

RJR Landfill Management Program

Waste Management Plan

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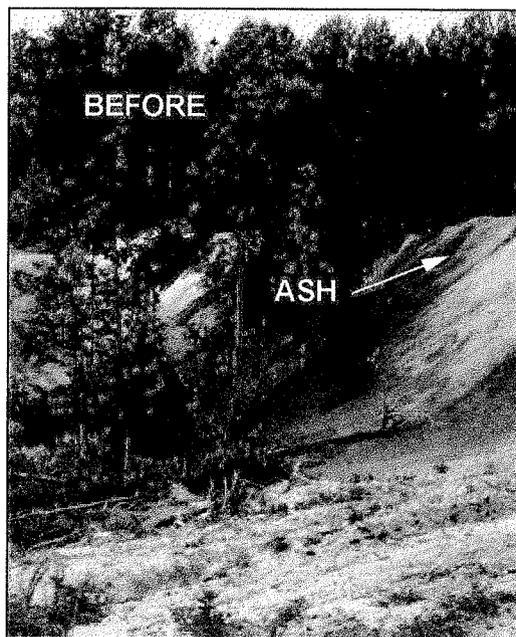
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Rural Hall Ash Landfill - Permit requirements for the Rural Hall ash landfill cost about \$20,000 in 1996.

New state regulations, developed with RJR involvement through an industry coalition, will allow the company to demonstrate that the requirement for a lined landfill with leachate collection is not necessary by utilizing EPA-developed modeling. A potential cost avoidance of approximately \$1.5 million can be realized by not having to line our ash landfill.

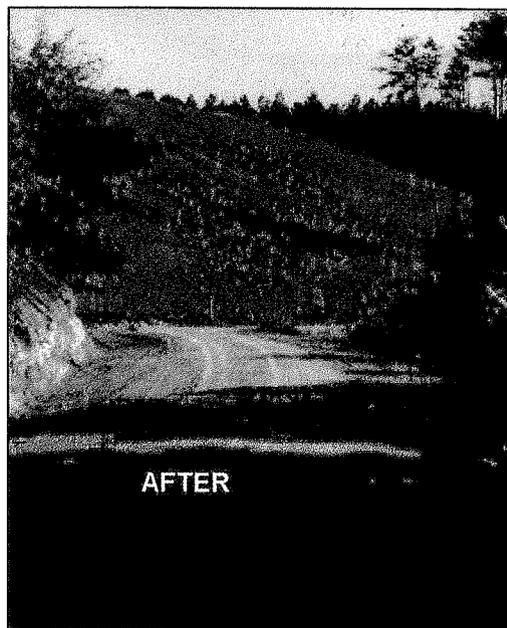
Alternatives for beneficially utilizing ash rather than disposal in the company landfill continue to be explored. Utility Division personnel have actively explored several options. Significant quantities of ash from the Bailey and Whitaker Park plants are currently being given to concrete and block manufacturers, and for agriculture purposes. An option to landfilling the majority of our ash, which comes from Tobaccolville, continues to be pursued. This alternative involves working with the city of Winston-Salem to use ash as daily cover at the municipal landfill. If a long term agreement can be reached with the city, then the company's Rural Hall landfill will be permanently closed.



RJR Rural Hall Ash landfill.

*Above
landfilling in progress.*

*Below
Completed landfill area with soil cap and vegetation cover.*



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WASTE REDUCTION GOAL

The goal of R. J. Reynolds Tobacco Company (RJR) is to eliminate ash generated at company operated utility plants as a waste material by identifying cost effective alternative uses for this material. Currently, approximately ten percent of the ash generated is beneficially reused.

A large percentage of ash generated at RJR is from the Tobaccoville Utility Plant and contains a high carbon content. High carbon ash is not suitable for many of the reuse options available for lower carbon ash. High carbon ash results from the use of low NOx boilers as required by our air permit.

RJR landfills ash by a method that could be argued as beneficial reuse. The company landfill is located in area where deeply eroded hollows exist. Ash is used to fill the hollow leaving relatively flat terrain that could be used for crop land, animal grazing, or other similar use. From 1980 through 1986, the company operated its' landfill on such terrain at the request of the property owner who subsequently uses the land for pasture and hay production.

The rate of generation of ash is directly proportional to the volume of coal burned. No technology has been identified that will reduce the proportional relation of coal consumption to ash generated. The decision to burn coal is based on process needs and the value of electricity sold under contract to Duke Power Company. The cost of ash disposal is not a significant figure in the decision to burn coal. RJR will continue to investigate alternatives for managing ash.

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MANAGEMENT OPTIONS INVESTIGATED

Numerous options for managing ash have been investigated in the past with several options currently being utilized.

CURRENTLY BEING INVESTIGATED

- High carbon ash separation and reinjection (CP&L Challenge Grant Project)

OPTIONS CURRENTLY IN USE:

- Use in concrete products.
- Use in agricultural products.
- Use as a surfacing material on unpaved roads.

OPTIONS INVESTIGATED:

- Use in structural concrete products.
- Use as an alternative to lime for agricultural purposes.
- Structural fill.
- Use as add material in the manufacture of cement.

Use as daily cover for sanitary landfill.

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TEN YEAR MANAGEMENT STRATEGY

It is the company's objective to eliminate landfill disposal of coal ash and close our Rural Hall landfill. This is an immediate goal and several people in both the Utilities Division and the environmental group are continually looking for alternatives to landfilling. Identified alternatives will be investigated and evaluated for environmental suitability and cost.

Waste reduction is a primary goal in managing all waste materials at R. J. Reynolds Tobacco Company. Ash has been managed by the company's Environmental Management and Utilities Groups since 1980 with the objective of investigating alternate methods of handling this material to reduce environmental impact and cost. Until a cost effective, reliable alternative to landfill of coal ash is identified RJR will continue to operate the Rural Hall landfill for the next ten years and beyond.