

1325 Dills Cove Rd.
Sylva, NC 28779

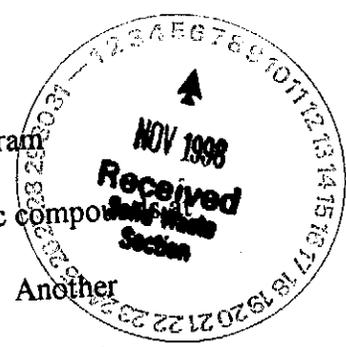


Phone & Fax
(828) 586-3955

11/03/98

Jackson County Landfill
Proposed Groundwater Contamination Delineation Program

Water samples from the landfill monitoring wells contain organic compounds at statistically significant levels, some in excess of groundwater standards. Another monitoring well on adjacent property contains similar compounds & levels. This information suggests that contamination from the landfill has migrated off-site in at least one location and may have occurred at other places.



Major concerns relate to drinking water contamination. This proposed program is sequential. The first phase will consist of locating all water and drinking water sources within 1/4 mile of the landfill waste. Geology in this area will be mapped. Interpretations based on this will be used to plan the second phase. It will be a ground water sampling program, using a geoprobe or hydropunch type tool, possibly hand augers, and maybe sampling surface waters at springs. Sample locations will be selected based on results of the first phase work. Samples will be analyzed, at a minimum, for the statistically significant compounds found in the monitoring wells.

I anticipate this work will be completed late in 1998 or early 1999, pending quick approval. Further work, monitoring well installation, sampling and modelling, will be based on results of the first and second phases. Plans will be prepared and submitted prior to starting future phases.

Michael H. Owens
MICHAEL H. OWENS

List of Attachments

- I Significant Organic Compounds in Monitoring Wells
 - A. Landfill
 - B. D & R Properties

- II Time vs Concentration Graphs - Landfill
 - benzene
 - 1,4 - dichlorobenzene
 - 1,1 - dichloroethane
 - cis -1,2 - dichloroethene
 - methylene chloride
 - tetrachloroethene
 - trichloroethene

- III Groundwater Contamination Delineation Program
 - Base Map
 - Proposed Activities Overlay

SIGNIFICANT ORGANIC COMPOUNDS
in Landfill Monitoring Wells
Statistically Significant Organic Compounds

| <u>Well#</u> | <u>compound</u> | <u>max level (ug/l)</u> | <u>2L(ug/l)</u> |
|--------------|------------------------------|-------------------------|-----------------|
| 1 | 1,1-dicloroethane | 41.7 | 700.0 |
| | * methylene chloride | 84.0 | 5.0 |
| | trichlorofluoromethane | 15.9 | 2,100.0 |
| | xylene | 31.7 | 530.0 |
| 4 | cis-1,2-dicloroethene | 33.5 | 70.0 |
| | * tetrachloroethene | 9.9 | 0.7 |
| 5 | * benzene | 11.0 | 1.0 |
| | 1,4 - dichlorobenzene | 11.3 | 75.0 |
| | 1,1 - dichloroethane | 12.0 | 700.0 |
| | * cis - 1,2 - dichloroethene | 75.3 | 70.0 |
| | * tetrachloroethene | 10.0 | 0.7 |
| | * trichloroethene | 11.0 | 2.8 |

* = greater than 2L groundwater standards

SIGNIFICANT ORGANIC COMPOUNDS
D & R Properties Monitoring Well
Detected Compounds

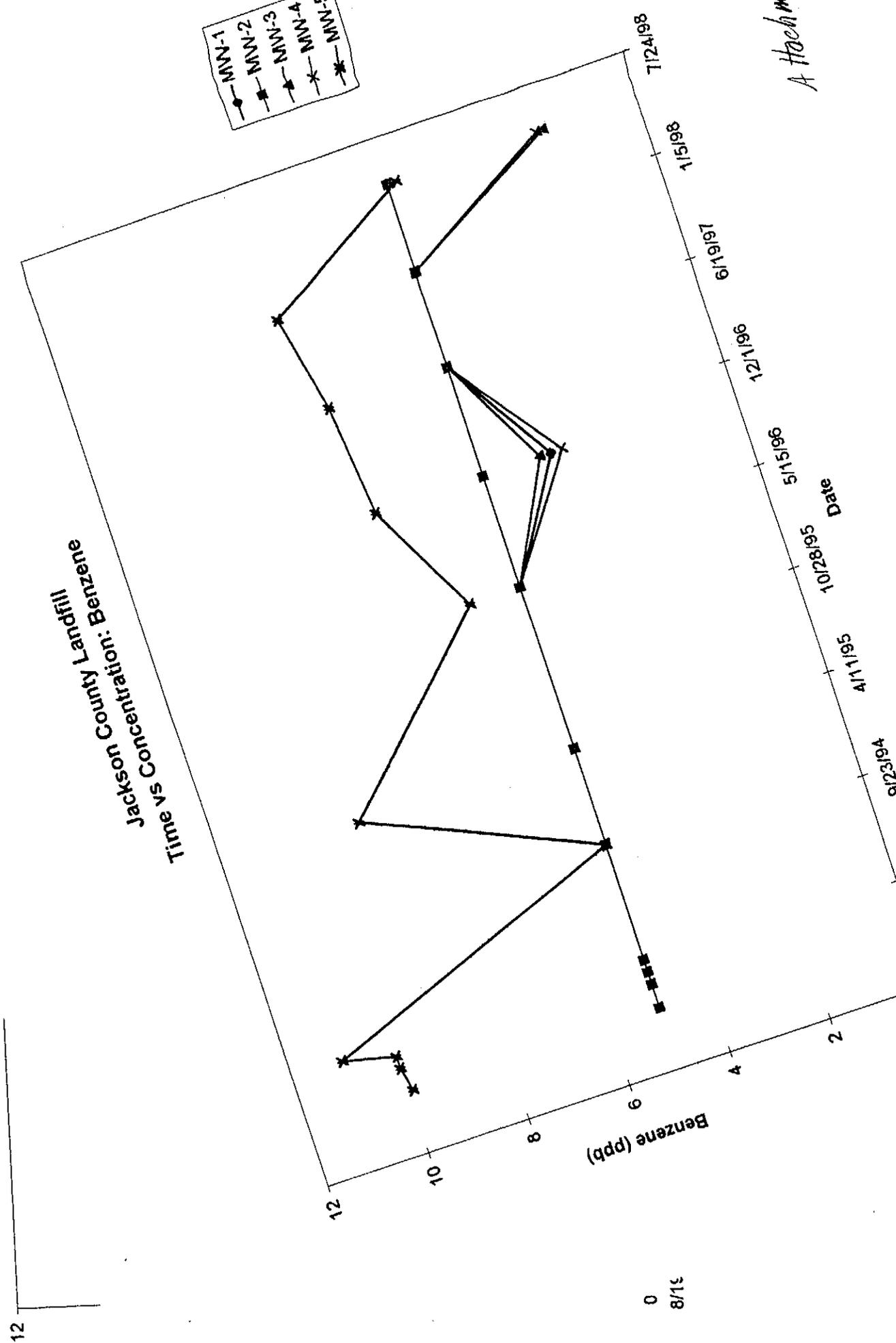
| <u>compound</u> | <u>max level (ug/l)</u> | <u>2L(ug/l)</u> |
|----------------------------|-------------------------|-----------------|
| benzene | 5.43 | 1.0 |
| chlorobenzene | 3.59 | 50.0 |
| chloroethane | 1.99 | NL |
| 1,4 - dichlorobenzene | 4.35 | 75.0 |
| 1,1 - dichloroethane | 2.13 | 700.0 |
| cis - 1,2 - dichloroethene | 31.90 | 70.0 |
| methyl chloride | 13.40 | NL |
| tetrachloroethylene | 5.43 | 0.70 |
| trichloroethylene | 3.80 | 2.8 |
| vinyl chloride | 2.00 | 0.015 |
| xylene (total) | 3.88 | 530.0 |

NL = not listed

Attachment I - B

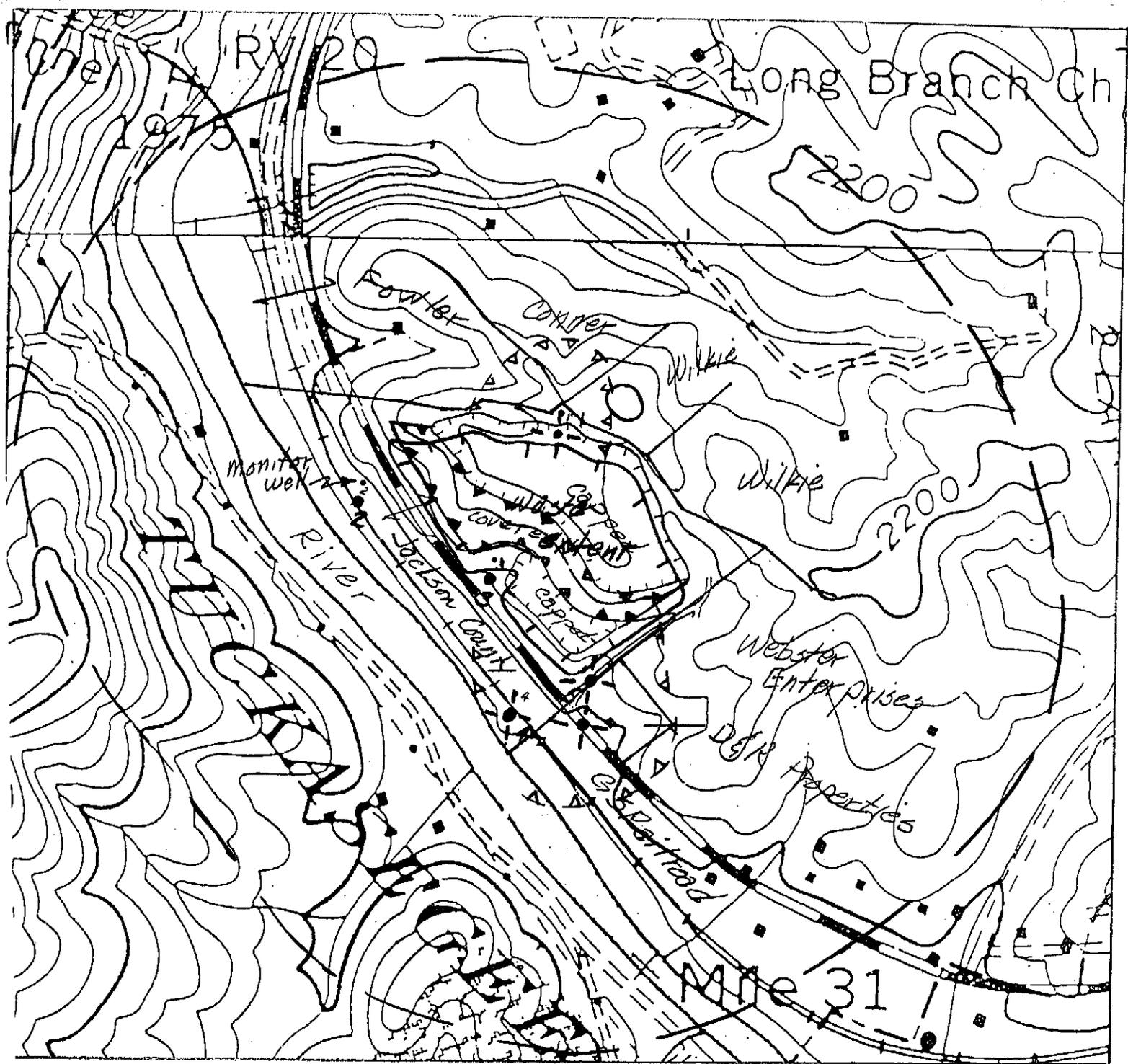
Jackson County
Time vs Concentration

Jackson County Landfill
Benzene Concentration vs Time



MN-1
MN-2
MN-3
MN-4
MN-5

Attachment II



Proposed Activities Overlay Explanation

⊆ extent of waste

⌒ area for drinking water, water & geologic survey

⊆ tentative area for geoprobe sampling - subject to change

•³ monitor well
 •⁴ monitor well with significant organic groundwater contamination