

Iron Issue at the Apalachee Solid Waste Management Facility

Introduction

Iron is a naturally occurring element in groundwater in this part of Florida. In certain circumstances excessive amounts of iron can pose a threat to the environment. The Florida Department of Environmental Protection (DEP) has established standards for concentrations of iron and other chemicals. The groundwater in and surrounding the Apalachee Solid Waste Management Facility (SWMF) is monitored semi-annually for dozens of different potential contaminants, including iron.

Iron Issue

Iron has shown up, in very high concentrations, near the southeast corner and northeast portion of the SWMF. It is a reasonable assumption that unlined cells at the SWMF are a contributing factor to these high levels of iron. It is interesting to note, however, similar problems exist in association with lined landfills elsewhere. This issue is certainly not unique to Leon County. Many other jurisdictions, especially those in the panhandle, are grappling with this problem.

To date, DEP has agreed to simply allow Leon County to monitor the situation. Recent data indicates the iron problem continues. It is expected that DEP may require some kind of action to lower iron concentrations in the near future.

Current Activities

In close cooperation with DEP, there is an ongoing effort to determine the extent of the groundwater contamination. New groundwater monitoring wells are being added, both upstream and downstream. Contrary to what was expected, iron concentrations have actually been higher at some sampling locations farther from the edge of the landfill than those close to the edge.

The County has hired Chris Teaf, Ph.D., an environmental toxicologist, to perform a health risk assessment based upon the data collected so far. His original assessment indicates an acceptable risk. While DEP has asked for additional information, the conclusions of the assessment will not change. Dr. Teaf is working on a response to DEP at this writing.

Future Activities

The County's solid waste consultant, HDR Engineering, is working with staff to address this issue. It seems to be a hydro-geologic issue rather than a solid waste one, with the landfill having an indirect effect. The science surrounding this issue is inconclusive, leaving the approach to take somewhat ambiguous. Thankfully, DEP has taken a cooperative stance. Staff will continue to work closely with DEP and HDR to deal with this potentially significant problem. Once a clear plan of action is established, a full report will be made to the Board.