

PRELIMINARY

**Health
Assessment
for**

TAYLOR ROAD

CERCLIS NO. FLD090494959

SEFFNER, FLORIDA

APRIL 24, 1989

Agency for Toxic Substances and Disease Registry
U.S. Public Health Service

PRELIMINARY HEALTH ASSESSMENT

TAYLOR ROAD SITE

HILLSBOROUGH COUNTY

SEFFNER, FLORIDA

DECEMBER 8, 1988

Prepared by:

State Health Office

Florida Department of Health and Rehabilitative Services (HRS)

Prepared for:

Agency for Toxic Substances and Disease Registry (ATSDR)

Background

The Taylor Road National Priorities List (NPL) site is located one-eighth mile north of the city of Seffner in eastern Hillsborough County, Florida. Three landfills comprise the Taylor Road site: the Taylor Road Landfill which operated from 1975 to 1980; the Department of Transportation (DOT) Borrow Pit Landfill and the Hillsborough Heights Landfill, both of which operated from 1980 to 1984. The three landfills were intended for disposal of municipal refuse but disposal of unknown quantities of industrial waste is suspected.

Ground water in the area is contaminated with volatile organic compounds (VOCs) and metals. Contaminant plumes in the surficial aquifer have been traced one mile down gradient (south-southwest) of the site. Down gradient private wells that tap the Floridan Aquifer have also shown low level contamination with VOCs.

The site is located in a residential and agricultural community. This community northeast of Seffner includes 11 dairy farms, two of which are located between one-quarter and one-half mile down gradient from the landfills, and a community well system that serves 2,500 people one mile down gradient from the landfills.

Hillsborough County Utilities Department, the owner of the site, was required by a consent decree between the County, the Department of Environmental Regulation (DER), and the Environmental Protection Agency (EPA) to install a multimedia cap, drainage ditches and methane gas control systems around each of the landfills. The consent decree also required the county to extend the county water supply system to residents in the

contaminated area south of the landfill and implement a thirty-year ground water monitoring program. At this time, the landfills have been capped and closed, and access to each of the individual landfills is restricted because each is fenced and locked. According to Hillsborough County Health Department Environmental Engineering personal, some residences in the area down gradient of the Taylor site are still using private wells, and water main coverage is spotty, especially with respect to side streets (see attached map).

In 1983, low levels of oil and grease were found in wells north of the landfill. Because these wells are located up gradient of the site, the contaminants probably cannot be attributed to the landfills.

The following documents were reviewed by Florida HRS:

1. Draft Report for Taylor Road Site, Seffner, Florida, Document Control # 361-WP1-RT-DERF-1 for EPA by Camp, Dresser and McKee, Inc. - September 9, 1986.
2. EPA Summary for Taylor Road Landfill NPL site, unsigned, undated.
3. East Hillsborough County, Florida, Area Wide Ground Water Contamination Report, by EPA - January 1988.
4. Data collection activities in the vicinity of the Taylor Road and Hillsborough Heights Landfills, March 1987 through December 1987, prepared for Hillsborough County Department of Solid Waste by Geraghty and Miller, Inc., March 1988.

Environmental Contamination and Physical Hazards

Because each of the former landfill facilities is now capped and closed, no physical hazards are known to exist at any of the three landfills that comprise the Taylor Road Site. Soils and air in the vicinity of the site have not been monitored.

Below is a compilation of the maximum concentrations of contaminants found in the Floridan Aquifer.

GROUND WATER - FLORIDAN AQUIFER

| <u>CONTAMINANTS</u> | <u>MAXIMUM CONCENTRATION (UG/L)</u> | |
|---------------------|-------------------------------------|-----------------|
| | <u>ON-SITE</u> | <u>OFF-SITE</u> |
| Benzene 20 | BLC | |
| 1,1-dichloroethene | 130 | BLC |
| Lead 480 | BLC | |
| Tetrachloroethene | 4.4 | 14 |
| Trichloroethene | 4300 | 5.6 |
| Vinyl Chloride | 85 | BLC |

g/L: micrograms per liter
LC: below level of concern

Potential Environmental and Human Exposure Pathways

Extensive sample data confirm contamination of the Floridan Aquifer which is the main source of potable water in the area. As a result of contamination of this aquifer (and the surficial aquifer), potential human pathways include ingestion of contaminated ground water, inhalation of contaminated soil particulates and volatile chemicals in ground water used for showering and bathing, dermal contact with contaminated water, and the ingestion of potentially contaminated milk (two dairies are directly down gradient of the site). Of the contaminants identified in the surficial aquifer at levels of concern, lead would bioaccumulate while VOCs would not. Soil, sediments, and air have not been monitored at or in the vicinity of the site, and cannot be addressed as pathways for human exposure.

Demographics

The closest residence is less than one-eighth mile from the site. The estimated population for the Seffner area is 27,000. Two schools, the McDonald Elementary and Englewood Elementary, are located one-half mile and one and one-quarter mile, respectively, northeast (up gradient) of the site.

Evaluation and Discussion

The primary pathway for human exposure to contaminants at the Taylor Road Site is ground water. Theoretically, implementation of the actions specified within the consent decree would prevent this pathway because the decree requires affected households to be hooked up to county water. However, the EPA conducted an area survey which included sampling of 500 private wells in the Seffner area in conjunction with identifying thirteen possible sources of contamination (three of these sources make up the Taylor NPL site). This survey found ten wells that were contaminated with VOCs, and bottled drinking water was supplied to the users of these wells. EPA field crews found that in many

areas where public water supplies are available, numerous private wells are still used for consumptive and domestic purposes.

The persistence of private well use down gradient of the site results in on-going public health concern, as does the continuing use of private well water for bathing and showering by residents that are supplied bottled water. Estimates of the number of wells located within 1 mile down gradient of the site, within the suspected area of contamination include 123 private permitted wells (and other unknown non-permitted wells drilled prior to the early 1970's) and the "Trail Drive" public water system that pumped 518,000 gallons/day in 1985 (potentially serving 2,500 people).

The cattle at the dairy farms south and southwest of the site may be exposed to contaminants via ingestion of surface water, sediments or soil. If future testing of milk shows concentrations of contaminants at levels of health concern, then milk may be another route of human exposure.

Conclusions

Based on the available information, this site is considered to be of potential public health concern because of the risk to human health caused by the possibility of exposure to hazardous substances via ingestion of contaminants from ground water, inhalation of contaminated particulates and volatile chemicals in ground water used for showering and bathing, dermal contact with contaminated water, and ingestion of potentially contaminated milk.

A comprehensive private well inventory should be conducted to ascertain additional populations that may be at risk. Information gained from this inventory should be used to coordinate a county water hook-up program, because EPA field crews found that in many areas where public water supplies are available, there are still numerous private wells for consumptive and domestic usages. Hook-up to county water could prevent all forms of exposure to contaminated ground water.

Better definition of the extent of contamination is needed. This includes: plume definition in the surficial aquifer and the Floridan Aquifer; testing of soil, sediments, and surface water off site; and food chain or bioaccumulation studies.