Landfill History

- County required to maintain closed landfill
  forever (Post Closure Care).
- October 1993.
- Francis Farm Landfill (FFLF) began accepting waste in 1973 and closed in
  1993.
• Groundwater & surface water monitoring

  • Sediment and Erosion Control

  • Roads and Access

  • Soil Cap (cover over waste)

  • Stormwater Management

  • Facility maintenance

  • Landfill gas (methane) monitoring.

What's Post Closure Care?
- Surface water not affected (clean).
- Landfill and off site close to landfill.
- Groundwater contaminated beneath.
- Makes leachate.
- Soil cap has settled - water infiltrates.
- Property boundary.
- Methane gas detected above limits at boundaries.
- Waste buried very close to property.

Landfill Problems
Compliance Issues:

- Develop a task list and timeline to address NCDENR Rules. -- Action Required
- Groundwater exceeds limits under Action Required
- Soil cap needs interim maintenance. -- NCDENR Rules. -- Action Required
- Landfill gas exceeds limits under

Compliance Issues
Facility returns to compliance for landfill gas system.

Continue to operate landfill gas recovery system.

Install new landfill gas monitoring wells.

NCDENR (Pending).

Submit new landfill gas monitoring plan to properties surrounding landfill (complete).

Expand facility boundary by purchase of landfill gas solutions.
Landfill Soil Cap Solutions

- Regrade facility to improve surface drainage (in progress).
- NCDENR (complete).
- Cap maintenance plan approved by DOT roads project (in progress).
- Stockpile cheap soil (dirt) from nearby.
- Prepare cap maintenance plan (complete).
Courthouse 19 times

Enough dirt to fill the Haywood County

high

Enough dirt to fill a football field 51 feet

Got Dirt?

County has acquired 100,000 cubic yards

of dirt for $300,000 last September.
This is part of normal required post closure care.

EFFE closed.

The first major cap maintenance since $286,000.

has begun to shed storm water at a cost of Cap maintenance of 43,000 cubic yards.

And some More Dirt
Return the facility to compliance
Implement corrective action plan (CAP)
Prepare an engineered corrective action
Select a remedy
Identity remediation methods (ACM) [in progress]
Assess extent of groundwater impacts

Groundwater Solutions
NCDENR will approve and
A Corrective Action Plan will be prepared and selected.

After the Public Hearing, a remedy or remedies as per 15 NAC 13B.1635(d) will be selected.

A public hearing will be held concerning the ACM report.

NCDENR will review the ACM report for groundwater (in progress).

ACM is an evaluation of many potential remedies.

Measures (ACM)

Assessment of Corrective Action
Monitored Natural Attenuation

Passive Reactive Barrier

Bioremediation with Injection Wells

Active Soil Vapor Extraction System

Phytomediation

Recovery Wells/Capture Zone/Pump & Treat

Leachate Recovery & Disposal

Add a geomembrane liner to the cap

Place a engineered soil cap over the waste area

List of Potential ACM Remedies
Big Four carriers at $120
behind, and T-Mobile was the least expensive of the
four at $148 a month. Sprint and AT&T were not that far
most expensive carrier, with an average customer bill.

A study earlier this year found that Verizon was the

North Carolina is $80.25

Average monthly residential water and sewer and bill in

North Carolina is $117

Average monthly residential electricity bill in North

Utilities by Comparison
$164.00 a year or $13.66 a month

Protects Human Health & the Environment

Station for further convenience

Provides a sanitary landfill and transfer

Waste/Recycling is hauled by third party

With 540 weekly hours of operation

Covers 10 Convenience Centers & MRF

Solid Waste Fee