

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director



MEMORANDUM

To: Matt Gantt

Date: June 24, 1996

From: Jim Bateson 

cc: Bobby Lutfy
Mark Poindexter

RE: Closure of Gaston County Landfills: Cramerton (#36-01); Biggerstaff (36-02);
Auten Road (36-03).

I have reviewed the water quality monitoring system records and analytical data for the above referenced landfills. At all three of the landfills, the groundwater monitoring systems are adequate for routine detection monitoring. Surface water sampling was not reported in the two sampling events submitted since monitoring systems were installed at the three facilities in 1994. No groundwater monitoring issues prevent the three landfills from being closed. Use the "paragraph f." on the attached sheet. This paragraph has been modified to include the need for surface water sampling.

Since existing groundwater quality data for each of the three facilities show organic constituents in exceedence of the State Groundwater Quality Standards, Gaston County will receive letters from Mark Poindexter or Larry Rose concerning the possibility of the need for assessment work.

Attached is a letter prepared by MSA Consulting Engineers, which summarizes Gaston County's efforts to properly close the three facilities. Also, I have attached the only file folders I could find for the facilities in the Central Files (Inactive Sites). They contain some data and correspondence concerning closure and final cover. Keep them intact for return to Central Files. This information should be enough for you to confirm whether or not the final cover at the facilities is adequate.

Fac/Perm/Co ID #	Date	Doc ID#
36-03 mj	7/29/2011	DIN 14605

8. WATER QUALITY MONITORING AND REPORTING REQUIREMENTS:

- a. Groundwater quality at this facility is subject to the "Classification and Water Quality Standards Applicable to the Groundwaters of North Carolina," 15A NCAC 2L. This includes, but is not limited to, the provisions for detection monitoring, assessment, and corrective action.
- b. The permittee shall sample the detection monitoring wells and surface water sampling location(s) at a minimum on a semi-annual basis or as required by the Solid Waste Section and in accordance with Section .1600 - Requirements for Municipal Solid Waste Landfill Facilities.
- c. Water quality detection monitoring shall continue for a minimum of five years from the date of the Sections's receipt of the owner/operator's notification that the facility will be maintained in compliance with the post-closure conditions specified in this letter. After five years the Sections will determine if further monitoring is to be required.
- d. Sampling equipment and methods shall conform to specifications in Attachment 1, "North Carolina Water Quality Monitoring Guidance Document for Solid Waste Facilities." The sampling parameters for this facility shall be in accordance with .1634 - Assessment Monitoring Program or an alternate list of sampling parameters as approved by the Solid Waste Section.
- e. The permittee shall maintain a record of all monitoring events and analytical data. Reports of the sampling events and analytical data shall be submitted to the Section in a timely manner.
- f. Past ground water quality data for this facility indicates that Groundwater Quality Standards have been exceeded for some chemical constituents. Additional water quality assessment will be necessary in the future. Until such time Wake County will continue to monitor and sample ground water consistent with Conditions b, c, and d of this section.

36-01,
36-02, and
36-03.



Water quality detection monitoring shall include sampling of surface water monitoring points, to be approved by the Section, in addition to sampling of the existing monitoring wells at the facility

Mr. Warren W. Shindle, P.E.
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CRAMERTON
36-01

Resolve

Groundwater sample collection, handling and storage were conducted in accordance with accepted protocol, including chain-of-custody documentation.

Results

The results of the groundwater gauging and field parameters are presented in Table 1. The groundwater analytical results are presented in Table 2. A shallow water table potentiometric map is presented in Figure 1. Laboratory data sheets are presented in Appendix A.

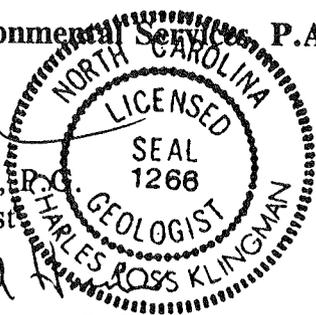
The groundwater samples collected from two (MW-2 and MW-6) of the eight monitor wells indicated the presence of VOCs above the North Carolina Groundwater Quality Standards (NCGQS) at the site. The groundwater sample collected from MW-2 indicated the presence of 8.2 micrograms per liter ($\mu\text{g/l}$) of vinyl chloride and MW-6 indicated the presence of 5.3 $\mu\text{g/l}$ benzene, 87 $\mu\text{g/l}$ cis-1,2-dichloroethene and 12 $\mu\text{g/l}$ trichloroethene. The NCGQS for benzene, cis-1,2-dichloroethene and trichloroethene are 1 $\mu\text{g/l}$, 70 $\mu\text{g/l}$ and 2.8 $\mu\text{g/l}$, respectively.

The groundwater samples collected from two (MW-1 and MW-6) of the eight monitor wells also indicated the presence of RCRA metals above the NCGQS. The groundwater sample collected from MW-1 indicated the presence of 18 $\mu\text{g/l}$ lead and MW-6 indicated the presence of 27 $\mu\text{g/l}$ cadmium. The NCGQS for cadmium and lead are 5 $\mu\text{g/l}$ and 15 $\mu\text{g/l}$, respectively.

If you have any questions concerning this project please do not hesitate to call.

Sincerely,
Resolve Environmental Services, P.A.

Ross Klingman
Ross Klingman, P.G.
Senior Geologist



Richard L. Harmon
Richard L. Harmon, P.G.
Principal Hydrogeologist

CRK/sh
Attachments
rep13.cram196.rpt

WELL AUTH LTR ?

WELLS OKAY ✓

SHORT SEALS	2 3'	3 2'	4 1.5'	5 1.5'
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SW. SITES NOT SAMPLED.

NEED RECEPTOR SURVEY

NOTED
IN MGA
LETTER
3-1-95

1984 LETTER FROM STATE OK'S 2' COVER.
CAP DATA ?

Mr. Warren Shindle
April 19, 1996
Page 2

AUTUM RD -
36-03

Resolve

Groundwater sample collection, handling and storage were conducted in accordance with accepted protocol, including chain-of-custody documentation.

Results

The results of the groundwater gauging and field parameters are presented in Table 1. The groundwater analytical results are presented in Table 2. A shallow water table potentiometric map is presented in Figure 1. Laboratory data sheets are presented in Appendix A.

The groundwater samples collected from monitor wells MW-2, MW-4 and MW-5 indicated the presence of 14 micrograms per liter ($\mu\text{g/l}$) vinyl chloride, 5.8 $\mu\text{g/l}$ 1,2-dichloroethane, and 8.1 $\mu\text{g/l}$ 1,2-dichloroethane and 9.2 $\mu\text{g/l}$ vinyl chloride, respectively, which were above the North Carolina Groundwater Quality Standard (NCGQS). Other VOCs detected in the groundwater samples at the site were below the NCGQS. The NCGQS for vinyl chloride and 1,2-dichloroethane are 0.015 $\mu\text{g/l}$ and 0.38 $\mu\text{g/l}$, respectively.

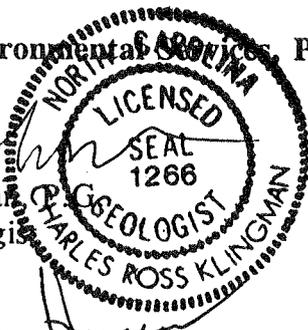
The groundwater samples did not indicate the presence of RCRA metals above method detection limits at the site.

If you have any questions concerning this project please do not hesitate to call.

Sincerely,

Resolve Environmental Services, P.A.


Ross Klingman
Senior Geologist




Richard L. Harmon, P.G.
Principal Hydrogeologist

CRK/sh
Attachments

AUTA. LTR 6/20/94 ✓

MON. SYSTEM GOOD ✓

DISCHARGES (2 CREEKS)
AT OR JUST BEYOND
FACILITY BDY.

SHORT SEAL + GROUT MW-1, 2.5'; MW-5, 3'

→ NEED RECEPTOR SURVEY?

→ NO S.W. SITES
(LONG CREEK)

CAP DATA ✓
'87 (LAW) 38 BORINGS

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BIGGERSTAFF
36-02

Resolve

quality control purposes. In conjunction with the groundwater sampling activities, field parameters (temperature, pH, and specific conductance) were also measured. The groundwater samples were analyzed by Envirolab, Inc. of Ormond Beach, Florida. Envirolab is a North Carolina certified laboratory.

Groundwater sample collection, handling and storage were conducted in accordance with accepted protocol, including chain-of-custody documentation.

Results

The results of the groundwater gauging and field parameters are presented in Table 1. The groundwater analytical results are presented in Table 2. A shallow water table potentiometric map is provided in Figure 1. Laboratory data sheets are presented in Appendix A.

The groundwater samples collected from two (MW-2 and MW-4) of the five monitor wells indicated the presence of VOCs above the North Carolina Groundwater Quality Standards (NCGQS) at the site. The groundwater sample collected from MW-2 indicated the presence of 240 micrograms per liter ($\mu\text{g/l}$) cis-1,2-dichloroethene, 31 $\mu\text{g/l}$ tetrachloroethene, 13 $\mu\text{g/l}$ trichloroethene and 46 $\mu\text{g/l}$ vinyl chloride. The groundwater sample collected from MW-4 indicated the presence of 6.6 $\mu\text{g/l}$ benzene, 8.9 $\mu\text{g/l}$ 1,2-dichloroethane and 5.3 $\mu\text{g/l}$ vinyl chloride. Other VOCs detected in groundwater samples collected at the site were below the NCGQS. The NCGQS for benzene, 1,2-dichloroethane, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene and vinyl chloride are 1 $\mu\text{g/l}$, 0.38 $\mu\text{g/l}$, 70 $\mu\text{g/l}$, 0.7 $\mu\text{g/l}$, 2.8 $\mu\text{g/l}$ and 0.015 $\mu\text{g/l}$, respectively.

RCRA metals were indicated above the NCGQS at four (MW-2, MW-3, MW-4 and MW-5) of the five on-site monitor wells. The groundwater sample collected from MW-2 indicated the presence of 18 $\mu\text{g/l}$ lead. The groundwater sample collected from MW-3 indicated the presence of 24 $\mu\text{g/l}$ lead. The groundwater sample collected from MW-4 indicated the presence of 12 $\mu\text{g/l}$ cadmium and the groundwater sample collected from MW-5 indicated the presence of 130 $\mu\text{g/l}$ lead and 2.7 $\mu\text{g/l}$ mercury. Other RCRA metals detected in groundwater samples collected at the site were below the NCGQS. The NCGQS for cadmium, lead and mercury are 5 $\mu\text{g/l}$, 15 $\mu\text{g/l}$ and 1.1 $\mu\text{g/l}$.

WELL AUTH?

NEED RECEPTOR SURVEY

NO S.W. SITES

COP DATA

'87 (LAW)

47 SPRINGS

43 ~~X~~ 2'