SITE INVESTIGATION OF SOUTHERN HISTORIC CATTLE DIP VATS

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REFERENCE: *Proceedings of the 2011 Georgia Water Resources Conference*, held April 11–13, 2011, at the University of Georgia.

Abstract. From the early 1900s to 1961, cattle ranchers in Southern states, particularly Arkansas, Georgia, Florida, and Texas, were required to control ticks on cattle to prevent Texas Cattle Fever, a disease that impacted cattle in the South. A United States Department of Agriculture program provided for the construction and operation of over 3,200 cattle dip vats. Solutions containing arsenic were initially used, until the ticks developed a resistance to the arsenic solution. Around the mid-1940s, arsenical pesticides were replaced by organochlorinated pesticides. The historic operations of cattle dip vats have lingering impacts on groundwater and soil that pose a threat to human health and the environment.

Geosyntec Consultants has contracted with the Florida Department of Environmental Protection to evaluate groundwater and soil impacts associated with historic cattle dip vats that are located in the Florida State Park System. A multi-faceted approach was used to characterize contaminant migration in groundwater and soils with respect to historical site operations, archaeological preservation, and environmental health. Several case studies at state parks located across Florida are presented, including methods of delineation and remediation. The approaches employed in these studies will assist others in future investigations of historic cattle dip vats that exist across the South, including Georgia.