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North Carolina Department of Environment and Natural Resources
Division of Waste Management

Beverly Eaves Perdue
Governor

Dexter R. Matthews
Director

Dee Freeman
Secretary

1/20/2010

Mr. Zee Lamb
Bertie County Manager
PO Box 530
Windsor, NC 27983

Subject: Pre-Regulatory Landfill Sites in Bertie County

Dear Mr. Lamb:

The General Assembly of North Carolina enacted Senate Bill 1492 which created a program to assess the public health and environmental hazards at landfill and dump sites that operated prior to 1983 and to develop and implement remedial action plans at sites requiring remediation. The Pre-Regulatory Landfill Unit (Unit) was created in the Inactive Hazardous Sites Branch (IHSB) to oversee these activities. The purpose of this letter is to make you aware of the sites identified in your county and to provide general guidance of relevant state statutes.

Based on the information obtained by the Unit, the sites listed below tentatively qualify under Senate Bill 1492.

<u>ID Number</u>	<u>Site Name</u>	<u>Site Address</u>
NONCD0000142	Colerain Refuse Disposal	NC 42 East, Colerain
NONCD0000136	Kelford Dump	Harrells Siding Rd, Kelford
NONCD0000139	Roxobel Refuse Disposal	Harrells Siding Rd, Kelford
NONCD0000140	Lewiston Refuse Disposal	551 Black Jack Rd, Lewiston
NONCD0000141	Windsor Refuse Disposal Area	East Elm St, Windsor

Work at these sites may be performed using the Unit's resources or through local government actions. The Unit has prioritized the sites statewide based on their threat to public health and the environment and will perform assessments and implement remedial actions based on this priority. Local governments may opt to perform the work at any time under the guidance of the Unit. Reimbursement of local government costs may be available for assessments and remedial actions to abate an imminent hazard as funds are available. The conditions for reimbursement include approval of the assessment and remediation plan by the Unit and certified accounting of costs. A document, *IHSB Guidelines for Addressing Old Landfills & Dumps*, was developed to assist local governments and the Unit in this work. It is available on our web site, http://wastenotnc.org/sfhome/IHSBRNCH_OldLandfills.HTM, for your review.

An additional purpose in notifying you of these sites is to provide information to assist in your responsibilities in the permitting of private drinking water wells. The General Assembly enacted legislation which required local health departments to implement programs for the permitting, inspecting,

and testing of private drinking water wells by July 1, 2008. State well construction standards in 15A NCAC 2C require a minimum horizontal separation of 500 feet between a water supply well and a landfill or disposal site. More precise location information for the sites in your county may be requested from the Unit.

If you are aware of additional sites, have additional information on the identified sites, or need further information, please contact me at (919) 508-8484.

Sincerely,



Aaron Shear, Hydrogeologist
Pre-Regulatory Landfill Unit
Inactive Hazardous Sites Branch
Superfund Section

cc: Mr. Jerry Parks – Bertie County Health Director



North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director

Division of Waste Management

Michael F. Easley, Governor
William G. Ross Jr., Secretary

February 26, 2007

<SAL> <FIRST> <LAST>, County Manager
County of <MUNICIPALITY>
<ADDRESS>
<TOWN>, North Carolina <ZIP>

Subject: Assessment, Cleanup, and Redevelopment of Old Landfill Sites Within Your Jurisdiction

Dear <SAL> <LAST>:

Governor Easley released his proposed budget February 22, 2007. Included in the budget is a specific item I believe should be of interest to you from a fiscal, environmental and public health protection perspective.

There are approximately 700 old landfills statewide and <LANDFILL#> old landfills in your local area that closed before the State permitting system became effective. These landfills are listed on the Old Landfill Sites portion of the Inactive Hazardous Sites Inventory maintained by the Superfund Section, Division of Waste Management. Any person, including local governments, that arranged for disposal or disposed of waste in the landfills may be held liable for the cleanup of the site. I have attached a report that identifies the location of known old landfill sites in <COUNTY NAME> County that may have closed prior to 1983 and thus qualify for the program described in this letter.

The Division has surveyed old landfills in 47 counties. The results of the survey indicate reason for concern about potential public health and safety impacts of these sites if they are not addressed. Seventy percent of the sites surveyed had a school, church, residence, day care or drinking water source within 1000 feet. The Division has found 102 old landfills that have a drinking water well within 500 feet. Thirteen of the landfills surveyed have residences built over the old landfill. The cost of assessment and cleanup of these old landfill sites can be as high as several million dollars.

Governor Easley's budget establishes a partnership between the State and local governments to both clean up the old landfill sites and provide funding for redevelopment of the sites. Many are in prime locations for redevelopment opportunities. The Governor's budget proposes to pay for cleanup and redevelopment of these sites through a surcharge on disposal of solid waste. The funding mechanism is a fair one. It is based on the idea that those who use solid waste disposal facilities should share responsibility for cleanup of sites used for solid waste disposal in the past that may have been lawful at the time, but did not meet standards that we now know are necessary to protect public health and safety.

The proposed \$2.00 per ton disposal surcharge would apply to residential, commercial, industrial, and construction and demolition debris type waste that is either disposed at a landfill or passes through a transfer station for disposal out-of-state. The State would use revenue from the surcharge to contract for cleanup of the old landfill sites and to provide grants to local government for redevelopment. The funds could also be used across the state to clean up other hazardous substance disposal sites that have no viable responsible party.

The only tool currently available to the State to ensure cleanup when it is needed is an enforcement action against those who owned, operated, or contributed to old landfills. The Governor's proposal would avoid placing an unreasonable

burden on any one local government and allow us to use our resources for actual cleanup rather than legal action. When old landfill sites were in use, North Carolina citizens, businesses, and industries benefited from their existence as a place to dispose of waste. The surcharge on waste disposal is a way for citizens, businesses, and industries to form a partnership for cleanup and redevelopment of these old landfill sites.

There is great interest this session of the General Assembly in strengthening requirements for landfills permitted in North Carolina. I encourage you to take a close look at legislation that will be introduced, specifically this initiative and what it can bring to your jurisdiction.

If you have questions regarding the program for clean-up of old landfills, please contact Jack Butler, Chief of the Superfund Section, at jack.butler@ncmail.net or call (919)508-8450.

Sincerely,

A handwritten signature in black ink, appearing to read "Dexter R. Matthews". The signature is written in a cursive, somewhat stylized font.

Dexter R. Matthews, Director

cc: David Thompson, NCACC
Jack Butler, Chief – Superfund Section

October 1, 1979

Mr. John E. Whitehurst
Bertie County Manager
Bertie County Courthouse
Windsor, NC 27983

JGL
Dear Mr. Whitehurst:

As discussed with Mr. Robert Parker in a meeting last week regarding the approved landfill plans for Bertie County, the two monitoring wells required may be constructed of 1½ inch galvanized pipe. If these wells are driven as discussed there will be no other requirements.

If you have any questions, please advise.

Respectfully,

J. Gordon Layton, Environmental Engineer
Solid & Hazardous Waste Management Branch
Sanitary Engineering Section

JGL:ns

cc: Mr. Billy W. Morris
Mr. Robert Parker
Mr. Joe W. Spruill



August 10, 1979

Mr. Mike Barnett
McDavid & Associates
Drawer 49
120 North Main Street
Farmville, NC 27828

Dear Mr. Barnett:

This letter is in regard to our meeting of August 3, 1979, in which the Bertie County landfill plans were discussed. As you will recall, a real concern on this site was the number of soil borings made and their location.

JGL

After a preliminary review, the following recommendations were made to you because of the lack of subsurface information:

1. No waste should be allowed in Areas III and IV due to the possible hydraulic connection of ground water to existing private wells in the area.
2. Elimination of drainage ditching proposed for Areas III and IV.
3. Changes on final slopes in Area I to get surface water off the landfill at a shorter distance. Other areas should also be considered.
4. Pipe slope drains installed to facilitate surface water channeling from landfill surface to the drainage ditch.

These are the basic items discussed. If you have any questions, please advise.

Yours truly,

J. Gordon Layton, Environmental Engineer
Solid & Hazardous Waste Management Program
Sanitary Engineering Section

JGL:bm
cc: Mr. Billy W. Morris

*Bartie
JWC*

November 21, 1978

Mr. Robert S. Parker
Post Office Box 586
Windsor, NC 27983

Dear Mr. Parker:

Your application for State Aid for Mosquito Control has been received and approved.

Enclosed are State Aid for Mosquito Control Rules and monthly report forms.

Upon receipt of monthly documented reports of completed work, payments will be issued.

Yours truly,

Jerry C. Perkins, Head
Solid Waste & Vector Control Branch
Sanitary Engineering Section

JCP/wss

cc: Mr. Dewey Roseman
Mr. John Whitehurst

October 12, 1978

act

✓ Mr. Robert S. Parker, Director
Bertie County Health Department
Post Office Box 586 *JWTC*
Windsor, North Carolina 27983

Dear Mr. Parker:

Your letter to Mr. Billy W. Morris with reference to manganese oxide waste has been forwarded to me for reply.

We have been in contact with Mr. John Stallings of R. J. Reynolds Tobacco Company for more information and samples of the material.

If R. J. Reynolds will lower the pH to 9.0 and dry the material so it will be as the dry samples they presented to this office, we have no objection to placing the waste in the Bertie County Sanitary Landfill.

Sorry we were so long in replying, but it took time for the samples to be studied.

Sincerely,

O. W. Strickland, Supervisor
Solid Waste Management Unit
Solid Waste & Vector Control Branch
Sanitary Engineering Section

OWS/vss

cc: Mr. Billy W. Morris
Mr. John Stallings

NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES

OFFICE MEMORANDUM

8/30/78 DATE

TO: Damon Antel
FROM: Bill Morris
RE: R. J. Reynolds Waste



Call Fri morning

PH - 5.0 - 9.0

To let you know I am starting to work at the
Fri - Sept 8 meeting - 10:30 a.m. (no)
Have Bill go get samples (if possible) would be of use
in the future.

Maintenance contact
PH 9.0 on below
(add above)

Bertie County Health Department

North Carolina State Board of Health Cooperating
WINDSOR, NORTH CAROLINA 27983

ERNEST L. CARRAWAY, JR.
CHAIRMAN OF THE BOARD

ROBERT S. PARKER
HEALTH DIRECTOR

August 29, 1978

Mr. Bill Morris
Eastern Regional Office
404 St. Andrews Street
Greenville, North Carolina 27834

Dear Bill:

Enclosed is the description on the manganese oxide.

Please have your state people hurry up and give me a tentative answer on whether we can accept this material or not. Mr. John Stallings (R.J. Reynolds) said they would convert the waste to our specifications but to please let him have an initial o.k. on disposal at the landfill.

Thanks.

Sincerely,

Bob Parker

Robert S. Parker
Health Director

RSP:pdh

Enclosure

Get material in and take the small sample they sent me from plant area. Let it down to the disposal site. (aluminum?)

John Stallings, R.J. Reynolds Co.
Tel. # 482-2133

The manganese conversion process will yield about 104 cu ft/week of filter cake. This wet cake will weigh about 8500 pounds and will be about 40% to 45% liquid.

The solid portion of this cake will contain oxides of manganese, lime, possibly some manganese hydroxide and a small amount of filter aid of the infusorial earth type. With the exception of the lime all of these materials are insoluble.

The liquid portion of the cake will approximate 3500 lbs or 335 gallons of water with the following characteristics:

pH	>10.5
Mn, ppm	0.034
K, ppm	2,509
Ca, ppm	1,536
SO ₄ , mg/ml	15.66
Ash, %	0.87
TKN, mg/L	0
NH ₃ , mg/L	0
(NO ₂ /NO ₃), mg/L	0.6 (0.001 lb/week)
Total P, mg/L	30 (0.08 lb/week)
Ortho P, mg/L	0.1 (0.001 lb/week)
Total Solids, mg/L	43707 (122 lb/week)
Total Vol. Solids, mg/L	9407 (26 lb/week)
Suspended Solids, Mg/L	118 (0.3 lb/week)
Total Dissolved Solids, mg/L	43589 (121 lb/week)
COD, mg/L	13462 (37 lb/week)
BOD ₅ , mg/L	6123 (17 lb/week)

Talked to Bill Morris on 9/1/78 - asked him to get back to R. J. Reynolds and mention that we would like to see a pH of not over 9.0 if possible and want to make sure we don't have a problem with moisture content. Could perhaps add some clay to reduce pH.

Did not make a decision as to whether it could be mixed in the landfill with other waste - may want to keep it separate from a handling standpoint. He will get back to me.

Bertie
Avoca

August 23, 1979

Mr. William T. Long, Jr., P.E.
Engineering Department
R. J. Reynolds Tobacco Company
Winston-Salem, NC 27102

Dear Mr. Long:

Enclosed is a plat of the disposal area for manganese oxide on the Avoca Division at Merry Hill, North Carolina. Please delineate, in plan view on this plat, the proposed sequence of trenching and filling.

We also need the dimensions of the trenches including: top width, bottom width and side wall slopes.

We will transfer this information to the other plan sheets.

Respectfully,

William L. Meyer
Environmental Engineer
Solid & Hazardous Waste Management Program
Sanitary Engineering Section

WLM:ns
Enclosure



C.33.6.1 *M. Z. Meyer*
Forsyth

R.J.Reynolds Tobacco Company
Winston-Salem, NC 27102

Bertie
AW r/c

RJR

February 23, 1981

Mr. W. Lee Fleming, Jr., Supervisor
State Engineering Unit
North Carolina Department of Natural
Resources & Community Development
P. O. Box 27687
Raleigh, North Carolina 27611

Dear Mr. Fleming:

R. J. Reynolds Tobacco Company, Permit No. 3947 Extension,
Bertie County.

As requested in your letter dated January 5, 1981, we are submitting the following information to verify that the sludge generated in our wastewater treatment plant is not a hazardous waste as defined in the May 19, 1980, Federal Register and Amendments. This information is supplied in the format suggested by Bill Meyer of the Department of Human Resources, Solid and Hazardous Waste Management Branch.

- o This material is not listed as a hazardous waste in Subpart D of Part 261 of the Federal Regulations.
- o This material does not have a flash point of less than 140^oF and, therefore, does not meet the criteria for ignitable.
- o This material has a pH that typically ranges from neutral to slightly acidic (pH 7.0 - 6.0) and, therefore, will not have the characteristics of a corrosive waste.
- o This material is an aqueous material that does not contain cyanide or sulfide and does not meet the criteria of a reactive waste.
- o At no point in the manufacturing process or waste treatment system are any of the organic compounds listed in the criteria for a toxic hazardous waste used and will, therefore, not be present in the resulting sludge. A complete lab analysis (toxic extraction procedure) of the sludge for the heavy metals listed in the criteria for toxic waste was performed. This analysis was conducted in accordance with the procedure listed in the May 19, 1980, Federal Register and resulted in no concentrations of heavy metals in excess of the listed criteria (see attachment for additional analytical information).

Mr. W. Lee Fleming, Jr.
Page 2
February 23, 1981

I trust the previously listed information will allow you to issue our permit extension. If you have any questions or need any additional information, please call me at (919) 777-5810.

Very truly yours,



G. L. Lamb
Engineering Department

GLL:ss

Attachment

cc: W. L. Meyer
 F. O. Sellers
 L. L. Bass, III

TABLE I

DETERMINATION OF TOXIC METALS IN STANDARD REFERENCE MATERIALS

<u>ELEMENT</u>	<u>SRM 1643a - WATER¹</u>		<u>SRM 1645 - RIVER SEDIMENT²</u>	
	<u>RJR VALUE</u>	<u>CERTIFIED RANGE</u>	<u>RJR VALUE</u>	<u>CERTIFIED RANGE</u>
Se	9.5	10-12	-	-
Ba	47.0	44-48	48	-
Cr	18.6	15-19	2.84 ²	2.68-3.24 ²
Cd	10.3	9-11	8.6	8.7-11.7
Pb	26.1	26-28	721	686-742
As	72.6	69-83	52	(66) ³
Ag	3.2	2.5-3.1	1.2	-
Hg	-	-	1.4	0.6-1.6

¹All values for SRM 1643a are reported as ng/g. RJR values represent the average of duplicate sample analyses.

²All values for SRM 1645 are reported as µg/gram except Cr which is reported as percent by weight. RJR values represent the average of three replicate samples.

³Arsenic is not certified by National Bureau of Standards. The Value in parentheses represents a single, independent determination.

TABLE 11

TOXIC METAL CONCENTRATION IN SLUDGE AND E.P. TOXICITY LEACHATES

SAMPLE DATE	SAMPLE TYPE	TOXIC METALS DETERMINATION				
		ELEMENT	SLUDGE ¹	E.P. LEACHATE ²		
Jan. 19, 1981	Grab	Cr ³	24.26	0.00		
		Pb	16.80	0.0		
		Cd	0.16	0.00		
		As	0.000	0.100		
		Ag	0.00	0.00		
		Hg	0.000	0.000		
		Ba	16.72	0.10		
		Se	0.000	0.000		
		Jan. 23, 1981	Grab	Cr	26.41	0.00
				Pb	14.50	0.0
Cd	0.13			0.00		
As	0.000			0.006		
Ag	0.00			0.00		
Hg	0.000			0.000		
Ba	21.43			0.10		
Se	0.000			0.000		
Jan. 26, 1981	Grab			Cr	30.61	0.00
				Pb	11.50	0.0
		Cd	0.25	0.00		
		As	0.000	0.002		
		Ag	0.00	0.00		
		Hg	0.000	0.000		
		Ba	17.01	0.200		
		Se	0.000	0.000		
		Jan. 30, 1981	Grab	Cr	20.65	0.00
				Pb	15.0	0.0
Cd	0.18			0.00		
As	0.000			0.009		
Ag	0.00			0.00		
Hg	0.000			0.000		
Ba	29.51			0.20		
Se	0.000			0.000		
Feb. 2, 1981	Grab			Cr	19.70	0.00
				Pb	15.00	0.0
		Cd	0.22	0.00		
		As	0.000	0.011		
		Ag	0.00	0.00		
		Hg	0.000	0.000		
		Ba	36.44	0.20		
		Se	0.000	0.000		
		Blanks (n = 2)		Cr		0.00
				Pb		0.0
Cd				0.00		
As				0.000		
Ag				0.00		
Hg				0.000		
Ba				0.00		
Se				0.000		

¹All values reported in $\mu\text{g/g}$ wet weight as taken from filtration unit following primary separation.

²All values reported in mg/L.

³Values for chromium represent total chromium. No further determination as Cr^{+3} or Cr^{+6} .

METHODS OF ANALYSIS

1. Sample Treatment

Two 1-liter sludge samples were taken from the aerobic digester unit of the Avoca Division waste treatment plant at specified time intervals to demonstrate (a) the presence or absence of toxic metals at concentrations regarded as hazardous and listed in the May 19, 1980 Federal Register and (b) the consistency of the digested sludge over a period of time. Immediately following the sampling procedure the samples of sludge were frozen and shipped to the Research and Development Department, Technical Services Division for testing and analysis. Samples were maintained in a frozen state until the extraction procedure toxicity test could be done.

2. Extraction Procedure

The method for performing the extraction procedure is given in Appendix II, Federal Register, May 19, 1980, pps. 33127-33128 and in Test Methods for Evaluating Solid Waste, Volume I (SW 846), Office of Water and Waste Management, U.S.E.P.A., Washington, D. C., 1980.

Two digester sludge samples were thawed in warm water immediately prior to the extraction procedure test. Sludge solids were separated from the liquid matrix by filtration using Millipore® Hazardous Waste Filtration systems (Cat. # YT30142HW). A 5-10 gram aliquot of the sludge cake was retained for analysis of toxic metals. One-hundred grams of sludge was placed in the extractor apparatus (Millipore® Cat. # YT31142HW and # YS33142HW) containing the required volume of deionized-distilled water, pH adjustment was made with 0.5N acetic acid as directed, and the slurry was extracted for a period of at least 24 hours. Solids separation following the extraction was achieved by filtration. The extraction filtrate was combined with the initial liquid filtrate and submitted for toxic metals analysis as leachate. System blanks were carried through the entire extraction procedure to assure that no contamination from the equipment occurred; blanks were submitted as leachate samples also.

3. Analysis for Toxic Metals

Analyses for toxic metals on both sludge cake and leachate samples were performed in strict accordance as outlined in Test Methods for Evaluating Solid Waste, Vol. I. Both sludge and leachate samples were retained in Teflon® bottles prior to analysis. All containers and equipment were scrupulously cleaned according to standard procedures within the Technical Services Division.

Verification and/or validation of the analytical data was provided in two ways: (1) standard reference material (SRM) samples acquired from the National Bureau of Standards were subjected to identical treatment as the sludge cake or leachate samples and (2) matrix interferences affecting the analytical data for a specific metal were defined by the method of standard addition using at least a three-point curve and determining that the line of best fit did pass through the origin.

For each sample--reference standards, sludges, leachates, and blanks-- the same pre-analysis procedures were followed: (1) total digestion of the sample with ultra-pure nitric acid and (2) dilution to appropriate volume in volumetric glassware with reagent grade, Type I deionized-distilled water and stored in Teflon[®] bottles until instrumental analysis was performed.

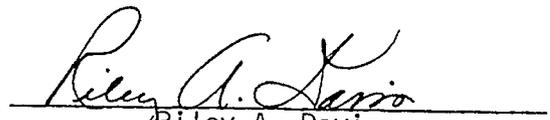
Actual determination of the concentration for the heavy metals of interest was done with a Perkin-Elmer Model 503 Atomic Absorption Spectrophotometer. For those metals requiring the use of the graphite furnace technique, a Model HGA-2100 Graphite Furnace Atomizer was used. Mercury was analyzed by the cold vapor technique which required the use of Perkin-Elmer Model MHS-1 system.

4. Presentation of Results

The analytical results for the determination of specific toxic metals in standard reference materials (SRM) from the National Bureau of Standards are shown in Table I. Excellent agreement between the RJR values and the National Bureau of Standards certified values was found. All RJR values were further verified by standard addition techniques although this procedure was redundant and unnecessary in the majority of analyses. Copies of the National Bureau of Standards certification documents have been included for your information.

Table II presents the analytical data from five independent samples of aerobically digested sludge and the leachate which resulted from the extraction procedure of the sludge samples. In no case did the concentration of the toxic metals in the leachate samples meet or exceed the maximum allowable concentration which would designate this waste as hazardous. A minor problem was observed in the analysis of the sludge cake samples for arsenic. Note that for the total sludge no arsenic was reported; in the leachate samples arsenic values ranging from 0 to 0.10 mg/L were found. Strong matrix interference was observed in the total sludge samples possibly due to the presence of major cations, i.e. sodium, potassium, and calcium. As a result of the matrix interferences linearity was not found when using the standard addition technique as can be seen on the graphic examples enclosed with this report. However 0.03 µg/ml arsenic standard was detected by the standard addition method. No arsenic values below 0.03 µg/ml were observed in the sludge samples. Since 0.03 µg/ml arsenic is well below the maximum concentration allowed and the leachate of the sludge is more important in establishing the sludge as hazardous waste, no further analysis of the sludge samples was necessary. The effects due to matrix interference in SRM 1645 were overcome by dilution as shown on the graphical illustration.

If there are any questions concerning these analytical methods, please contact me at (919)-777-7034.


Riley A. Davis
R&D Group Leader

/bmg

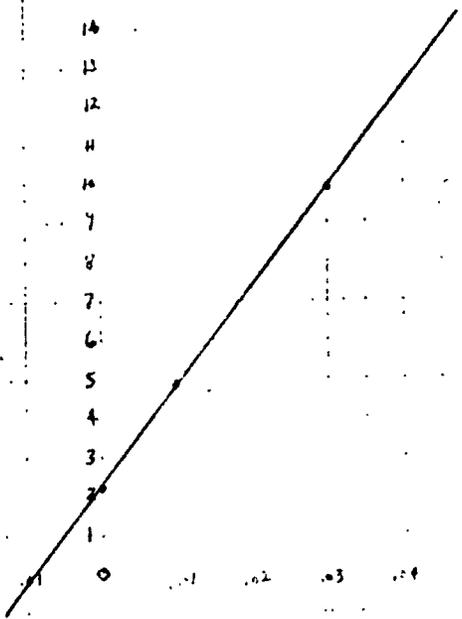
500215

Arvic

2-17-1

no. x...

24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0



0.009 ug/ml

ug/ml

ug/ml

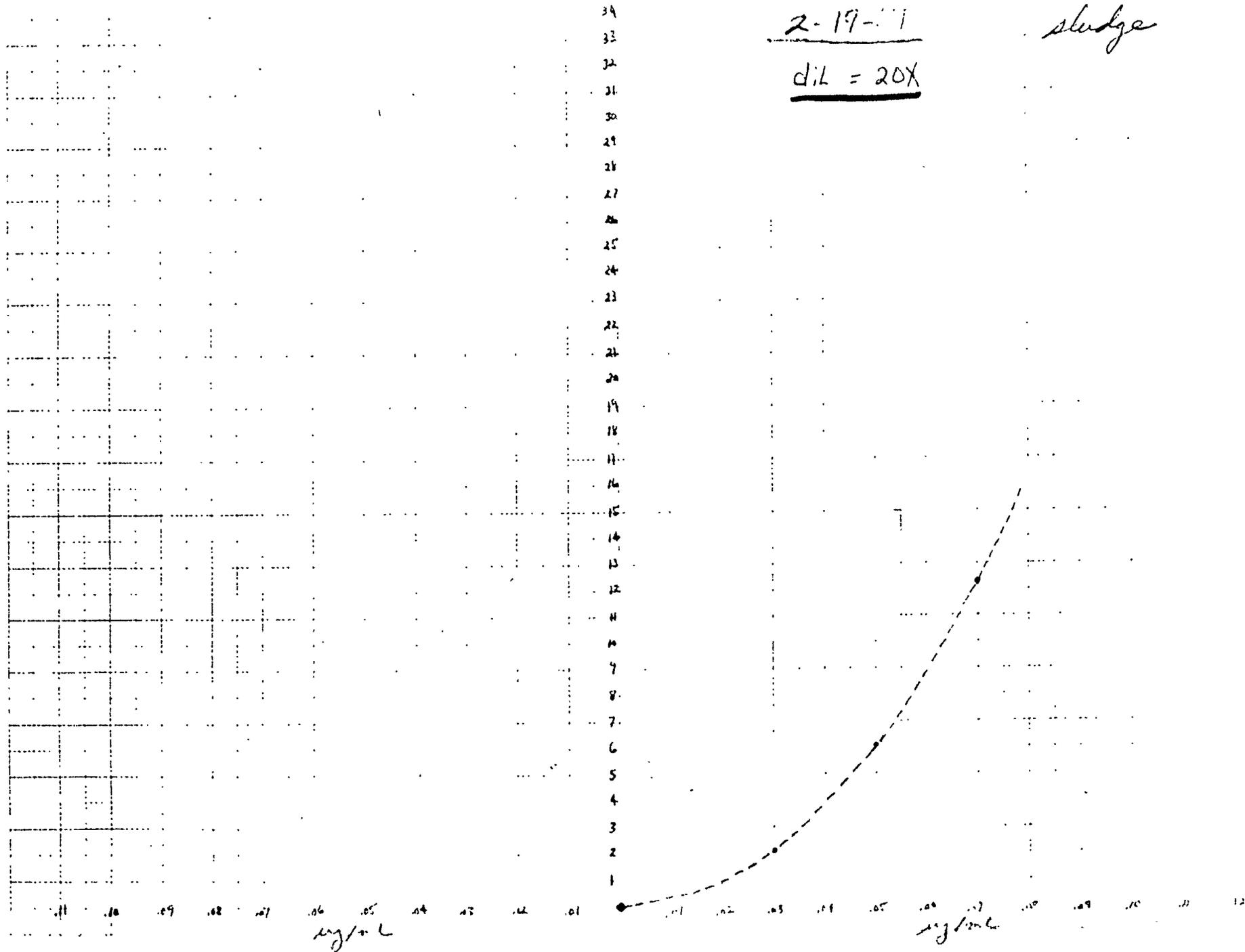
500161

Arsenic

2-19-77

sludge

dil = 20X



River Sediment

NBS 1645

Arsenic

2-19-81

d:L = 100X

Absorbance

80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5

$$\frac{(0.049 \text{ } \mu\text{g/ml})(100 \times)(50 \text{ ml})}{4.7 \text{ gms}} = 52 \text{ } \mu\text{g/g}$$

NBS = (66)

$\mu\text{g/ml}$

$\mu\text{g/ml}$

.25 .20 .15 .10 .05 .00 .05 .10 .15 .20 .25 .30 .35 .40 .45 .50 .55 .60 .65 .70 .75 .80 .85 .90 .95 1.00

The values listed below are based on measurements made in one laboratory, and are given for information only. While no reason exists to suspect systematic bias in these numbers, no attempt was made to evaluate such bias attributable to either the method or the laboratory. The method used for each set of measurements is also listed. The uncertainties indicated are two times the standard deviation of the mean.

Kjeldahl Nitrogen	(0.0797% ± 0.0048)
Total Phosphorus	(.051% ± .0014)
Loss on Ignition (800 °C)	(10.72% ± .28)
Oil and Grease (Freon)	(1.71% ± .26)
Chemical Oxygen Demand (Dichromate)	(149,400 mg/kg ± 9,000)

The methods used are:

Total Phosphorus - ASTM Method E-350.

Chemical Oxygen Demand (Dichromate) - Standard Methods for the Examination of Water and Waste Water, 14th Edition (1975), Section 508, page 550.

Oil and Grease (Freon 113 Extraction) - ibid., Section 502, page 518.

The following values are not certified, but are given to describe the matrix of the material: SiO₂ - 51%; MgO - 4%; Al₂O₃ - 4%; CaO - 4%.

H. L. Rook supervised collection, freeze drying, and homogenization of the SRM. The following members of the staff of the NBS Center for Analytical Chemistry performed the certification measurements: T. J. Brady; E. R. Deardoff; L. P. Dunstan; M. S. Epstein; R. Filby; M. Gallorini; E. L. Garner; T. E. Gills; J. W. Gramlich; R. R. Greenberg; S. H. Harrison; G. J. Lutz; L. A. Machlan; E. J. Maienthal; T. C. Rains; H. L. Rook; T. A. Rush; and W. P. Schmidt.

The development work, preceding the certification of the SRM, was supported by the Environmental Protection Agency under an Interagency Agreement.

Instructions for Use

The material, as received, is essentially free from moisture. In case of exposure to moisture, it should be dried without heat to a constant weight before using. Recommended procedures for drying are: (1) drying for 24 hours using a cold trap at or below -50°C and a pressure not greater than 30 Pa (0.2 mm Hg); (2) drying in a desiccator over P_2O_5 or $\text{Mg}(\text{ClO}_4)_2$. When not in use, the material should be kept in a tightly sealed bottle and stored in a cool, dark place.

Material of this kind is intrinsically heterogeneous. Consequently, the analyst should endeavor to minimize any segregation by thoroughly mixing the contents of the bottle by shaking and rolling before each use. In addition, when taking a portion for analysis, the analyst should strive to remove as representative a sample as possible.

Preparation and Analysis

This SRM was prepared from material dredged from the bottom of the Indiana Harbor Canal near Gary, Indiana. This material was screened to remove foreign objects, freeze dried, and sieved to pass a No. 80 ($180\mu\text{m}$) screen. This material was thoroughly mixed in a V-blender, bottled, and sequentially numbered. The material has been radiation-sterilized to minimize alteration from biological activity.

Randomly selected bottles were used for the analytical measurements. Each analyst examined at least 6 bottles, some of them measuring replicate samples from each bottle. No correlation was found between measured values and the bottling sequence. The results of measurements on samples from different bottles did not appear to differ significantly from sub-samples within the bottles. Accordingly, it is believed that all bottles of this SRM have substantially the same composition. The analytical methods employed were those in regular use at NBS for certification of Standard Reference Materials, except as noted below. Measurements and calibrations were made to reduce random and systematic errors to no more than one percent, relative. The uncertainties of the certified values listed in the table include those associated with both measurement and material variability. They represent the 95 percent tolerance limits for an individual sub-sample, i.e., 95 percent of the sub-samples from a unit of this SRM would be expected to have a composition within the indicated range of values 95 percent of the time.

The following values have not been certified because either they are not based on results of a reference method, or were not determined by two or more independent methods. They are included for information only.

All values are in units of $\mu\text{g/g}$ of sample, unless otherwise indicated.

Antimony	(51)	Potassium	(1.2 wt. %)
Arsenic	(66)	Scandium	(2)
Cobalt	(8)	Sodium	(0.55 wt. %)
Lanthanum	(9)		

National Bureau of Standards

Certificate of Analysis

Standard Reference Material 1645

River Sediment

This Standard Reference Material is intended for use in the calibration of methods used in the analysis of river sediment and materials with similar matrices. The material has been freeze dried and is now essentially free from moisture. The certified values given below are based on measurements made on a dried sample of at least 100 mg for the trace elements and for a 1-g sample for iron and chromium.

The values are based on the results of 6 to 30 determinations by the analytical techniques indicated. The estimated uncertainties include those due to sample variation, possible method differences, and errors of measurement (see Preparation and Analysis).

Element	$\mu\text{g/g}$	Element	$\mu\text{g/g}$
Cadmium ^{c d}	10.2 \pm 1.5	Thorium ^b	1.62 \pm 0.22
Copper ^{b c}	109 \pm 19	Uranium ^b	1.11 \pm .05
Lead ^{b d}	714 \pm 28	Vanadium ^{a c}	23.5 \pm 6.9
Manganese ^{b c}	785 \pm 97	Zinc ^{a d}	1720 \pm 169
Mercury ^{a c}	1.1 \pm 0.5		<u>Weight %</u>
Nickel ^{b d}	45.8 \pm 2.9	Chromium ^{b c}	2.96 \pm 0.28
Thallium ^b	1.44 \pm 0.07	Iron ^{a c}	11.3 \pm 1.2

^a Atomic Absorption Spectrometry

^b Isotope Dilution Mass Spectrometry

^c Neutron Activation Analysis

^d Polarography

The overall direction and coordination of the technical measurements leading to certification were performed under the chairmanship of J. K. Taylor.

The technical and support aspects involved in the preparation, certification, and issuance of this Standard Reference Material were coordinated through the Office of Standard Reference Materials by W. P. Reed.

Washington, D.C. 20234
November 16, 1978

J. Paul Cali, Chief
Office of Standard Reference Materials

(over)

Concentration of Constituent Elements

<u>Element</u>	<u>Concentration^a</u> <u>ng/g</u>	<u>Element</u>	<u>Concentration^a</u> <u>ng/g</u>
Arsenic	76 ± 7	Manganese	31 ± 2
Barium	46 ± 2	Mercury ^b	(<0.2)
Beryllium	19 ± 2	Molybdenum	95 ± 6
Cadmium	10 ± 1	Nickel	55 ± 3
Chromium	17 ± 2	Selenium	11 ± 1
Cobalt	19 ± 2	Silver	2.8 ± 0.3
Copper	18 ± 2	Strontium	239 ± 5
Iron	88 ± 4	Vanadium	53 ± 3
Lead	27 ± 1	Zinc	72 ± 4

^a The estimated uncertainty is based on judgment and represents an evaluation of the combined effects of method imprecision and possible systematic errors among methods. (No attempt was made to derive exact statistical measures of imprecision because several methods were involved in the determination of the constituents.) To convert to nanograms per milliliter, multiply by the density of the SRM. The density at 23 °C is 1.017 grams per milliliter.

^b Mercury is *not certified*. Gold had been added at a concentration of 15 ng/mL in an attempt to stabilize mercury added at a concentration of 1 ng/mL.

Source and Preparation of Material: SRM 1643a was prepared at the U.S. Geological Survey, National Water Quality Laboratory, Arvada, Colorado, under the direction of L. Schroeder of that laboratory and J. R. Moody of the NBS Center for Analytical Chemistry. Only high-purity reagents were used and the containers were acid-cleaned and sterilized before use. In the preparation, a polyethylene cylindrical tank was filled with approximately 1000 liters of distilled water and sufficient nitric acid to make the solution approximately 0.5 moles HNO₃ per liter. Solutions containing known amounts of calcium, sodium, magnesium, potassium, gold, and the elements to be determined were added to the acidified water solution with constant stirring. After thoroughly mixing, the solution was filtered, sterilized, and then transferred to one liter polyethylene bottles.

Analytical Methods Used:

Atomic absorption spectrometry,
electrothermal atomization

Atomic absorption spectrometry,
vapor generation

Flame emission spectrometry

Isotope dilution mass spectrometry,
thermal ionization

Neutron activation, instrumental

Neutron activation, radiochemical

Photon activation

Polarography

Spectrophotometry

Analysts:

Center for Analytical Chemistry, National Bureau of Standards

- | | |
|-----------------------|---------------------|
| 1. M. B. Blackburn | 9. R. M. Lindstrom |
| 2. B. I. Diamondstone | 10. L. A. Machlan |
| 3. M. S. Epstein | 11. E. J. Maienthal |
| 4. E. L. Garner | 12. J. D. Messman |
| 5. T. E. Gills | 13. J. R. Moody |
| 6. R. R. Greenberg | 14. T. C. Rains |
| 7. S. Hanamura | 15. R. L. Zeisler |
| 8. H. M. Kingston | |

July 1, 1980

U. S. Department of Commerce
Philip M. Klutznick
Secretary

National Bureau of Standards
Ernest Ambler, Director

National Bureau of Standards

Certificate

Standard Reference Material 1643a

Trace Elements in Water

This Standard Reference Material is intended primarily for evaluating the accuracy of trace element determinations in filtered and acidified fresh water and for calibrating instrumentation used in these determinations. SRM 1643a approximates the elemental composition of fresh water-27 $\mu\text{g/g}$ calcium, 9 $\mu\text{g/g}$ sodium, 8 $\mu\text{g/g}$ magnesium, and 2 $\mu\text{g/g}$ potassium. Nitric acid is present at a concentration of 0.5 moles per liter to stabilize the trace elements.

Concentrations of Constituent Elements: The concentrations of the trace elements that were determined are shown in the following table. The certified values are based on results obtained either by reference methods of known accuracy or by two or more independent, reliable analytical methods. Noncertified values, which are given for information only, appear in parentheses.

Notice and Warnings to Users:

Expiration of Certification: This certification is invalid after two years from the shipping date.

Precautions: The bottle should be shaken before use because of possible water vapor condensation. Pipets should not be inserted into the bottle to prevent possible contamination of the SRM. After use, the bottle should be capped tightly and placed inside the aluminized bag, which should be folded and sealed with a sealing tape. This safeguard will protect the SRM from possible environmental contamination and long-term loss of water.

Elemental determinations at ng/g levels are limited by contamination. Apparatus should be scrupulously cleaned and only the purest grade reagents employed. Samplings and manipulations, such as evaporations, should be done in a clean environment-for example, a Class 100 clean hood.

The overall direction and coordination of the technical measurements leading to this certificate were performed under the chairmanship of I. L. Barnes and J. R. Moody.

The technical and support aspects involved in the preparation, certification, and issuance of this Standard Reference Material were coordinated through the Office of Standard Reference Materials by R. Alvarez.

Washington, D.C. 20234
March 3, 1980

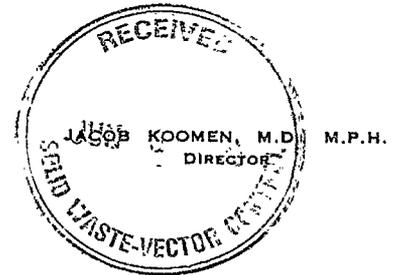
George A. Uriano, Chief
Office of Standard Reference Materials

(over)



*Bertie
LOR*

STATE OF NORTH CAROLINA
DEPARTMENT OF HUMAN RESOURCES



Division of Health Services

EASTERN REGIONAL OFFICE
404 ST. ANDREWS STREET
GREENVILLE, N.C. 27834

JAMES B. HUNT, JR.
GOVERNOR

SARAH T. MORROW, M.D., M.P.H.
SECRETARY

June 2, 1978

Mr. Junius B. Russell, Jr.
District Conservationist
Soil Conservation Service
P. O. Box 566
Windsor, N. C. 27983

Dear Junius:

Thank you for your letter of May 30th regarding the proposed drainage project at Aulander.

I will plan to bring the project application for State aid by the Town Office during the first week in July, as soon as they become available. At that time, I will assist the mayor or a member of the board in completing the form. It is a very simple form requiring a budgeted cost figure for the proposed work, a resolution making someone responsible for reports and checks, a general plan for all proposed work and a signature. State checks, for the work completed, are mailed out at the end of each month as the work is reported.

I recommend that the Town proceed with advertising for bids based on a ditch design of three-foot bottom width, a four-foot depth and a 1:1 side slope for the entire project--as we have previously discussed. It would also be expedient to adopt the resolution at the next board meeting.

I will not be able to attend the next scheduled board meeting, but look forward to working with the board members and with you in completing this project.

Sincerely,

Dewey Boseman

Dewey Boseman
Environmental Engineer
Route 1, Box 170
Bath, N. C. 27808

/ae

cc: Mr. Jerry Perkins

DEPARTMENT OF HUMAN RESOURCES

DIVISION OF HEALTH SERVICES

GREENVILLE



August 4, 1977

Mr. C. H. Edwards, Chairman
Bertie County Board of Commissioners
Windsor, NC 27983

Dear Mr. Edwards:

It is with pleasure that I am writing to inform you of the improvements that have been made in the Bertie County Landfill.

The cooperation of the Board of Commissioners along with that of Mr. Bob Parker and Mr. John Whitehurst is appreciated by this office. With the continued supervision of Mr. Parker and the additional manpower the site should continue to improve and be an operation you will all be proud of.

Again I would like to thank you for your prompt attention concerning the landfill problems. Please contact me if I can ever be of any assistance to you concerning your solid waste program.

Sincerely,

Billy W. Morris, District Sanitarian
Solid Waste Management Unit
Solid Waste & Vector Control Branch
Sanitary Engineering Section

/bgb

cc: Mr. Bob Parker
Mr. John E. Whitehurst
Mr. O. W. Strickland

DEPARTMENT OF HUMAN RESOURCES

DIVISION OF HEALTH SERVICES
GREENVILLE



August 4, 1977

Mr. C. H. Edwards, Chairman
Bertie County Board of Commissioners
Windsor, NC 27983

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Sincerely,

Billy W. Morris, District Sanitarian
Solid Waste Management Unit
Solid Waste & Vector Control Branch
Sanitary Engineering Section

/bgb

cc: Mr. Bob Parker
Mr. John E. Whitehurst
Mr. O. W. Strickland

DEPARTMENT OF HUMAN RESOURCES

DIVISION OF HEALTH SERVICES
GREENVILLE



April 22, 1977

Mr. John E. Whitehurst
Bertie County Manager
Bertie County Courthouse
Windsor, NC 27983

JFR
Dear Mr. Whitehurst:

Mr. Fred Wood and I enjoyed our recent meeting with you and Mr. Bob Parker in reference to the Bertie County Solid Waste Program.

We feel that you and Mr. Parker understand the problems that exist at the County Landfill and have a sincere desire to correct them. Your willingness to cooperate with us in bringing your landfill into compliance with State Regulations is appreciated.

Enclosed is the copy of the "Solid Waste Management Rules" that you requested. Please feel free to contact us if we can be of any assistance to you in the future.

Sincerely,

BWM

Billy W. Morris, District Sanitarian
Solid Waste Management Unit
Sanitary Engineering Section

/bgb

Enclosure

cc: Mr. Bob Parker
~~Mr. O. W. Strickland~~

DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
GREENVILLE



April 22, 1977

Mr. John E. Whitehurst
Bertie County Manager
Bertie County Courthouse
Windsor, NC 27983

JK
Dear Mr. Whitehurst:

Mr. Fred Wood and I enjoyed our recent meeting with you and Mr. Bob Parker in reference to the Bertie County Solid Waste Program.

We feel that you and Mr. Parker understand the problems that exist at the County Landfill and have a sincere desire to correct them. Your willingness to cooperate with us in bringing your landfill into compliance with State Regulations is appreciated.

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Sincerely,

BWM

Billy W. Morris, District Sanitarian
Solid Waste Management Unit
Sanitary Engineering Section

/bgb

Enclosure

cc: Mr. Bob Parker
Mr. O. W. Strickland

OWS/tg

cc: Mr. Billy W. Morris
Bertie County Health Department March 10, 1977
John E. Whitehurst

Mr. C. H. Edwards, Chairman
Bertie County Board of Commissioners
Windsor, North Carolina 27983

Dear Mr. Edwards:

In reviewing our records, I find that the Bertie County landfill is not being operated in accordance with your approved plans or in accordance with the operational requirements of the Division of Health Services Solid Waste Management Rules.

Mr. Billy W. Morris, District Sanitarian, inspected the site on February 24, 1977 and I visited the site with Mr. Morris on March 9, 1977.

The major violations at the site are:

1. The waste has not been properly covered in many weeks;
2. The areas that have been completed for over a year have not been properly graded and seeded;
3. Surface drainage is not controlled;
4. Blowing material is not controlled;
5. Access is not controlled while there is no supervision on site.

From my general observation, there seems to be a lack of understanding on the part of management as to the need for adequate equipment, personnel and management to operate a sanitary landfill.

Your assistance is needed in providing the leadership to get this site back into compliance, including the correction of the above listed violations.

Thanking you in advance for your cooperation. If you desire to meet with Mr. Morris and me on site to discuss the problem, please let us know.

Sincerely,

O. W. Strickland, Supervisor
Solid Waste Management Unit
Solid Waste & Vector Control Branch
Sanitary Engineering Section

OWS/tg

cc: Mr. Billy W. Morris
Bertie County Health Department
John E. Whitehurst
Mr. W. J. Barnacascel
Mr. Robert Spivey
Mr. B. F. Bazemore
Mr. Tildon Brown

Bertie County Health Department

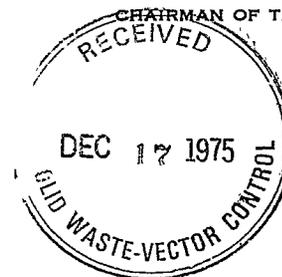
North Carolina State Board of Health Cooperating

WINDSOR, NORTH CAROLINA 27983

WILLIAM W. HILL, JR., M.P.H.
HEALTH DIRECTOR

December 15, 1975

WAYNE ATKISSON, D.D.S.
CHAIRMAN OF THE BOARD



Mr. O. W. Strickland, Supervisor
Solid Waste Management Unit
P. O. Box 2091
Raleigh, North Carolina 27602

Dear Mr. Strickland,

We, too are very concerned with Mr. Morris marking so many deficiencies on his visits to our landfill.

Since the taxpayers in the county are paying the bills, we are trying to operate the landfill for their convenience at as reasonable cost as possible.

I do not know whether you remember or not, but when the survey was made for Bertie County, it was estimated that we would need 40 four cubic yard containers and a 20 cubic yard packer truck with gasoline motor and that one man could pick up and operate the landfill with trenches being dug with the front-end loader.

We now have 140 four cubic yard containers, two 30 cubic yard packer trucks with diesel motors, three men full-time besides my time. So you can see the cost of operation is much higher than the original estimation, and basically I think we are doing a good job of keeping container sites cleared, picking up on schedule, and keeping the public satisfied, although evidently we are not pleasing Mr. Morris.

The extra waste from Harrington Manufacturing Company and Blue Ridge Shoe Company would require at least three more trenches per year at a cost of \$9,000 or more. This waste is mostly plywood 2 x 4 wood flats, scrap plastic left after shoes are cut out and there is some paper and cardboard boxes in the waste.

We keep this waste compacted and pushed down every day and hope to cover with six inches of dirt at least once a week. When we are through, the swamp land will be raised to the same level as the rest of the land and seeded in either grass or planted in trees.

If Mr. Wood would visit us, we would be glad to talk over the operation with him and try to follow any suggestions he might have.

The rubble area is kept locked on weekends and at night, in fact, we have had three locks broken off within the last two weeks.

I am in the office most every work-day from 7:30 a. m. to 9:00 a. m., if anyone needs to make an appointment or communicate with me.

Sincerely yours,



Robah L. Griggs, Jr.
Sanitarian

RLG:phd

CC: Mr. Bill Morris
Regional Office
Greenville, North Carolina

November 19, 1975

Mr. R. L. Griggs, Jr.
Sanitarian III
Bertie County Health Department
P. O. Box 586
Windsor, N. C. 27963

JLR

Dear Mr. Griggs:

I am very much concerned with the poor conditions found at your landfill on the inspection of November 4, 1975. In reviewing the records I find that the site has been in violation on a number of items on recent inspections.

This office granted a variance on access control; this seems to have caused a problem due to placing of waste in the so-called rubble area that should be landfilled.

If there is any way this office can assist you in getting the site back into full compliance, please let us know.

Thank you in advance for your cooperation.

Sincerely,

O. W. Strickland, Supervisor
Solid Waste Management Unit
Solid Waste & Vector Control Branch
Sanitary Engineering Section

OWS/cc
cc: Mr. Billy Morris

Bartie

JHR

June 23, 1975

Ms. Nancy G. Stephens
Post Office Box 461
Aulander, North Carolina 27805

Dear Ms. Stephens:

I am sending a copy of your letter to Mr. Billy W. Morris, District Sanitarian, requesting that he investigate the conditions described. There is no State law that deals with the conditions described. The requirement for cleaning of lots is usually handled on a local basis since municipal and county officials have authority to adopt appropriate ordinances in regard to this matter. At the time of his visit, Mr. Morris will contact you to discuss his findings and also if this agency has any authority in regard to this matter.

Very truly yours,

Sidney H. Usry, Head
Solid Waste & Vector Control Branch
Sanitary Engineering Section

SHU:bm
cc: Mr. Billy W. Morris

P. O. Box 461

Douglas, N. Carolina 27805

September 1974



North Carolina Dept. of Health
Raleigh, North Carolina



Gentlemen:

I have been told that there is a State law which says ^{that} a lot within the city limits must be kept closed up by the owner. There is a lot behind the house I live in which has not been closed off in the last five years and the Town Authorities here

Have not seen fit to do
anything about it. I
consider it a health
hazard and thought
it might be within
your jurisdiction to
see that the law is
enforced if there is
such a law.

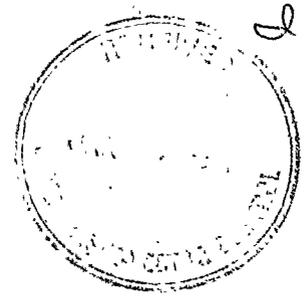
Thank you.

Very truly yours
Nancy G. Stephens

P. S. Nine months after
this letter was written,
and after being promised
that this summer I
would not have the
Mosquito & snake problem
of previous years, I
find the situation
unchanged. I hope that
you will be able to
help me. Please try.

Bertie
J R

ROXOBEL GARMANT COMPANY, INC.
BOX 189
ROXOBEL, N. C. 27872



January 21, 1975

R. L. Griggs, Jr. Acting Director
Bertie County Health Department,
Windsor, N. C. 27983

Dear Sir:

In appreciation for your letter of January 10, 1975 I would like to thank you for your offer of one container at your cost. This is most agreeable.

However, I feel your offer of three pick ups per week at a cost of \$30.00 per month is unreasonable. I base this on the fact that, I would possibility only need three pick ups per week during our peak season which would only last for approximately three months a year. I feel twice a week pick up would be ample for Roxobel Garment Company, Inc. and would only average this amount per year.

For the last two weeks I have made it a point to observe the containers located near Roxobel-Kelford School between the Town of Roxobel and Kelford. I find those containers are filled daily and also that a large portion of the trash is deposited by people living inside the corporation limits of Roxobel and Kelford.

To my knowledge there is only three containers in this end of the County. The point I am trying to make is that if a container is placed at my location it would be utilized by th public which includes the towns people. This making your previous offer of \$.50 per cubic yard unsatisfactory, as I would also be paying for town and county trash collection as well as my own.

As I have explained previous, the public will be using the containers. Therefore I purpose the following.

- That: The Town of Roxobel purchase the containers to be located at Roxobel Garment Co., Inc. since it is the town's obligation, for trash collection in question.
 - That: Roxobel Garment Co., Inc. pays a sum of \$10.00 per month to Bertie County Health Department for its part of the trash collection. To be paid in advance for a period of one year.
 - That: Bertie County Health Department makes the necessary pickups, whatever they may be, in conformance with their work schedule.
 - That: At the end of one year renegotiation, by all parties involved, be in order.
- I feel that this is a fair offer to all concerned as it will not create hardships on any particular one and it will be a help to the public which we all serve.
Looking forward to your reply.

Your cordily,

Roy Edwards, Manager

P. S. I would like to take this opporunity to express my thanks once again to you and the many others who have spent time with this project.

CC: John E. Whitehurst, County Manager
Bertie County

CC: Sidney H. Usry, Head
Solid Waste & Vector Control Branch
Sanitary Engineering Section
P. O. Box 2091,
Raleigh, N. C. 27603
Kelly L. Bishop, Mayor
Roxobel, N. C. 27872

Bill Morris
Solid Waste and Vector Control Branch
Greenville Regional Office
404- St. Andrews Street, Greenville, N.C. 27834

November 29, 1974

Mr. R. L. Griggs, Jr.
Acting Director
Bertie County Health Department
P. O. Box 586
Windsor, N. C. 27983

gjr

Dear Mr. Griggs:

Your letter of November 18, 1974, requesting a variance concerning access control to your sanitary landfill has been received.

I have discussed your request with Mr. Billy Morris, District Sanitarian in your area, and Mr. Usry. After reviewing your operational reports for the past year it seems that you are able to control dumping at off hours; therefore, we are granting your request. It is requested that you provide good directional signs so people will know where to dump when no operator is on site.

The continuance of this variance will depend on your ability to control off hours dumping.

Let me congratulate you and everyone that has had a part in providing Bertie County an excellent solid waste program.

Sincerely,

O. W. Strickland, Supervisor
Solid Waste Management Unit
Solid Waste & Vector Control Branch
Sanitary Engineering Section

OWS/ct

cc: Mr. Billy Morris
Mr. Sidney H. Usry

Bertie County Health Department

North Carolina State Board of Health Cooperating
WINDSOR, NORTH CAROLINA 27983

November 18, 1974



Mr. O. W. Strickland
Solid Waste and Vector Control Branch
Department of Human Resources
Division of Health Services
P. O. Box 2091
Raleigh, North Carolina 27602

Dear Mr. Strickland:

We would like permission to keep our landfill gate open at all times to better serve the public. There are many people in the county who take truck loads of trash at night and on weekends and if they get there and the gate is locked, they will put the trash side of the containers or carry it back to the first woods path on someone else's land and dump it. Then next time they will set old appliances beside the nearest container site and we will have to send a truck with two men to pick it up.

Some of these people travel 20 to 30 miles to the landfill and so far we have had very little trouble with dumping in unauthorized places when the gate is left open.

Sincerely yours,

A handwritten signature in cursive script that reads "R. L. Griggs, Jr.".

R. L. Griggs, Jr.
Acting Director

RLG:mc j



Bertie
lrc

STATE OF NORTH CAROLINA
DEPARTMENT OF HUMAN RESOURCES
STATE BOARD OF HEALTH

ROBERT W. SCOTT
GOVERNOR
LENOX D. BAKER, M.D.
SECRETARY

P. O. Box 2091
RALEIGH 27602

July 28, 1972

JACOB KOOMEN, M.D., M.P.H.
STATE HEALTH DIRECTOR AND
SECRETARY-TREASURER
W. BURNS JONES, JR., M.D., M.P.H.
ASSISTANT STATE HEALTH DIRECTOR

Mrs. Blanche Perry, Clerk
Town of Colerain
Colerain, North Carolina 27924

Dear Mrs. Perry:

We are in receipt of your letter of intent pursuant to Section XIII of the North Carolina State Board of Health "Rules and Regulations Providing Standards for Solid Waste Disposal." Your proposal to utilize the county operated disposal facility is acceptable provided the county program is implemented within the time schedule required by these regulations.

At the time the county disposal program is implemented, you will be required to close your present disposal site in accordance with the requirements of Section XIII - C of the regulations.

Very truly yours,

Sidney H. Usry

Sidney H. Usry, Chief
Solid Waste & Vector Control Section
Sanitary Engineering Division

SHU:bm
cc: Mr. Fred J. Wood

Bertie County Health Department

North Carolina State Board of Health Cooperating
WINDSOR, NORTH CAROLINA 27983

July 18, 1972

Mrs. Blanche Perry, Secretary
Town of Colerain
Colerain, North Carolina

Dear Mrs. Perry:

The County of Bertie hopes to have in operation shortly after the first of the year a sanitary landfill, operating according to the rules and regulations of the State Board of Health.

This landfill will be for the use of all citizens of Bertie County.

Sincerely yours,

R. L. Griggs, Jr.
R. L. Griggs, Jr., Chairman
Solid Waste Landfill Committee

RLG:mcj

N. C. State Board of Health
Raleigh, N. C.

Gentlemen;

I hope this letter will explain our position, as asked for in letter dated June 7, 1972.

Yours truly,
Blanche Perry
Blanche Perry, Clerk

RECEIVED

JUL 27 1972

SANITARY ENGINEERING
DIVISION

June 21, 1974

Mr. R. L. Griggs, Jr., R. S.
Bertie County Health Department
P. O. Box 586
Windsor, N. C. 27983

Dear Mr. Griggs:

In reviewing the progress made throughout North Carolina in solid waste management, the County of Bertie is to be congratulated on the great progress you have made. I am sure that much of the progress that has been made is the result of your hard work and excellent supervision.

I visited your landfill with Mr. Morris a few weeks ago and it was an impressive operation. There are two items I would like to request your cooperation in correcting. Access must be controlled at all times, either by a gate or an attendant on duty. Special waste such as hatchery waste must be placed separately and covered as soon as delivered.

Again let me congratulate you on an excellent program and thank you for your cooperation in correcting the above stated items.

Sincerely,

O. W. Strickland, Supervisor
Solid Waste Management Unit
Solid Waste & Vector Control Branch
Sanitary Engineering Section

OWS/ct

cc: Mr. Billy Morris

July 27, 1972

Mr. James Kearney
Supervisor
Farmers Home Administration
Windsor, North Carolina 27983

Re: Bertie County Solid Waste Program

Dear Mr. Kearney:

STR

I understand that the recommended county program will be implemented in Bertie County. This agency agrees to provide supervision with the implementation of the solid waste management plan in order to assure compliance with the "Rules and Regulations Providing Standards for Solid Waste Disposal."

Very truly yours,

Sidney H. Usry, Chief
Solid Waste & Vector Control Section
Sanitary Engineering Division

SHU:bm

cc: Mr. Fred J. Wood
Mr. R. L. Griggs, Jr.

*Ad. by the
EOR*

STATE OF NORTH CAROLINA
DEPARTMENT OF WATER AND AIR RESOURCES

ROBERT W. SCOTT
GOVERNOR

P. D. DAVIS
J. NELSON GIBSON, JR.
WAYNE MABRY
HUGH L. MERRITT
LEE L. POWERS
J. AARON PREVOST
W. GRADY STEVENS



S. VERNON STEVENS, JR.
CHAIRMAN

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GEORGE E. PICKETT, DIRECTOR
TELEPHONE 829-3003
E. C. HUBBARD, ASST. DIRECTOR
TELEPHONE 829-3006
RALEIGH, N. C. 27611
P. O. BOX 27048

In Replying Refer To:
NQ71EFA

June 23, 1971

TO: Mr. Randolph Hendricks
Planning Coordinator
State Planning Division
Department of Administration
Raleigh, North Carolina

FROM: Mr. D. L. Coburn, Chief *D.C.*
Water Quality Division
Department of Water and Air Resources

SUBJECT: Clearinghouse Notification No. 71-0625
Proposed Solid Waste Facilities
Town of Windsor
Bertie County

The North Carolina State Board of Health has primary jurisdiction in connection with approval of solid waste facilities and this Department has no comment on these facilities at this time.

cc: Mr. T. F. Armstrong
Mr. Joe L. Hudson
Mr. Marshall Staton
Mr. C. R. Smart

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JUN 24 1971

SANITARY ENGINEERING
DIVISION

File Bertie
JOR

STATE OF NORTH CAROLINA
DEPARTMENT OF WATER AND AIR RESOURCES

ROBERT W. SCOTT
GOVERNOR

P. D. DAVIS
J. NELSON GIBSON, JR.
WAYNE MABRY
HUGH L. MERRITT
LEE L. POWERS
J. AARON PREVOST
W. GRADY STEVENS



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JUL 1 1971

SANITARY ENGINEERING
DIVISION

February 16, 1971

Mr. R. L. Griggs, Jr.
Bertie County Health Department
Windsor, North Carolina 27983

Dear Mr. Griggs: *JJR*

The scheduled meeting with the Bertie County Commissioners on March 1, 1971, at 10:30 A.M., is agreeable with this office. I am having Mr. Fred J. Wood, District Sanitarian, present this proposed solid waste plan to the Commissioners at that time.

Very truly yours,

Sidney H. Usry, Chief
Solid Waste & Vector Control Section
Sanitary Engineering Division

shu:bm

cc: Mr. Fred J. Wood

Bertie County Health Department

North Carolina State Board of Health Cooperating
WINDSOR, NORTH CAROLINA 27983

2-10-71

Mr. Sidney Usry

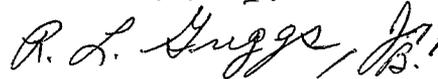
State Board of Health

Raleigh, North Carolina, 27602

Dear Mr. Usry:

A meeting has been arranged for Monday, March 1, 1971 at 10:30 a.m.,
for you or one of your staff to discuss your plans for solid waste disposal
in Bertie County, with the Bertie County Commissioners

Sincerely yours,



R. L. Griggs, Jr.

RLG:b

October 12, 1970

Mr. Joe S. Warlick
Clerk to Board of County Commissioners
~~Bertie County~~
Windsor, North Carolina 27983

JUR
Dear Mr. Warlick:

In reply to your request of October 9, 1970, I shall be glad to prepare a solid waste disposal plan for Bertie County. As soon as this plan is completed, I will notify your office so that arrangements can be made to present this plan to the Bertie County Board of Commissioners.

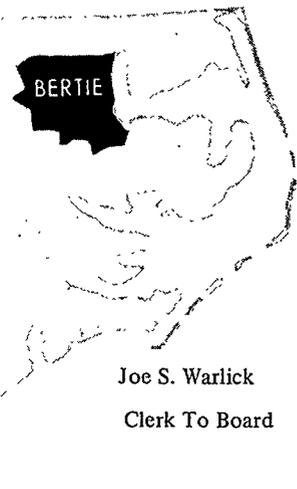
Very truly yours,

Sidney H. Usry, Chief
Solid Waste & Vector Control Section
Sanitary Engineering Division

SHU:bm

cc: Mr. Robah Griggs
Mr. Fred J. Wood

BERTIE COUNTY
NORTH CAROLINA
WINDSOR, NORTH CAROLINA 27983



October 9, 1970

Board of County Commissioners
B. F. Hoggard, Chairman
C. H. Edwards
R. B. Spivey
B. F. Bazemore
W. J. Barnacascel

Joe S. Warlick
Clerk To Board

RECEIVED

OCT 12 1970

Mr. Sidney Usry
Sanitary Engineering Division
State Board of Health
Raleigh, N.C.

**SANITARY ENGINEERING
DIVISION**

Dear Mr. Usry:

Mr. George Jennings, County Extension Chairman, and Mr. Robah Griggs, Sanitarian with the Bertie County Health Department, met with the Board of Commissioners at their regular meeting held Monday, October 5, 1970 to discuss the need for sanitary land fills in the county.

The Board of Commissioners passed a resolution requesting that you make a land fill survey for Bertie County giving cost estimates and recommendations as to the type of fill that will serve the county best, without cost to the county.

If you need further information, please contact Mr. Jennings, Mr. Griggs or myself.

Sincerely,

Clerk to the Board

JSW: prj

cc: Mr. Robah Griggs, Sanitarian
Windsor, N.C.

Mr. George Jennings
County Extension Chairman
Windsor, N.C.

October 8, 1970

Mr. R. L. Griggs, Jr.
Sanitarian
Bertie County Health Department
Windsor, North Carolina 27983

SHU
Dear Mr. Griggs:

In reply to your request, the North Carolina State Board of Health will be glad to prepare a solid waste disposal plan for Bertie County. Upon completion of this plan, I will notify you so that a meeting can be arranged for the presentation to interested persons.

Very truly yours,

Sidney H. Usry, Chief
Solid Waste & Vector Control Section
Sanitary Engineering Division

SHU:bm
cc: Mr. Fred Wood

Bertie County Health Department

North Carolina State Board of Health Cooperating
WINDSOR, NORTH CAROLINA 27983

October 5, 1970

RECEIVED

OCT 10 1970

ENGINEERING
DIVISION

Mr. Sidney H. Usry, Chief
Solid Waste and Vector Control Section
Sanitary Engineering Division
N. C. State Board of Health
Raleigh, North Carolina 27602

Dear Mr. Usry:

The Bertie County Board of Commissioners have adopted a resolution requesting that your office make a survey and make a report of a solid waste disposal system for Bertie County. They would like the report to be based on the one sanitary land fill and container pick-up system.

Sincerely yours,



R. L. Griggs, Jr.
Sanitarian

CC: Bertie County Commissioners

Mr. George Jennings

SURVEY DATA
and
PROPOSED MANAGEMENT PROGRAM
for
SOLID WASTE DISPOSAL
in
BERTIE COUNTY

Prepared By
SANITARY ENGINEERING DIVISION
NORTH CAROLINA STATE BOARD OF HEALTH
Raleigh, N. C.

SECTION I - Introduction

In the overall environmental sanitation picture of rapidly expanding urban communities of North Carolina, the problem of how to handle the estimated 4,511,000 tons of refuse produced annually offers one of our greatest challenges. This is a problem of the community as well as the individual and continual disregard on the part of either will certainly result in unnecessary disease and annoyance. Lack of understanding, carelessness and indifference is largely responsible for our present problems. Frequently, individual effort is fruitless without public control, but, at the same time, efforts of public health agencies are doomed to failure without support of individual citizens.

Refuse which is contaminated with disease organisms originating in the home or institutions provides food and shelter for many of our most important public health pests, insects and rodents. It is, therefore, necessary that refuse be handled in an acceptable manner from the point of origin to that of disposal. Refuse, at the point of origin, is largely the responsibility of the producer and must be stored in an approved manner. Refuse collection is accomplished in three ways: (1) by the individual, (2) by a governmental agency using public funds, and (3) by private contract garbage collectors who are paid by the individual receiving the service. Refuse disposal is normally accomplished by (1) the individual who utilizes his own land or disposal areas belonging to private or public agencies, (2) by governmental agencies who utilize publicly-owned disposal areas or (3) by private collectors who provide their own disposal area or utilize that of a public agency. No longer is the old-fashioned, insanitary refuse dump acceptable in today's society as a means of refuse disposal. An open dump is aesthetically offensive because of smoke and odors and is responsible for the reduction of adjacent land values, and are gradually being replaced by the sanitary landfill or other sanitary means of refuse disposal.

SECTION II - Legal Aspects

Authority to Regulate

Boards of Health

County boards of health have the authority to regulate the collection and disposal of refuse. This authority is based on the broad powers as set forth in G. S. 130-17 which permits boards of health to make rules and regulations as necessary to protect and to advance public health. Such regulations typically cover three major areas:

- (1) The type of container in which garbage is stored.
- (2) Sanitation standards for equipment used in the collection of refuse.
- (3) Standards and methods for disposal.

Attached to this report is a copy of an ordinance that has been prepared for adoption by the local boards of health for the control of storage, collection, and disposal of refuse.

Boards of Commissioners

County boards of commissioners have authority to regulate under G.S. 153-272 through 275, the collection and disposal of refuse by private persons and firms outside municipal boundaries.

In exercising this authority, the board of commissioners may:

- (1) Issue licenses or permits for the collection and disposal of refuse.
- (2) Prohibit collection and disposal by unlicensed persons.
- (3) Grant licensed persons exclusive rights to collect in designated areas.
- (4) Regulate the fees charged for private collection services.
- (5) Operate collection and disposal services.

Authority to Finance

The 1967 General Assembly amended G. S. 153-77 and G. S. 153-80 of the County Finance Act to authorize the issuance of bonds for sanitary landfills and for vehicles and equipment.

SECTION III - The Refuse Problem in Bertie County

The survey of Bertie County was completed in 1968 and the data has been summarized on the attached table. In addition, the following general information was gathered in regard to the storage, collection, and disposal of refuse.

Storage: Approximately 19,635 people are living in Bertie County where there are only limited regulations governing on-site storage. Refuse is stored on the ground, in 55-gallon barrels, or in other type containers, many of which have no lids. This provides ideal conditions for the breeding and feeding of flies, rats, and other pests.

Collection: The refuse in the municipalities is collected once or twice a week. At the time the survey was conducted there were no known private collectors working in the rural areas of the county. Private collectors can be an asset to the county when their activities are regulated by the Board of Health and County Commissioners.

Disposal: The study reveals that an estimated 6,092 tons of household, commercial, industrial, and institutional refuse is being collected annually by the municipalities in Bertie County. This amount of refuse is being placed at seven land disposal sites shown on the enclosed map. All sites are open dumps.

The study further reveals that there are approximately 14,598 people living in rural Bertie County who have no collection or disposal services. Computing their annual rate at less than the urban dweller, an estimated 5,391 tons of refuse is produced by them annually. Part of this tonnage is being burned and part is buried, but a large part is cluttering our farms, woodlands, streams, and highways.

SECTION IV - Recommendations

To protect the health of the people of Bertie County and to prevent the depreciation of the county's environment, the following plan for storage, collection, and disposal of refuse is recommended.

Storage: Under authority stated in Section II of this report, the Bertie County Board of Health should adopt ordinances that shall require all householders to provide containers of a type approved by the Health Director. Every such container shall be constructed of metal, or equally durable material, in such a manner as to be strong, watertight, not easily corrodible, fly and rodent proof, be equipped with handles and shall have a capacity of not more than 32 gallons. Businesses and institutions shall provide containers that are in accordance with those required for householders other than size which may vary with the approval of the Health Director.

Collection: It is recommended that door-to-door collection in unincorporated areas of Bertie County be left to private enterprise (private collectors). An effort should be made to get a private collection firm to work in the county. The collection firm should be regulated under authority as stated in Section II of this report.

It is also recommended that a container system be provided for collection in the unincorporated areas where door-to-door service is not available or is not economically feasible. Container service could also be provided for small municipalities where the haul distance is great and the volume is low.

Disposal: In preparation of recommendations for the disposal by sanitary landfill, it is necessary to consider length of haul, volume of refuse, and cost to county and municipalities. Based on these factors, it is recommended that:

1. The Bertie County Board of Commissioners in cooperation with the municipalities provide one sanitary landfill in the general vicinity of the proposed location shown on the enclosed map to serve the total population of the county.
2. After the county site is opened, the present dumps including those on private property should be closed and covered with two feet of compacted earth. Every effort should be made to clean up roadside dumps to prevent continued dumping at these sites. Note: Soon after these dumps are closed and before they are covered with earth, they should be heavily baited with rat poison for

at least two weeks. This will prevent the rat population from migrating to other areas.

There is nothing in these recommendations that would prevent the individual from disposing of his own refuse on his own property as long as it is done in a manner approved by the Health Director.

Supervision: In order that adequate supervision may be provided, it is recommended that the Bertie County Health Department be put in charge of the operation. This would consist of: promotion of this program, education of the public, and supervision of the landfill operation.

SECTION V - Cost Analysis

Capital Investment - Landfill

Site

One (1) site of twenty (20) acres @ \$300/acre	\$ 6,000
--	----------

Equipment

One (1) high-lift loader with multi-purpose bucket, cab, heater, and sanitation package (Allis Chalmers HD7G or equal)	22,500
--	--------

Structure

One (1) structure to provide shelter for equipment and office space	3,000
---	-------

Miscellaneous

Site preparation (access road, signs, etc.)	4,000
Legal fees	500
Survey and plans	1,000
Supervision of site preparation	<u>500</u>

TOTAL	\$37,500
-------	----------

Capital Investment - Container System

One (1) Dumpmaster - 20 cu. yd.	\$21,000
Forty (40) Containers (4 cu. yd.) @ \$250/container	10,000
Site preparation for containers @ \$50/container	<u>2,000</u>

TOTAL	\$33,000
-------	----------

TOTAL CAPITAL INVESTMENT \$70,500

Annual Operating Cost - Sanitary Landfill

One (1) Operator (Dumpmaster and loader)	\$ 6,000
Fuel and repairs (loader)	2,000
Equipment depreciation	2,500
Miscellaneous (s.s., ins., earth moving, etc.)	<u>1,000</u>
TOTAL	\$11,500

Annual Operating Cost - Container System

Fuel and repairs (Dumpmaster) - 20,000 miles @ 20¢/mile	\$ 4,000
Equipment depreciation - Dumpmaster - \$3,000	4,000
Containers - \$1,000	
Miscellaneous (ins., etc.)	<u>1,000</u>
TOTAL	\$ 9,000

TOTAL ANNUAL OPERATING COST \$20,500

Notes:

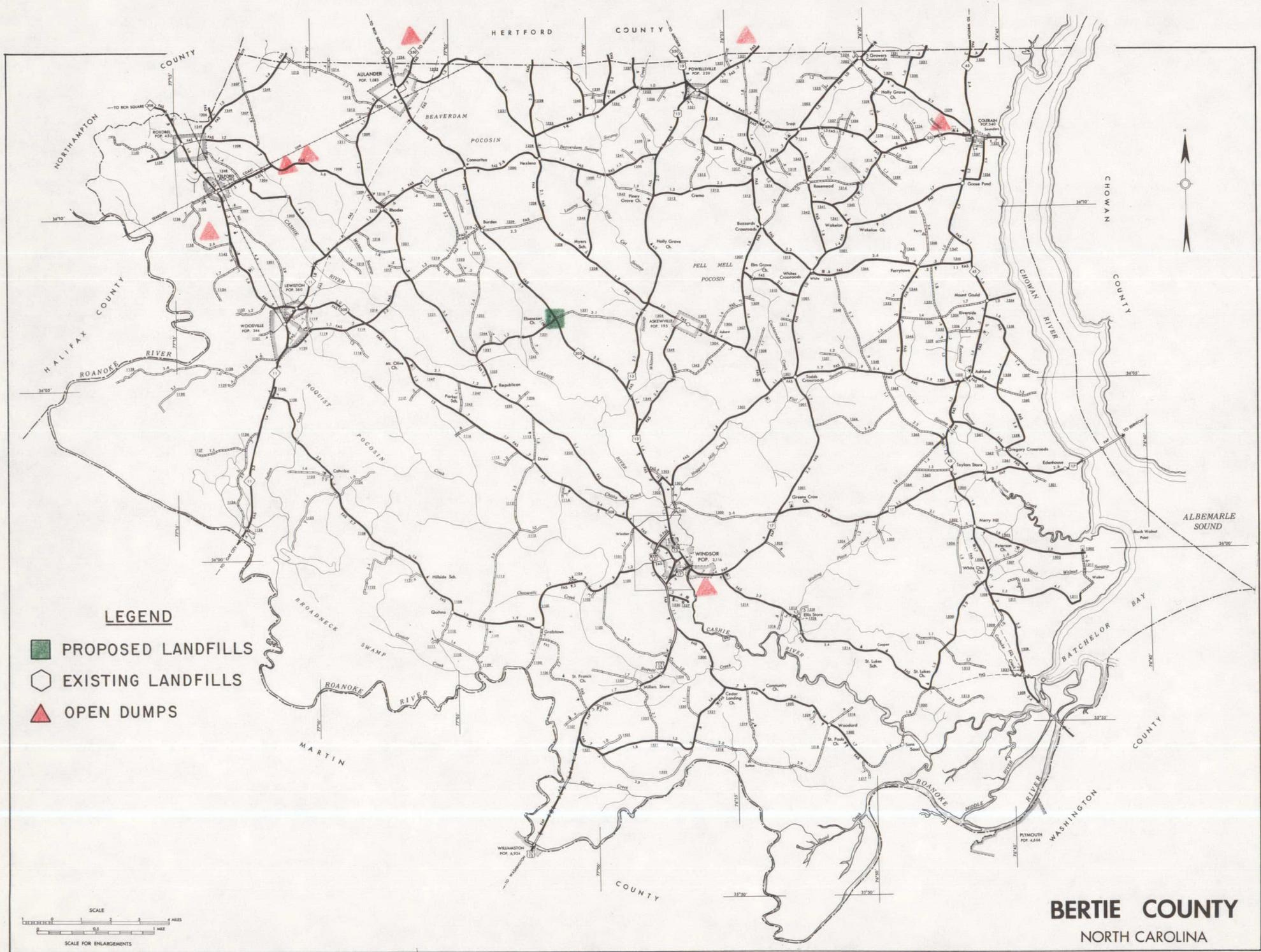
1. The loader operator would operate the Dumpmaster Monday, Tuesday, Thursday, and Friday mornings.
2. The landfill would be open Monday, Tuesday, Thursday and Friday afternoon and all day Wednesday.
3. Containers would be serviced at least twice a week or more often if needed.
4. The containers would serve for household waste only. Other type waste would be transported to the disposal site by the individual or by contract collectors.
5. Municipalities and industry would transport their refuse to the disposal site with the exception of the small communities which could be served by the container system.
6. Based on the cost of solid waste disposal for the total population of Bertie County, with an estimated population of 19,635, the annual operating cost for disposal would be 58 cents per person.
7. For the container system designed to serve the rural population estimated to be 14,598 people, the annual operating cost would be 65 cents per person.

(This does not include the operator salary which is included in the disposal cost estimates.)

8. Additional containers could be added without imposing a burden on the container collection system. Industry and business could be serviced for a fee that would half defray the operating expenses.

SECTION VI - Conclusion

1. The problem of refuse disposal in Bertie County is due to a number of factors. There are more disposable items on the market today than ever existed in the past as many containers are no longer the returnable and reusable types. The pounds of disposed items per capita per day have doubled over the past decade. Regardless of whether the area of discussion is rural or urban, the disposable items are still the problem, only the quantity changes.
2. This is a problem that affects the total population from the farmer whose land is being dumped upon to the person who lives near a burning dump.
3. The Solid Waste and Vector Control Section of the State Board of Health, through the local health department, is available to assist in any way possible.
4. The recommendations of this report were made to meet the anticipated needs for a ten-year period. Before the end of this time, exhaustive studies of new methods should be made and incorporated in plans for the future.



RULES AND REGULATIONS GOVERNING THE STORAGE, COLLECTION,
TRANSPORTING, AND DISPOSAL OF REFUSE IN _____
COUNTY, NORTH CAROLINA

Be It Ordained By The _____ Board of Health:

That the following regulations for the protection of public health are hereby adopted pursuant to authority granted by Section 17 of Chapter 130 of the General Statutes of North Carolina, and shall govern the storage, collection, transporting, and disposal of refuse throughout _____ County, except that these regulations shall not apply to the area within any municipality, sanitary district, or other governmental unit which operates its own refuse collection and disposal system.

SECTION I - DEFINITIONS

The following definitions shall apply in the interpretation and enforcement of these regulations:

- A. The word "refuse" means garbage or rubbish.
- B. The word "garbage" means all putrescible solid wastes, including vegetable matter, animal offal, and carcasses of small animals, but excluding human body wastes, animal manure, and recognizable industrial by-products. Used milk cartons, or other discarded food containers that are not dry and clean shall be included in this definition.
- C. The word "rubbish" means non-putrescible solid wastes.
- D. The term "Health Director" means the director of the _____ County Health Department, or his authorized representative.
- E. The word "person" means any individual, firm, governmental unit, organization, partnership, corporation, or company.
- F. The term "refuse collector" means any person who collects or transports refuse, other than one who removes refuse from his own premises.

SECTION II - REFUSE STORAGE

No owner, occupant, tenant, or lessee of any premises shall permit any garbage or other refuse to accumulate upon such premises that is not stored in a manner approved by the Health Director.

- (1) Garbage shall be stored in a container of a type approved by the Health Director. Every such container shall be constructed of metal, or equally durable material, in such a manner as to be strong, water tight, not easily corrodible, fly proof, and rodent proof, shall have a capacity of not more than 32 gallons; shall have handles designed for lifting; and shall have fly-tight covers which shall be kept in place at all times, except when garbage or other refuse is being deposited in or removed from such container. A sufficient number of containers shall be provided to hold at least one week's accumulation of garbage. Each garbage container shall be kept clean so that no odor or other nuisance will exist.

- (2) Rubbish shall be stored in such a manner that it will not provide harborage to rats, nor cause a fire hazard.

SECTION III - REFUSE COLLECTION

The owner, occupant, tenant, or lessee of any premises upon which garbage is stored shall remove, or cause to be removed, all garbage from said premises at least once a week. Refuse collectors shall remove all refuse from the premises, when they receive compensation for this service, at least once a week. The work shall be done in a clean and orderly manner, without causing damage to the container. Any refuse that is spilled shall be cleaned up, and the premises left in a sanitary condition.

SECTION IV - REFUSE TRANSPORTATION

No refuse collector shall transport refuse in a conveyance that has not been approved by the Health Director. Such conveyances shall be leak proof, and covered with a canvas, or other substantial material, unless it is constructed in such a manner as to prevent leakage or spillage of the refuse. Truck beds in which garbage is hauled shall be cleaned daily.

SECTION V - REFUSE DISPOSAL

No refuse collector, or other person, shall dispose of refuse, except by one of the following methods; provided that this section shall not be construed to prevent any person from properly disposing of refuse from his own residence, or business establishment, by burning or burying it in a safe and sanitary manner approved by the Health Director.

- (1) By burning refuse in an incinerator of a type approved by the Health Director as safe and sanitary.
- (2) By burying refuse in a sanitary landfill that is designed, operated, and equipped in accordance with the recommendations in Special Bulletin No. 479 of the North Carolina State Board of Health, Refuse Disposal By Sanitary Landfill. This bulletin is hereby incorporated by reference pursuant to authority granted by Article 4 of Chapter 130 of the General Statutes of North Carolina, and becomes a part of these regulations as fully as if set out verbatim herein. A copy of said bulletin is on file in the office of the Clerk of the Superior Court of _____ County, and in the office of the Health Director.

SECTION VI - REFUSE COLLECTOR PERMITS

- A. No person shall collect, transport, or dispose of refuse without a written permit from the Health Director; provided that this sub-section shall not apply to any person disposing of refuse from his own residence, or business establishment. The Health Director shall issue such permit only when, upon inspection, he finds that the facilities, equipment, and proposed operating methods of the applicant are in compliance with the requirements of these regulations.

SECTION VII - REVOCATION OF PERMITS

- A. Whenever upon the inspection of facilities, equipment, or operating methods of any person holding a permit to collect, transport, or dispose of refuse, the Health Director finds that conditions or practices exist which are in violation of the provisions of these regulations, the Health Director shall give notice in writing to such person that unless such conditions or practices are corrected within ten days, the permit will be revoked. At the end of such ten-day period, the Health Director shall make a re-inspection, and if he finds that such conditions or practices have not been corrected, he shall give notice in writing to such person that his permit has been revoked. Upon the receipt of this notice, such person shall immediately cease to collect, transport, or dispose of refuse. No such permit shall be reinstated by the Health Director until he finds, upon inspection, that all provisions of these regulations have been complied with, except that following a hearing, as hereinafter provided, such permit may be reinstated by order of the County Board of Health.
- B. Upon written petition from a person whose permit to collect, transport, or dispose of refuse has been denied or revoked, the County Board of Health shall hold a hearing at which time such person shall be given an opportunity to show that his permit should not have been denied or revoked. No such hearing shall be held unless written petition therefor shall have been filed in the office of the Health Director on or before the tenth day following the day on which said permit was denied or revoked. The Health Director shall convey the request for a hearing to the Chairman of the County Board of Health as soon as practicable. Such hearing shall be held within _____ days following the receipt of such petition by the Chairman. After such hearing, the County Board of Health may either approve the denial or revocation of such permit, or order that it be issued or reinstated, depending upon its findings as to whether or not these regulations have been complied with.

SECTION VIII - PENALTY

Any person who violates any rules and regulations adopted by a local Board of Health shall be guilty of a misdemeanor, and fined not exceeding fifty dollars (\$50) or imprisoned not exceeding thirty days (30), as provided by Section 203 of Chapter 130 of the General Statutes of North Carolina.

SECTION IX - CONFLICTING REGULATIONS REPEALED

All regulations or parts of regulations in conflict herewith are repealed only to the extent necessary to give these regulations full force and effect.

SECTION X - SEVERABILITY

If any provision of these rules and regulations, or the application thereof to any person or circumstance, is held invalid, the remainder of the rules and regulations, or the application of such provision to other persons or circumstances, shall not be affected thereby.

SECTION XI - EFFECTIVE DATE

These regulations shall be in full force and effect from and after _____ .

AN ACT TO AUTHORIZE COUNTIES TO REGULATE THE COLLECTION OF GARBAGE

ARTICLE 22

Garbage Collection and Disposal

G. S. 153-272. Control of Private Collectors. -- The board of county commissioners of any county is hereby empowered to regulate the collection and disposal of garbage by private persons, firms, or corporations outside of the incorporated cities and towns of the county for the purpose of encouraging and attempting to insure an adequate and continuing service of garbage collection and disposal where the board deems it to be desirable. In the exercise of such power, the board may issue a license to any private person, firm, or corporation to collect and/or dispose of garbage; may prohibit the collection and/or disposal of garbage by unlicensed persons, firms, or corporations; may grant to licensed persons, firms, or corporations the exclusive right to collect and/or dispose of garbage for compensation within a specified area and prohibit unauthorized persons, firms, or corporations from collecting and/or disposing of garbage within said area; and may regulate the fees charged by licensed persons, firms, and corporations for the collection and/or disposal of garbage to the end that reasonable compensation may be provided for such services. The board may adopt regulations pursuant to the power herein granted, and the violation of any such regulation shall be a misdemeanor, subject to a fine not exceeding fifty dollars, or imprisonment not exceeding thirty days; each week that any such violation continues to exist shall be a separate offense. (1961, c. 514, s.1)

G. S. 153-273. County collection and disposal. -- The board of county commissioners of any county is hereby empowered to establish and operate garbage collection and/or disposal facilities in areas outside of incorporated cities and towns where, in its opinion, the need for such facilities exists. The board may contract with any city or town to collect and/or dispose of garbage in any such area. In the disposal of garbage, the board may use any vacant land owned by the county, or it may acquire suitable sites for such purpose. The board may make appropriations to carry out the

activities herein authorized. The board may impose fees for the use of disposal facilities, and in the event it shall provide for the collection of garbage, it shall charge fees for such collection service sufficient in its opinion to defray the expense of collection. (1961, c. 514, s.1)

G. S. 153-274. Powers of local boards of health unaffected. -- Nothing in this article shall affect the powers of local boards of health to control the keeping, removal, collection, and disposal of garbage, insofar as the exercise of any such power is necessary to protect and advance the public health. (1961, c. 514, s.1)

G. S. 153-275. Powers granted herein supplementary. -- The powers granted to counties by this article shall be deemed supplementary to any powers heretofore or hereafter granted by any other law, either general, special, or local, for the same or similar purpose, and in any case where the provisions of this article conflict with or are different from the provisions of such other law, the board of county commissioners may in its discretion proceed in accordance with the provisions of such other law, or, as an alternative method, in accordance with the provisions of this article. (1961, c. 514, s.1)

Sec. 1a. The provisions of this Act shall not apply to Vance County.

Note:

Chapter 904 of the 1961 Session Laws exempts Johnston County from all provisions of this article.

Chapter 912 of the 1961 Session Laws authorizes Dare County Board of Commissioners to levy ad volorem tax in areas of the county in which the county provides garbage collection service.