

Davie Landfill
4001 Southwest 142nd Avenue
Davie, Florida
County: Broward
District: Southeast
Site Lead: EPA
Placed on National Priorities List: September 8, 1983
Delisted: November 22, 2006
HWC # 010
ERIC ID # 3783

Site Description and History

The Davie Landfill has been owned and operated by Broward County since 1971. The site is located in Section 27, Township 50S, Range 40E at 26° 04' 10.5600" N, 80° 20' 33.3600" W. The facility includes a 30-acre asphalt-lined sanitary landfill, an 80-acre trash landfill and a 10-acre wastewater sludge lagoon. Previously, the site had included an incinerator and sludge lagoon. The facility began accepting trash and ash from the county's garbage incinerator in 1964. The sludge lagoon was constructed on-site in 1971 in an unlined natural depression to accept septic tank wastes and municipal sludges. The sanitary landfill was opened in 1975 upon closure of the incinerator. The sludge lagoon was closed in 1981.

In 1981, Broward County imposed strict operational controls by terminating all liquid and sludge waste dumping at the wastewater sludge lagoon. A number of studies to document the extent of contamination have been performed by Broward County, the Florida Department of Environmental Regulation (FDER, now DEP), EPA and the US Geological Survey. A series of monitoring wells have been installed within the groundwater contamination plume or plume-influenced areas. The design of the monitoring system allows water quality to be sampled through the entire depth of the aquifer and provides an early warning of plume encroachment on drinking water supply wells.

Threat

The primary concern at this site was contamination of the Biscayne Aquifer, a designated sole source water supply to residents and commercial establishments in this area west of the City of Ft. Lauderdale. The source of contamination was from leachate from the lagoon. Ammonia, lead, chromium, iron and arsenic have been detected in monitoring wells near the lagoon. Various organic and volatile organic compounds have also been detected in the groundwater. By 2004 the site met the cleanup goals specified in the ROD and was delisted in November 2006.

Response Strategy and Status

The FDER had been working with Broward County to address problems at the site. The EPA became involved with negotiations since the site was added to the Superfund National Priorities List. As discussed above, Broward County had conducted studies of the site and had taken some

mitigative steps. A closure report for the Davie Landfill was completed by Broward County in May 1985. FDER and EPA concurred with Broward County's proposal to stabilize and dispose of the sludge from the lagoon in a permitted Class 1 sanitary landfill. A Record of Decision (ROD) was signed by EPA in September 1985, formalizing this alternative for source control.

Since investigations into groundwater contamination were not conclusive, EPA agreed to perform a groundwater assessment. Broward County signed a contract with Post, Buckley, Schuh & Jernigan for the remedial design of the sludge lagoon closure, and work began in April 1987. An escrow agreement between the FDER and Broward County was executed in April 1988. This agreement provided the necessary assurances to the state for the sludge lagoon closure. An intergovernmental agreement between the EPA and FDER was signed in June 1988, to provide the necessary state assurances for the EPA.

A Cooperative Agreement was signed in August 1988, between the EPA and Broward County that provided \$1.6 million to the county for final construction. The design and construction bid documents were approved in November 1988, the bid was awarded in March 1989, and work began in April 1989. The construction consisted of excavation and stabilization of the sludge lagoon contents. In September 1989, the construction was determined by EPA to be substantially complete. In October 1989, a final inspection of the construction was performed; all construction work was determined to be satisfactory. Groundwater monitoring will continue for a thirty year period.

A Contamination Assessment Plan (CAP) for the groundwater contamination was submitted by Broward County to the FDER Southeast District Office. The CAP was approved in June 1991 and the field work was completed in 1992, as part of the Contamination Assessment Report (CAR). The EPA and DEP worked to allow Broward County to complete their requirements for landfill closure under existing agreements with the southeast District and satisfy the Remedial Investigation/Feasibility Study (RI/FS) requirements of EPA. In March 1992, the DEP recommended that EPA assume lead management role for the Davie site.

The ROD signed in September 1985 addressed only source control and stated that additional necessary action would be addressed after further data evaluation. In March 1992, Broward County signed an Administrative Order on Consent with EPA to conduct a study to address soil and groundwater contamination, and analyze cleanup alternatives for the site. In August 1992, Camp, Dresser & McKee (CDM) submitted a workplan for a RI/FS and sampling and analysis plan. The revised work plan was completed in March 1993. The result of the December 1993 Treatability Study, along with vinyl chloride detections in residential wells, required a new FS. The final FS was submitted by CDM in April 1994, and was followed with a Proposed Plan by the EPA.

A final ROD was signed by the EPA in August 1994. A Letter of Concurrence for the ROD was signed by the DEP in April 1995. The selected alternative included natural attenuation of groundwater contamination, an Operation and Maintenance program with on-site sampling by Broward County for the DEP Southeast District, and off-site sampling of private wells by the Broward County Health Department.

Broward County completed public water line extensions in the spring of 1996 for all residents adjacent to the site or who had previously detected groundwater contamination. Some of the residents chose not to hook up to the public water supply at that time. The County requested permission to remove off-site monitor wells, outside the Closure Permit Zone of Detection, and the request was denied by DEP.

The US Army Corps of Engineers (USACE) conducted the first Five-Year Review for EPA in May 2000. DEP reviewed this report and requested minor revisions/clarifications in August 2000. The Five-Year Review Report was subsequently approved.

By 2004 the site met cleanup goals as specified in the ROD, i.e. two consecutive sampling events below MCLs for the stated contaminants of concern (vinyl chloride and antimony). Broward County submitted a Completion Report along with a request to delist the site to the EPA in March 2004. In May 2004 the EPA formally requested concurrence from DEP to delist the site from the NPL. DEP signed a concurrence letter on August 27, 2004.

In June 2005, the USACE conducted the second Five-Year Review for the EPA. The final report concluded that the site remains protective of human health and the environment.

On June 22, 2006, the EPA published an "intent to delete notice" in the Federal Register to delist the site from the NPL.

No adverse public comments were received during the thirty-day public comment period for the intent to delete notice. Therefore, the site was delisted on November 22, 2006. The EPA has returned lead management of the site to the DEP Southeast District. Groundwater monitoring will continue to be performed by Broward County.