

PRELIMINARY  
**Health  
Assessment  
for**

FAIRLAWN WELLFIELD

FAIRLAWN, NEW JERSEY

JANUARY 19, 1989

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

## THE ATSDR HEALTH ASSESSMENT: A NOTE OF EXPLANATION

Section 104(i)(7)(A) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, states "...the term 'health assessment' shall include preliminary assessments of potential risks to human health posed by individual sites and facilities, based on such factors as the nature and extent of contamination, the existence of potential pathways of human exposure (including ground or surface water contamination, air emissions, and food chain contamination), the size and potential susceptibility of the community within the likely pathways of exposure, the comparison of expected human exposure levels to the short-term and long-term health effects associated with identified hazardous substances and any available recommended exposure or tolerance limits for such hazardous substances, and the comparison of existing morbidity and mortality data on diseases that may be associated with the observed levels of exposure. The Administrator of ATSDR shall use appropriate data, risk assessments, risk evaluations and studies available from the Administrator of EPA."

In accordance with the CERCLA section cited, ATSDR has conducted this preliminary health assessment on the data in the site summary form. Additional health assessments may be conducted for this site as more information becomes available to ATSDR.

PRELIMINARY HEALTH ASSESSMENT  
FAIRLAWN WELLFIELD  
FAIRLAWN, NEW JERSEY  
January 19, 1989

Prepared by:  
Office of Health Assessment  
Agency for Toxic Substances and Disease Registry (ATSDR)

Background

The Fairlawn Wellfield site is listed by the U.S. Environmental Protection Agency (EPA) on the National Priorities List (NPL). In 1978, volatile organic compounds (VOCs) were detected in four municipal supply wells located within and adjacent to the Fairlawn Industrial Park. These wells were removed from the municipal system shortly after contamination was discovered. The source of the groundwater contamination was believed to be SANDVIK, Inc., and/or Fisher Scientific Company. Fisher Scientific Company has been in operation on this 10-acre site since 1955. There is a bulk transfer area for unloading railroad tank cars which is suspected of being the point source. No information was provided concerning the SANDVIK, Inc., operations.

The following documents were provided to ATSDR for review: Hydrogeologic Report of Sandvik, Inc., September 1984; Remedial Investigation, September 24, 1984; and the Feasibility Study, July 1985. These documents form the basis of this preliminary health assessment.

Environmental Contamination and Physical Hazards

The environmental contamination on-site (maximum concentrations reported) consists of benzene (250 ppm), ethylbenzene (230 ppm), trichloroethylene (1,000 ppm), and toluene (670 ppm) in soil; and methylene chloride (3 ppm), tetrachloroethylene (2 ppm), benzene (25 ppm), trichloroethylene (50 ppm), and 1,1,1-trichloroethane (2 ppm) in groundwater.

The off-site environmental contamination off-site has not been reported.

No physical hazards were reported to be present on this site. The industrial park is an active facility. Access may be restricted somewhat by this status; however, no specific measures to restrict public access were described.

Potential Environmental and Exposure Pathways

The environmental pathways of concern are on-site contaminated soil, migration of contaminated soil, sediment, and surface water off-site, and migration of contaminated groundwater.

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The human exposure pathways of concern are ingestion and dermal contact with contaminated soil, sediment, and surface water; inhalation of VOCs emanating from contaminated soil; and ingestion, dermal contact and absorption, and inhalation (volatile components) of contaminated groundwater.

### Demographics

The site is bounded on three sides by the remaining industries of Fairlawn Industrial Park. There are several residences within 300 feet on the fourth side. There are no private wells in the vicinity of the site. However, there are public water supply wells nearby.

### Evaluation and Discussion

The four wells that were found contaminated were taken out of service in 1978. The present disposition of these wells is not known. Whether or not other public wells potentially impacted by the groundwater plume are in the vicinity is not known. Presumably, a municipal monitoring program is in place that will identify any wells that might become contaminated in the future.

Use of groundwater contaminated with VOCs could pose an inhalation, dermal contact, and ingestion concern since fairly high levels of VOCs were measured. It was not clear whether or not the concentration data were taken from monitoring wells or from the public supply wells that were taken from service.

No information was provided concerning the presence of, or potential for, migration of soil, sediment, or surface water off site. This could be an important pathway, particularly if the direction of movement is toward the residential areas where children could come in contact with these media. Ingestion and dermal contact probably are not important pathways for Industrial Park workers and other adults.

ATSDR has prepared, or will prepare, Toxicological Profiles on the site contaminants noted above.

### Conclusions and Recommendations

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 groundwater, surface water, and soil. We note that the Feasibility Study document is dated July 1985, and by this time, the site remediation activities

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(capping to prevent contact with and migration of soil, groundwater extraction for migration control, extracted groundwater treatment) should have been completed. Confirmation that the environmental and human exposure pathways identified above have been successfully remediated would allow ATSDR to reevaluate the level of public health concern this site poses. Confirmatory information should include current measurements of the levels of contamination in the wellfield, particularly if consideration will be given to reintroducing the four wells into the public system.