

Varsol Spill
(Biscayne Aquifer Area-Wide Groundwater Contamination)
Miami International Airport
Miami, Florida
County: Miami – Dade
District: Southeast
Site Lead: EPA
Placed on the National Priorities List: September 8, 1983
Delisted: September 1, 1988
ERIC ID # 3778
HWC # 005

Site Description and History

The Varsol Spill site is located under a portion of the Miami International Airport in Section 29, Township 53S, Range 41E, at 25° 48' 23.5506" N, 80° 16' 09.6057" W. Between 1966 and 1985, approximately 15 spills and leaks totaling 2 million gallons were documented at the site; including an underground pipeline leak that discharged about 1.6 million gallons of petroleum solvent at the airport. Dade County brought enforcement action against Eastern Airlines, the owner of the spilt solvents. A consent agreement was signed requiring assessment and cleanup, if necessary, of several maintenance areas and tank farms.

This site, Miami Drum Services and Northwest 58th Street Landfill sites have collectively been addressed by the EPA under the federal Superfund cleanup program through the Biscayne Aquifer Study, as one management unit. All three sites are underlain by the Biscayne Aquifer, a highly productive aquifer and the sole source of drinking water for most of the residents in southeast Florida. The aquifer is vulnerable to contamination because of its limestone composition and its close proximity to the land surface. The Biscayne Aquifer Study has addressed remedial action for the three Superfund sites, in addition to area wide groundwater contamination in the Biscayne Aquifer study area.

There are four public well fields in the study area: 1) Medley well field; 2) Miami Springs well field; 3) Preston well field; and 4) Northwest well field. The Medley well field has been closed since 1982. The Northwest well field, with an installed capacity of 150 million gallons per day (mgd), became operational in mid-1983. After installation of the Northwest Well Field, production at the Miami Springs and Preston Well Fields was reduced to approximately 10 mgd.

Threat

The Varsol Spill site is no longer considered a public health concern, since contaminants from the spill are no longer detected in the area. Remaining area wide groundwater contamination in the Biscayne Aquifer is considered by the Centers for Disease Control to be a potential threat to public health and is being addressed separately by well head treatment at the Miami Springs and Preston municipal well fields. Area wide contaminants include vinyl chloride, 1, 1, 2, 2,-tetrachloroethane, methylene chloride, 1, 1-dichloroethane, 1, 1-dichloroethene, benzene and acrylonitrile.

Response Strategy and Status

A Remedial Investigation/Feasibility Study was completed in May 1985. The investigation determined that there were no solvents remaining in groundwater at or around the airport attributable to the prior discharges. It is anticipated that prior recovery actions and biodegradation contributed to its decline to levels similar to background or the remaining area wide contamination.

The Record of Decision (ROD) documenting the selected remedial alternative was signed by the EPA in September 1985. The EPA concluded that no further action was necessary to specifically address the Varsol Spill. Air stripping of the groundwater recovered from the Preston and Miami Springs municipal well fields prior to public distribution and consumption was the selected alternative for remaining area-wide groundwater contamination identified by the Biscayne Aquifer Study. See Biscayne Aquifer-Miami Drum, site summary # 3776, for further information on the ongoing Area wide Biscayne Aquifer groundwater remediation.

The Varsol Spill site was delisted from the National Priorities List in September 1988.