

PRELIMINARY

**Health
Assessment
for**

EVOR PHILLIPS LEASING

OLD BRIDGE TOWNSHIP, MIDDLESEX COUNTY, NEW JERSEY

02NJD980654222

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

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THE ATSDR HEALTH ASSESSMENT: A NOTE OF EXPLANATION

Section 104(1)(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
EVOR PHILLIPS LEASING
OLD BRIDGE TOWNSHIP, NEW JERSEY

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

Background

The Evor Phillips Leasing (EPL) Site is listed by the U.S. Environmental Protection Agency (EPA) on the National Priorities List. The site is located in Old Bridge Township (Middlesex County), New Jersey. EPL has been reported to contain between 4,000 and 5,000 drums containing chemical wastes. EPL has no provisions for containment and is unlined. Approximately 30 to 40 drums of chemical waste have been removed by the State of New Jersey. Access to the site is unrestricted.

The following documents were reviewed by ATSDR: (1) Site Inspection Report, August 3, 1982, and (2) Hazard Ranking Package, June 28, 1982. These documents form the basis of this Preliminary Health Assessment.

Environmental Contamination and Physical Hazards

Preliminary on-site sampling results have identified 1,2 dichloroethane (570 ppm in soil, 10 ppm in groundwater, 4 ppm in private well), and trichloroethylene (197 ppm in soil, 358 ppb in groundwater). Other substances identified in on-site soils include: ethylbenzene (1,590 ppm), and toluene (3,240 ppm), phthalates (8 ppm in test pit waste). In addition, copper (200 ppb), nickel (69 ppb), and zinc (2,400 ppb) were detected in a private well. No further sampling information was reported. Physical hazards include the reported buried drums on-site.

Potential Environmental and Human Exposure Pathways

Potential environmental pathways include migration of contaminated groundwater, surface water, soils, leachate, and sediment. In addition, volatilization of contaminants in ambient air and bioaccumulation of contaminants in fish and water fowl are other environmental pathways.

Potential human exposure to contaminants include ingestion and direct contact with groundwater, surface water, soil, leachate, and sediment. Other possible exposure pathways include the possible ingestion of bioaccumulated contaminants in the food chain and the inhalation of volatilized contaminants or contaminants entrained in air.

Demographics

There are about 1,000 people living within a one-half mile radius of the site. The distance from EPL to the nearest residence is 75 yards.

Evaluation and Discussion

Since access to EPL is possible, trespassers may come into direct contact with contaminated soil or drums containing unknown chemical wastes. The potential for serious injury is possible. Moreover, drums on-site may leak their contents onto soil and in turn leach into the underlying aquifer of concern (Raritan-Magothy), approximately 60 feet from the surface. Quantitative efforts to identify potentially hazardous chemicals and restricted access to the site are necessary to insure safety of area residents.

Municipal well data confirm the presence of site-related contaminants, although sporadic, in groundwater. The earliest documented date of municipal well contamination is 1983. It has been reported that all well water samples exceeded EPA and the State of New Jersey Water Quality Criteria for heavy metals (n=21). In addition, 7 potable water wells exceeded water quality levels for beryllium and nickel. No information was provided as to whether area residents are currently drinking water from these private wells.

Therefore, it is highly probable, (due to the characteristics of the landfill) that leaching of on-site contaminants into the underlying aquifer is occurring. Municipal wells within the vicinity of EPL do not demonstrate the presence of site related contaminants. However, the site is about a mile away from a well field serving the City of Perth Amboy. There are wells nearby that are used as alternate supplies (Deep Run Reservoir and Middlesex Water Company). In addition, Tennent Pond is located about a mile from EPL and is used to recharge potable water wells. Continued monitoring of municipal wells is necessary to insure the safety of the public water supply.

Recreational fishing and hunting occurs nearby. However it has been reported that neither fish nor game are likely to be contaminated. Sampling information corroborating fish contamination has not been reported. Air sampling has not been performed with respect to EPL. Crops are not grown in the vicinity of the site. Moreover, livestock and/or domestic fowl are not kept nearby. ATSDR has prepared, or will prepare, Toxicological Profiles on the site contaminants noted above.

Conclusions and Recommendations

Based on available information, this site is considered to be of public health concern because of the risk to human health caused by the likelihood of human exposure to hazardous substances. Exposure to site-related contaminants is possible through direct contact with contaminated soil and drums on-site. In addition, ingestion, direct

contact with contaminated groundwater is another possible route of exposure. Restrict access to the site and insure that contaminated groundwater is not being used for potable purposes. ATSDR has previously notified EPA of its findings.

Additional information on contaminants released, populations potentially exposed, and environmental pathways through which the contaminants can reach these populations. At a minimum, future investigations of this site should include a characterization of the site and site contaminants to include identification of chemical wastes in drums, and a characterization of the hydrogeology of the area.

Further environmental characterization and sampling of the site and impacted off-site areas during the Remedial Investigation and Feasibility Study (RI/FS) should be designed to address the environmental and human exposure pathways discussed above. When additional information and data, such as the completed RI/FS, are available, such material will form the basis for further assessment by ATSDR, as warranted by site-specific public health issues.