become effective.

Based on past ground-water monitoring data for the Alexander County landfill, there are already documented violations of North Carolina Groundwater Quality Standards at some of the detection monitoring wells. A copy of your most recent sampling analytical data is attached on which highlighting has been done for the Appendix I constituents that exceed the Groundwater Quality Standards. Therefore, when the new rules take effect, Alexander County will quickly be required to implement assessment monitoring for all Appendix II constituents. Since the Groundwater Quality Standards are also used in establishing the ground-water protection standards, you may also rapidly move into assessment of corrective action

P.O. Box 27687, Raleigh, North Carolina 27611-7687 Telephone 919-733-4984 Fax # 919-733-0513

An Equal Opportunity Affirmative Action Employer

50% recycled/10% post-consumer paper

alternatives based on a full-scale ground-water investigation to determine the nature and extent of contamination at the site.

If Alexander County chooses to continue to operate their MSWLF facility after October 9, 1993, then you need to begin planning and budgeting immediately for the activities outlined in Attachment A. A revised Water Quality Monitoring Plan must be submitted as part of the Transition Plan on or before April 9, 1994. All background sampling and related activities for the upgraded monitoring system must be completed and reported to the Division in order to demonstrate compliance with the new water quality monitoring requirements on or before October 9, 1994. As requested in the letter dated May 18, 1992, all private and public water supply wells within a half mile's radius of the landfill site should be identified and a map locating these wells should be submitted immediately. The nearest downstream surface water intake should also be identified and reported.

Please note that the goals and objectives for ground-water assessment monitoring and ground-water contamination investigations are the same under both the current and the proposed rules and shall be accomplished in a way that is protective of human health and the environment. However, current rules allow for greater flexibility in the assessment and investigation activities and the sample analytical costs could be substantially less using the constituent list required under current rules and policy as compared to analytical costs required by the new rules based on Subtitle D, which require sampling for the Appendix II list of constituents.

I hope this letter has been helpful in providing you more insight into the actions that will be required by Alexander County to maintain compliance with the water quality monitoring requirements of the Solid Waste Management Rules as we make the transition to the new rules growing out of the E.P.A. Subtitle D Regulations. If you have any questions or comments regarding this letter, please contact the Solid Waste Section at (919) 733-0692.

Sincerely,

Bobby Lutfy

Bobby Lutfy, Hydrogeologist

Solid Waste Section

cc: Anthony Foster

Attachments

MW-1 ORGANIC CHEMICAL ANALYSIS

BASE/NEUTRAL AND ACID EXTRACTABLES	LAB NO	930937	930938	930939	930940	930941	
	FIELD #	17137	17139	17140	17141	17142	
COMPOUND	TYPE	(1)	(1)	(1)	(2)	(2)	( )
	UNITS	ug/l ~~ug/kg~~	ug/l ~~ug/kg~~	ug/l ~~ug/kg~~	ug/l ~~ug/kg~~	ug/l ~~ug/kg~~	ug/l ug/kg
N-nitrosodimethylamine	10/330	U	U	U	U	U	
bis(2-chloroethyl)ether							
2-chlorophenol							
phenol							
1,3-dichlorobenzene							
1,4-dichlorobenzene 1 4			10K	10K		10K	
1,2-dichlorobenzene			U	U		U	
bis(2-chloroisopropyl)ether							
hexachloroethane							
N-nitroso-di-n-propylamine							
nitrobenzene							
isophorone							
2-nitrophenol							
2,4-dimethylphenol							
bis(2-chloroethoxy)methane							
2,4-dichlorophenol							
1,2,4-trichlorobenzene							
naphthalene 10			10K				
hexachlorobutadiene			U				
4-chloro-m-cresol							
hexachlorocyclopentadiene							
2,4,6-trichlorophenol							
2-chloronaphthalene							
acenaphthylene							
dimethyl phthalate							
2,6-dinitrotoluene							
acenaphthene							
2,4-dinitrophenol	50/1650						
2,4-dinitrotoluene	10/330						
4-nitrophenol	50/1650						
fluorene	10/330						
4-chlorophenylphenylether							
diethyl phthalate 5000 (ZL Dra(+))				10K		10K	
4,6-dinitro-o-cresol	50/1650			U		U	
diphenylamine	10/330						
azobenzene							
4-bromophenylphenylether							
hexachlorobenzene							
pentachlorophenol	50/1650						
phenanthrene	10/330						
anthracene							
dibutyl phthalate 700 (ZL Dra(+))						10K	
fluoranthene						U	

MDL
H_2O/SOIL

J - Estimated value.
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit. MDL
NA - Not analyzed.
1/ - Tentative identification.
2/ - On NRDC List of Priority Pollutants.

N.C. Division of Health Services
DHS 3068-D (4/86 Laboratory)

DIVISION OF HEALTH SERVICES, N.C. DEPARTMENT OF HUMAN RESOURCES
P.O. BOX 28047 - 306 N. WILMINGTON, ST., RALEIGH, N.C. 27611

MW-1 ORGANIC CHEMICAL ANALYSIS MW-3 MW-4 US spring

BASE/NEUTRAL AND ACID EXTRACTABLES	LAB NO	930937	930938	930939	930940	930941	
	FIELD #	17137	17139	17140	17141	17142	
COMPOUND	TYPE	(1)	(1)	(1)	(2)	(2)	( )
	UNITS	µg/l ~~µg/kg~~	µg/l ~~µg/kg~~	µg/l ~~µg/kg~~	µg/l ~~µg/kg~~	µg/l ~~µg/kg~~	µg/l µg/
pyrene	10/330	U	U	U	U	U	
benzidine	50/1650						
butyl benzyl phthalate	10/330						
benz(a)anthracene							
chrysene							
3,3-dichlorobenzidine	50/1650						
bis(2-ethylhexyl)phthalate	10/330	10 (MP9)				10K	
di-n-octyl phthalate	10/330					U	
benzo(b)fluoranthene	50/1650						
benzo(k)fluoranthene							
benzo(a)pyrene							
indeno(1,2,3-cd)pyrene							
dibenzo(a,h)anthracene							
benzo(g,h,i)perylene							
aniline	50/1650	U	U	U	U	U	
benzoic acid							
benzyl alcohol							
4-chloroaniline							
dibenzofuran	10/330						
2-methylnaphthalene							
2-methylphenol							
4-methylphenol							
2-nitroaniline	50/1650						
3-nitroaniline							
4-nitroaniline							
2,4,5-trichlorophenol							
CAPROLACTAM		U	85	U	U	U	

MDL
H_2O/SOIL

J - Estimated value.
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit. MDL
NA - Not analyzed.
1/ - Tentative identification.
2/ - On NROC List of Priority Pollutants.

N.C. Division of Health Services
DHS 3068-0 (4/86 Laboratory)

OCT-19-1993 10:08 ALEXANDER COUNTY ADMIN 704 632 0059 P.06

STATE LABORATORY OF PUBLIC HEALTH
DIVISION OF HEALTH SERVICES, N.C. DEPARTMENT OF HUMAN RESOURCES
P.O. BOX 29047 - 306 N. WILMINGTON ST., RALEIGH, N.C. 27611

Background

CHEMICAL ANALYSIS

PURGEABLE COMPOUNDS		MW-1	MW-3	MW-4	US	Spring	
	LAB NO	930937	930938	930939	930940	930941	
	FIELD #	17137	17139	17140	17141	17142	
COMPOUND	TYPE	(1)	(1)	(1)	(2)	(2)	( )
	UNITS	ug/l ug/kg	ug/l ug/kg	ug/l ug/kg	ug/l ug/kg	ug/l ug/kg	ug/l ug/kg
loromethane	10 ppb	u	u	u		u	
romomethane							
chlorodifluoromethane							
nyl chloride							
loroethane						trace	
thylene chloride 5	5 ppb	15	147			u	
ichlorofluoromethane		u	u				
hene, 1,1-dichloro						42	
hane, 1,1-dichloro- 5 (APP)		19	132	17		u	
2-trans-dichloroethene		u	u	u			
loroform							
thane, 1,2-dichloro- 0.38			2J				
thane, 1,1,1-trichloro-			trace				
rbontetrachloride			u				
romodichloromethane	10 ppb						
ropane, 1,2-dichloro- .56	5 ppb		23				
3-trans-dichloropropene			u				
richloroethylene 2.8			9				
hlorodibromomethane	10 ppb		u				
enzene 1	5 ppb	trace	14	2J		2J	
thane, 1,1,2-trichloro-		u	u	u		u	
3-cis-dichloropropene	10 ppb						
-chloroethyl vinyl ether							
romoform							
thane, 1,1,2,2-tetrachloro-	5 ppb						
thene, tetrachloro-		trace	trace				
oluene 1000		u	13	trace		trace	
hlorobenzene			u	u		u	
thylbenzene							
acetone 700 (2)	10 ppb	u	u	u	2J,B	2J,B	
2-butanone					u	u	
carbondisulfide	5 ppb				trace B		
2-hexanone	10 ppb		trace		u		
4-methyl-2-pentanone			u				
styrene							
vinyl acetate							
xylenes (total) 400		1J	57	4J		14	
cis-1,2-dichloroethene	5 ppb	0.7 u	8	12			
ethyl ether 0	10 ppb		124				
	↑MDL↑						

J - Estimated value.
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit. = MDL
NA - Not analyzed.
1/ - Tentative identification.
2/ - On NRDC List of Priority Pollutants.
B - present in lab blank
N.C. Division of Health Services

DHS 3068-0 (4/86 Laboratory)

DIVISION OF HEALTH SERVICES, N.C. DEPARTMENT OF HUMAN RESOURCES
P.O. BOX 28047 - 306 N. WILMINGTON, ST., RALEIGH, N.C. 27611

MW-1 ORGANIC CHEMICAL ANALYSIS

BASE/NEUTRAL AND ACID EXTRACTABLES	LAB NO	930937	930938	930939	930940	930941	
	FIELD #	17137	17139	17140	17141	17142	
COMPOUND	TYPE	(1)	(1)	(1)	(2)	(2)	( )
	UNITS	µg/l ~~µg/kg~~	µg/l ~~µg/kg~~	µg/l ~~µg/kg~~	µg/l ~~µg/kg~~	µg/l ~~µg/kg~~	µg/l µg/kg
N-nitrosodimethylamine	10/330	U	U	U	U	U	
bis(2-chloroethyl)ether							
2-chlorophenol							
phenol							
1,3-dichlorobenzene							
1,4-dichlorobenzene 1.4			10K	10K		10K	
1,2-dichlorobenzene			U	U		U	
bis(2-chloroisopropyl)ether							
hexachloroethane							
N-nitroso-di-n-propylamine							
nitrobenzene							
isophorone							
2-nitrophenol							
2,4-dimethylphenol							
bis(2-chloroethoxy)methane							
2,4-dichlorophenol							
1,2,4-trichlorobenzene							
naphthalene 10			10K				
hexachlorobutadiene			U				
4-chloro-m-cresol							
hexachlorocyclopentadiene							
2,4,6-trichlorophenol							
2-chloronaphthalene							
acenaphthylene							
dimethyl phthalate							
2,6-dinitrotoluene							
acenaphthene							
2,4-dinitrophenol	50/1650						
2,4-dinitrotoluene	10/330						
4-nitrophenol	50/1650						
fluorene	10/330						
4-chlorophenylphenylether							
diethyl phthalate 5000 (2L Draft)				10K		10K	
4,6-dinitro-o-cresol	50/1650			U		U	
diphenylamine	10/330						
azobenzene							
4-bromophenylphenylether							
hexachlorobenzene							
pentachlorophenol	50/1650						
phenanthrene	10/330						
anthracene						10K	
dibutyl phthalate 700 (2L Draft)						U	
fluoranthene							
	MDL H_2O/501L						

J - Estimated value.
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit. MDL
NA - Not analyzed.
1/ - Tentative identification.
2/ - On NRDC List of Priority Pollutants.

N.C. Division of Health Services
DHS 3068-0 (4/86 Laboratory)

STATE LABORATORY OF PUBLIC HEALTH
DIVISION OF HEALTH SERVICES, N.C. DEPARTMENT OF HUMAN RESOURCES
P.O. BOX 28047 - 306 N. WILMINGTON, ST., RALEIGH, N.C. 27611

MW-1 ORGANIC CHEMICAL ANALYSES MW-3 MW-4 US spring

BASE/NEUTRAL AND ACID EXTRACTABLES	LAB NO	930937	930938	930939	930940	930941	
	FIELD #	17137	17139	17140	17141	17142	
COMPOUND	TYPE	(1)	(1)	(1)	(2)	(2)	( )
	UNITS	µg/l ~~mg/kg~~	µg/l ~~mg/kg~~	µg/l ~~mg/kg~~	µg/l ~~mg/kg~~	µg/l ~~mg/kg~~	µg/l µg/kg
pyrene	10/330	U	U	U	U	U	
benzidine	50/1650						
butyl benzyl phthalate	10/330						
benz(a)anthracene							
chrysene							
3,3-dichlorobenzidine	50/1650						
bis(2-ethylhexyl)phthalate	10/330	10 (MDL)				10K	
di-n-octyl phthalate	10/330					U	
benzo(b)fluoranthene	50/1650						
benzo(k)fluoranthene							
benzo(a)pyrene							
indeno(1,2,3-cd)pyrene							
dibenzo(a,h)anthracene							
benzo(g,h,i)perylene							
aniline	50/1650	U	U	U	U	U	
benzoic acid							
benzyl alcohol							
4-chloroaniline							
dibenzofuran	10/330						
2-methylnaphthalene							
2-methylphenol							
4-methylphenol							
2-nitroaniline	50/1650						
3-nitroaniline							
4-nitroaniline							
2,4,5-trichlorophenol							
CAPROLACTAM		U	85	U	U	U	

MDL
H2O/SOIL

J - Estimated value.
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit. MDL
NA - Not analyzed.
1/ - Tentative identification.
2/ - On NRDC List of Priority Pollutants.

N.C. Division of Health Services
DHS 3068-0 (4/86 Laboratory)

OCT-19-1993 10:10 ALEXANDER COUNTY ADMIN 704 632 0059 P.09

STATE LABORATORY OF PUBLIC HEALTH
DIVISION OF HEALTH SERVICES, N.C. DEPARTMENT OF HUMAN RESOURCES
P.O. BOX 28047 - 306 N. WILMINGTON, ST., RALEIGH, N.C. 27611

Background

ORGANIC CHEMICAL ANALYSIS

PURGEABLE COMPOUNDS	LAB NO	MW-1 930937	MW-3 930938	MW-4 930939	"US" 930940	Spring 930941	
	FIELD #	17137	17139	17140	17141	17142	
COMPOUND	TYPE	(1)	(1)	(1)	(2)	(2)	( )
	UNITS	ug/l ug/kg	ug/l ug/kg	ug/l ug/kg	ug/l ug/kg	ug/l ug/kg	ug/l ug/kg
lloromethane	10 ppb	u	u	u	u	u	
romomethane							
ichlorodifluoromethane							
inyl chloride							
hloroethane						trace	
ethylene chloride 5	5 ppb	15	147			u	
richlorofluoromethane		u	u				
thene, 1,1-dichloro						42	
thane, 1,1-dichloro- 5 (AP9)		19	132	17		u	
,2-trans-dichloroethene		u	u	u			
hloroform							
thane, 1,2-dichloro- 0.38			2J				
thane, 1,1,1-trichloro-			trace				
arbontetrachloride			u				
romodichloromethane	10 ppb						
ropane, 1,2-dichloro- .56	5 ppb		23				
,3-trans-dichloroopropene			u				
richloroethylene 2.8			9				
hlorodibromomethane	10 ppb		u				
enzene 1	5 ppb	trace	14	2J		2J	
thane, 1,1,2-trichloro-		u	u	u		u	
,3-cis-dichloroopropene	10 ppb						
-chloroethyl vinyl ether							
romoform							
thane, 1,1,2,2-tetrachloro-	5 ppb						
thene, tetrachloro-		trace	trace				
toluene 1000		u	13			trace	
hlorobenzene			u	trace		u	
ethylbenzene				u			
					2J,B	2J,B	
acetone 700 (2)	10 ppb	u	u	u	u	u	
2-butanone					trace B		
carbondisulfide	5 ppb				u		
2-hexanone	10 ppb		trace				
4-methyl-2-pentanone			u				
styrene							
vinyl acetate							
xylenes (total) 400		1J	57				
cis-1,2-dichloroethene	5 ppb	0.7 u	8	4J		14	
ethyl ether 0	10 ppb		124	12			
	↑MDL↑						

J - Estimated value.
K - Actual value is known to be less than value given.
L - Actual value is known to be greater than value given.
U - Material was analyzed for but not detected. The number is the Minimum Detection Limit. = MDL
NA - Not analyzed.
1/ - Tentative identification.
2/ - On NRDC List of Priority Pollutants.
B - present in lab blank
N.C. Division of Health Services

DHS 3068-0 (4/86 Laboratory)

N. C. Department of Human Resources
Division of Health Services

Organic
SAMPLE ANALYSES REQUEST

State Laboratory of Public Health
P. O. Box 28047
306 N. Wilmington Street

STATE LABORATORY OF PUBLIC HEALTH
DIVISION OF HEALTH SERVICES, N.C. DEPARTMENT OF HUMAN RESOURCES

N. C. Department of Human Resources
Division of Health Services

Organic
SAMPLE ANALYSES REQUEST

State Laboratory of Public Health
P. O. Box 28047
306 N. Wilmington Street
Raleigh, 27611

Site Number 02-01 Field Sample Number 17141
Name of Site Alexander Co LF Site Location Sr 1620
Collected By Rose ID# 062 Date Collected 4-13-93 Time 1:00

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater (1)	___ Solid (5)	Upstream - BUS-1
✓ Surface Water (2)	___ Liquid (6)	
___ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	Split Sample

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
___ Arsenic		___ Arsenic		___ Silver	
___ Barium		___ Barium		___ Sulfates	
___ Cadmium		___ Cadmium		___ Zinc	
___ Chromium		___ Chloride		___ Ph	
___ Lead		___ Chromium		___ Conductivity	
___ Mercury		___ Copper		___ TDS	
___ Selenium		___ Fluoride		___ TOC	
___ Silver		___ Iron			
		___ Lead			
		___ Manganese			
		___ Mercury			
		___ Nitrate			
		___ Selenium			

ORGANIC CHEMISTRY

Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
✓ P&T:GC/MS		___ EDB		___ Methoxychlor	
✓ Acid:B/N Ext.		___ PCB's		___ Toxaphene	
___ TOX		___ Petroleum		___ 2,4-D	
		___ Endrin		___ 2,4,5-TP (silvex)	
		___ Lindane			

MICROBIOLOGY

Parameter
___ (MF) Coliform Colonies/100mls
___ (MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/1
___ Gross Alpha	
___ Gross Beta	

te Received 4-14-93 SA Date Reported
te Extracted 4-19-93 SA, WG, AA Date Analyzed BNA 4-19-93 BD PT 5-6-93 nw
orted By Lab Number 930940

S 3191 (Revised 7/85)
d and Hazardous Waste (Review 7/87)

OCT-19-1993 10:11 ALEXANDER COUNTY ADMIN 704 632 0059 P.11

N. C. Department of Human Resources
Division of Health Services

Organic
SAMPLE ANALYSES REQUEST

State Laboratory of Public Health
P. O. Box 28047
306 N. Wilmington Street
Raleigh, 27611

Site Number 02-01 Field Sample Number 17142
Name of Site Alexander Co LF Site Location SR 1620
Collected By Ross ID# 062 Date Collected 4-13-93 Time 12:45

Type of Sample:

Environmental	Concentrate	Comments
___ Groundwater (1)	___ Solid (5)	Downstream - WG-2
✓ Surface Water (2)	___ Liquid (6)	-Spring coming from LF
___ Soil (3)	___ Sludge (7)	
___ Other (4)	___ Other (8)	Split Sample

INORGANIC CHEMISTRY

Extractables		Total			
Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
Arsenic		Arsenic		Silver	
Barium		Barium		Sulfates	
Cadmium		Cadmium		Zinc	
Chromium		Chloride		Ph	
Lead		Chromium		Conductivity	
Mercury		Copper		TDS	
Selenium		Fluoride		TOC	
Silver		Iron			
		Lead			
		Manganese			
		Mercury			
		Nitrate			
		Selenium			

ORGANIC CHEMISTRY

Parameter	Results mg/1	Parameter	Results mg/1	Parameter	Results mg/1
✓ P&T:GC/MS		EDB		Methoxychlor	
✓ Acid:B/N Ext.		PCB's		Toxsphene	
TOX		Petroleum		2,4-D	
		Endrin		2,4,5-TP (silvex)	
		Lindane			

MICROBIOLOGY

Parameter
(MF) Coliform Colonies/100mls
(MPN) Coliform Colonies/100mls

RADIOCHEMISTRY

Parameter	Results PCi/1
Gross Alpha	
Gross Beta	

Date Received 4-14-93 SA Date Reported
Date Extracted 4-19-93 SA, WG, AA Date Analyzed BNA 4-20-93 SB PT 5-6-93 mw
Reported By Lab Number 930941

3191 (Revised 7/85)
Hazardous Waste (Review 7/87)

OCT-19-1993 10:12 ALEXANDER COUNTY ADMIN 704 632 0059 P.12

ACTIVITY REPORT(RX)

10.19.1993 10:20

NC DEHNR SOLID WASTE SECTION 733-4810

DATE	TIME	DURATION	REMOTE ID	MODE	PAGES	RESULT
10.15	11:01	02'15"	704 484 5200	ECM	2	O.K.
10.15	11:42	01'23"	9194925873	G3	2	O.K.
10.15	11:51	01'21"		G3	2	O.K.
10.15	14:16	00'52"	2018128348	G3	1	O.K.
10.15	14:27	00'41"	919 896 7005	ECM	1	O.K.
10.15	14:37	01'56"	8043579171	ECM	3	O.K.
10.15	14:40	00'35"	8043579171	ECM	1	O.K.
10.15	15:01	11'07"		G3	11	O.K.
10.15	15:21	02'31"	6838366	G3	2	O.K.
10.15	15:29	00'49"	9194990872	G3	1	O.K.
10.15	16:10	00'40"	919 896 7005	ECM	1	O.K.
10.18	08:15	00'45"	0000	ECM	2	O.K.
10.18	10:25	01'18"	09	G3	2	O.K.
10.18	10:51	01'30"	19192537022	G3	2	O.K.
10.18	11:19	07'36"	0	G3	5	N.G.46
10.18	11:28	29'43"	0	G3	12	N.G.47
10.18	12:03	04'20"	0	G3	5	O.K.
10.18	13:38	01'36"	404 339 0920	G3	2	O.K.
10.18	13:40	00'44"	1 919 851 7024	ECM	2	O.K.
10.18	13:47	00'55"	1 704 633 8140	ECM	2	O.K.
10.18	14:29	01'23"	4017922786	G3	2	O.K.
10.18	14:31	02'23"	4017922786	G3	3	O.K.
10.18	15:06	00'38"	919 7153060	ECM	1	O.K.
10.18	15:35	01'35"	404 339 0920	G3	2	O.K.
10.18	15:37	01'19"	404 347 0076	ECM	3	O.K.
10.18	15:56	05'23"	9195706788	G3	5	O.K.
10.19	07:54	01'19"	919 733 8493	G3	2	O.K.
10.19	10:08	01'31"	404 347 1695	ECM	2	O.K.
10.19	10:10	01'50"		G3	2	O.K.
10.19	10:13	06'46"	704 632 0059	ECM	12	O.K.

GAI CONSULTANTS

GAI Consultants-NC, Inc.
4000 Blue Ridge Road
Suite 500
Raleigh, NC 27612
919/783-4783
FAX 919/783-0241

FAX TRANSMITTAL SHEET

DATE: 10-19-93 PROJECT NO: 93124.07

TO: Larry Rose

COMPANY: Solid Waste Section

FAX NO: 733-4810

PAGES: 8 (Including this sheet)

FROM: Tracy Thomas

MESSAGE:

NOTE: If any of this facsimile transmission is illegible, or you do not receive the same number of pages as stated above, please contact us immediately at: (919) 783-4783

ALEXANDER COUNTY 02-01

Page 2
GAI Consultants, Inc.
Job #: 0493-17714

REIC SAMPLE #	17714-1	METHOD	MOL	ANALYST
GAI SAMPLE #	[redacted]-1			
	-----mg/l-----			
Total Metals				
arsenic	ND	7060	0.010	PL
barium	ND	6010	0.10	IL
cadmium	ND	7131	0.001	PL
chromium	ND	7191	0.005	KP
copper	ND	6010	0.10	IL
iron	3.70	6010	0.10	IL
lead	ND	7421	0.010	KP
manganese	0.08	6010	0.05	IL
mercury	ND	7470	0.001	PL
selenium	ND	7740	0.010	PL
silver	ND	6010	0.01	IL
zinc	0.02	6010	0.02	IL
General Chemistry				
nitrate (N)	ND	300	0.20	CD
*BOD	ND	5210B	2	DB/MM
COD	12	410.4	10	CD
chloride	ND	300	2.5	CD
fluoride	0.19	4500-F C	0.01	MS
sulfate	37.5	300	5.0	CD
TDS	143	2540C	1	DB
TOC	4.0	9060	1.0	KC
conductivity	234 umhos	2540 C	1 umho	DB
	-----ug/l-----			
TOX	ND	9020	20.0	KC

Page 3
GAI Consultants, Inc.
Job #: 0493-17714

REIC SAMPLE #	17714-2	METHOD	MQL	ANALYST
GAI SAMPLE #	MW-3			
	-----mg/l-----			
Total Metals				
arsenic	ND	7060	0.010	PL
barium	ND	6010	0.10	IL
cadmium	ND	7131	0.001	PL
chromium	ND	7191	0.005	KP
copper	ND	6010	0.10	IL
iron	11.8	6010	0.10	IL
lead	ND	7421	0.010	KP
manganese	0.73	6010	0.05	IL
mercury	ND	7470	0.001	PL
selenium	ND	7740	0.010	PL
silver	ND	6010	0.01	IL
zinc	0.02	6010	0.02	IL
General Chemistry				
nitrate (N)	ND	300	0.20	CD
*BOD	10	5210B	2	DB/MM
COD	12	410.4	10	CD
chloride	3.8	300	2.5	CD
fluoride	0.20	4500-F C	0.01	MS
sulfate	ND	300	5.0	CD
TDS	175	2540C	1	DB
TOC	23.9	9060	1.0	KC
conductivity	359 umhos	2540 C	1 umho	DB
	-----ug/l-----			
TOX	65.8	9020	20.0	KC

Page 4
GAI Consultants, Inc.
Job #: 0493-17714

REIC SAMPLE #	17714-3	METHOD	MQL	ANALYST
GAI SAMPLE #	MW-4			
	-----mg/l-----			
Total Metals				
arsenic	ND	7060	0.010	PL
barium	ND	6010	0.10	IL
cadmium	ND	7131	0.001	PL
chromium	ND	7191	0.005	KP
copper	ND	6010	0.10	IL
iron	19.1	6010	0.10	IL
lead	ND	7421	0.010	KP
manganese	14.5	6010	0.05	IL
mercury	ND	7470	0.001	PL
selenium	ND	7740	0.010	PL
silver	ND	6010	0.01	IL
zinc	0.06	6010	0.02	IL
General Chemistry				
nitrate (N)	ND	300	0.20	CD
*BOD	11	5210B	2	DB/MM
COD	21	410.4	10	CD
chloride	14.4	300	2.5	CD
fluoride	0.08	4500-F C	0.01	MS
sulfate	14.0	300	5.0	CD
TDS	126	2540C	1	DB
TOC	26.1	9060	1.0	KC
conductivity	265 umhos	2540 C	1 umho	DB
	-----ug/l-----			
TOX	73.0	9020	20.0	KC

Page 5
GAI Consultants, Inc.
Job #: 0493-17714

REIC SAMPLE #	17714-4	METHOD	MQL	ANALYST
GAI SAMPLE #	WS-1			
	-----mg/l-----			
Total Metals				
arsenic	ND	7060	0.010	PL
barium	ND	6010	0.10	IL
cadmium	ND	7131	0.001	PL
chromium	ND	7191	0.005	KP
copper	ND	6010	0.10	IL
iron	0.35	6010	0.10	IL
lead	ND	7421	0.010	KP
manganese	ND	6010	0.05	IL
mercury	ND	7470	0.001	PL
selenium	ND	7740	0.010	PL
silver	ND	6010	0.01	IL
zinc	ND	6010	0.02	IL
General Chemistry				
nitrate (N)	ND	300	0.20	CD
*BOD	ND	5210B	2	DB/MM
COD	ND	410.4	10	CD
chloride	2.7	300	2.5	CD
fluoride	0.07	4500-F C	0.01	MS
sulfate	ND	300	5.0	CD
TDS	10	2540C	1	DB
TOC	1.1	9060	1.0	KC
conductivity	21	2540 C	1 umho	DB
	-----ug/l-----			
TOX	ND	9020	20.0	KC

Page 6
GAI Consultants, Inc.
Job #: 0493-17714

REIC SAMPLE #	17714-5	METHOD	MQL	ANALYST
GAI SAMPLE #	WS-2			
	-----mg/l-----			
Total Metals				
arsenic	ND	7060	0.010	PL
barium	ND	6010	0.10	IL
cadmium	ND	7131	0.001	PL
chromium	0.005	7191	0.005	KP
copper	ND	6010	0.10	IL
iron	1.56	6010	0.10	IL
lead	ND	7421	0.010	KP
manganese	7.62	6010	0.05	IL
mercury	ND	7470	0.001	PL
selenium	ND	7740	0.010	PL
silver	ND	6010	0.01	IL
zinc	ND	6010	0.02	IL
General Chemistry				
nitrate (N)	0.15	300	0.20	CD
*BOD	6	5210B	2	DB/MM
COD	12	410.4	10	CD
chloride	19.1	300	2.5	CD
fluoride	0.06	4500-F C	0.01	MS
sulfate	9.0	300	5.0	CD
TDS	98	2540C	1	DB
TOC	19.6	9060	1.0	KC
conductivity	200	2540 C	1 umho	DB
	-----ug/l-----			
TOX	62.0	9020	20.0	KC

MQL - Minimum Quantifying Level
BOD - Biochemical Oxygen Demand
COD - Chemical Oxygen Demand
TDS - Total Dissolved Solids
TOC - Total Organic Carbon
TOX - Total Organic Halides
ND - None Detected at MQL
* - BOD was set up at 1:30 pm on 04-14-93.

DATE 5-21-93

APPROVED Marilyn Schweinbrates for Claude Scott

Ray Erickson
Ray Erickson

REIC Laboratory

225 Industrial Park Road
P O Box 286 Beaver WV 25813

Custody № 14987

CHAIN OF CUSTODY RECORD

Date: 4/13/93

Customer Name GAI CONSULTANTS INC.

Address 114 W LEE ST (304) 344-5300
CHARLESTON WV

SEND RESULTS TO RALEIGH OFFICE

Person to Contact WENDALL PARKER Telephone (919) 783-4783

Billing Address 4000 BLUE RIDGE RD, SUITE 500
RALEIGH, N.C. 27612

Sample Collection Information

Sampling Site ALEXANDER COUNTY LF

Project # 93-2666-01 Sampler CHRIS GROSE

Date of Sample Shipment 4/13/93 How Shipped PERSONAL DELIVERY

SAMPLE LOG AND ANALYSES REQUEST

Turnaround Requirements
✓ Regular
___ Rush

Analysis Requested

Sample ID	Containers # and Type	Date	Time	Matrix	Grab / Comp.							Remarks
MW-1	5	4/13	11:20		GRAB							3-1000ml; 1-40ml 1-100ml
MW-3	5	4/13	1:30		"							
MW-4	5	4/13	11:40		"							" "
WS-1	5	4/13	1:00		"							" "
WS-2	5	4/13	12:40		"							" "

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Chris Grose	4/13: 6:10				
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Condition on Arrival:	
		[illegible]	4/13/93	@ 6:10	

Comments MDL'S MUST MEET CURRENT N.C. SOLID WASTE SECTION REQUIREMENTS

Possible Interfering Compounds

Requested by Chris Grose

Sampling Field Data Sheet

GAI CONSULTANTS, INC.

PROJECT: 93-107-01

SAMPLERS: CHRIS GROSE

FIELD DATA SHEET ALEXANDER COUNTY LANDFILL

MONITORING PT. NUMBER	SAMPLE NUMBER	DATE OF COLLECT.	TIME SAMPLED	SAMPLING PARAMETERS					WATER QUALITY PARAMETERS				
				DTH-G.W.	REF. PT.	VOL. PUR.	SAMP. TY.	SAMP.DTH	pH	TEMP.	SP. COND		
MW-1		4/13/93	11:20	32.62'		3.2 gal DRY	GRAB		6.85	75.2°	215		
MW-2				19.84'									
MW-3		4/13/93	12:10	25.1'		2.0 gal DRY	GRAB		6.25	78.4°	360		
MW-4		4/13/93	11:40	5.7'		6.3 gal	GRAB		5.94	73.2°	220		
OLD MW-1				21.76'									
WS-1		4/13/93	1:00				GRAB		5.86	67.3°	18.6		
WS-2		4/13/93	12:40				GRAB		5.76	71.4°	169		

COMMENTS

1) COULD NOT ADVANCE BAILER IN WELLS OLD MW-1 AND MW-2. CASING BENT @ 15' IN OLD MW-1 AND AT 10.4' IN MW-2.

2) SAMPLES SPLIT FOR ANALYSIS BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES, SOLID WASTE SECTION.