

PRELIMINARY

**Health
Assessment
for**

HERCULES INC.

GIBBSTOWN, GLOCESTER COUNTY, NEW JERSEY

CERCLIS NO. NJD002349058

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(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
HERCULES INC.
GIBBSTOWN, NEW JERSEY

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

Background

The Hercules Inc. (HI) is listed by the U.S. Environmental Protection Agency on the National Priorities List. The 5.5-acre active site is adjacent to the Delaware River and is located in Gibbstown (Glocester County), New Jersey. The company disposed solvents, acids and waste oils in two unlined disposal pits. Access to the site is restricted. Removal operations have not occurred. However, site control measures have been instituted.

The following documents were reviewed by ATSDR: (1) Preliminary Assessment, 1984, and (2) the Hazard Ranking Package, August 6, 1982. These documents form the basis of this Preliminary Health Assessment.

Environmental Contamination and Physical Hazards

Preliminary on-site groundwater sampling results have identified benzene (1.4 ppm), phenol (40 ppm), and isopropyl benzene (18 ppm). Off-site sampling information is limited to 2 public wells. Off-site sampling results have detected trichloroethylene (TCE) in Gibbstown Well #4. Physical hazards were not reported.

Potential Environmental and Human Exposure Pathways

Potential environmental pathways include migration of contaminated groundwater, surface water, soils and sediment, and the volatilization of contaminants in ambient air. In addition, the bioaccumulation of contaminants in fish, water fowl, livestock, commercial agricultural products, edible plants, and vegetables from residential gardens are other environmental pathways to be considered.

Potential human exposure to contaminants include ingestion and direct contact with groundwater and surface water through domestic uses (e.g., consumption, bathing, showering, cooking). Other possible human exposure pathways include direct contact with soil and sediment, the possible ingestion of bioaccumulated contaminants in the food chain, and the inhalation of volatilized contaminants or contaminants entrained in air during remedial operations.

Demographics

HI is located in an undeveloped area. Gibbstown, the nearest population center, is located approximately three-quarters of a mile from the site. There are about 13,500 people living within a 3-mile radius of the site. Approximately 150 people are employed at HI and at the adjacent chemical plant.

Evaluation and Discussion

On-site soil is contaminated and has been confirmed by visible and historical evidence. However, sampling results have not been reported for on and off-site soil.

Private wells are not in use within the vicinity of the site. It was reported that groundwater from Gibbstown Well #4 demonstrated low levels of TCE. However, further sampling results have not been supplied. It is possible that TCE contamination may be unrelated to HI. Area residents from Greenwich Township (pop. 6,100), less than 1 mile from the site, and the Borough of Paulsboro (pop. 6,944) are served by water from 6 municipal wells. Sampling information regarding these wells has not been reported.

Clonmell Creek passes through the site. Preliminary reports indicate that it is unlikely surface water is used for potable or irrigation purposes. However, no further information has been provided. Neither air sampling nor food chain information from this site has been reported for ATSDR review. ATSDR has prepared, or will prepare a Toxicological Profile on benzene.

Conclusions and Recommendations

Based on 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 human exposure to hazardous substances. At a minimum, future investigations of this site should include a characterization of the site and site contaminants, 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.