

PRELIMINARY
Health
Assessment
for

PJP LANDFILL

HUDSON COUNTY, JERSEY CITY, NEW JERSEY

OCTOBER 11, 1988

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.

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

Background

The PJP Landfill site is listed by the U.S. Environmental Protection Agency (EPA) on the National Priorities List (NPL). The approximately 87-acre site may have been used since 1968 to dispose of an unknown quantity of chemical and industrial wastes. The State certified the landfill to receive hazardous wastes in 1971. The site presently is closed. The Hackensack River borders the site on the west; leachate from the site has been observed in a ditch that runs across the site to the west. The site has a history of underground fires. The state of New Jersey conducted an extensive removal action in 1985 to extinguish the fires, involving major excavation work. The site is fenced with an unguarded entrance gate that prevents vehicular access but does not prevent pedestrian access.

The following documents were provided to ATSDR for review: Hazard Ranking System Package, 1982; the Remedial Action Master Plan, September 1983; and a January 1984 memorandum concerning emergency response. These documents form the basis of this preliminary health assessment. Additional documents are available in New Jersey State files, and will be consulted during any further health assessment by ATSDR.

Environmental Contamination and Physical Hazards

On-site environmental contamination consists of chromium (40 ppb), phenols (33,000 ppb), various pesticides (up to 7,000 ppb), and volatile organics (up to 9,000 ppb) in groundwater; and benzene (27 ppb), chlorobenzene (33 ppb), and lead (500 ppb) in leachate in the ditch.

No off-site contamination data have been collected.

Numerous fires, some subterranean, have been reported. However, it is our understanding that the areas where fires were a threat have been recompacted and capped, and a gas-venting system installed. Thus, fires should no longer be of significant health concern.

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Potential Environmental and Exposure Pathways

The environmental pathway of concern is the migration of leachate into off-site surface waters used by the public, and inhalation of volatile organic compounds from the gas-venting system. Of secondary importance is contact (dermal, ingestion) of on-site soils, and contamination of the groundwater by percolation through the soil on-site or from surface water and leachate. The significance of these environmental pathways was diminished by the immediate removal action conducted in 1985/86. The human exposure pathway of concern is contact with contaminated surface water by swimming, boating, and other public uses, inhalation of volatile contaminants from gas-venting system, and to a lesser degree, contact with on-site surficial contamination.

Demographics

The closest residence is within 1,000 feet of the site. Within a one-mile radius of the site reside 11,900 people. A high-rise apartment complex and a park are within 0.5 mile. There are reported to be no private or municipal wells in the area.

Evaluation and Discussion

The nature and extent of industrial and chemical wastes disposed of in this landfill has not been fully described. Soil borings should be taken in the landfill in order to quantify and identify the hazardous substances present which may impact public health. The magnitude of this source will affect the degree of pollution which could impact the Hackensack River, should leachate continue to flow from the site. Boating and sailing are the activities reported to take place on the River; these activities normally would not lead to excessive exposure. Swimming and fishing apparently are not normal activities on this river. The evaluation of groundwater contamination has been limited. Further information on the extent of contamination in on- and off-site groundwaters and on the extent of groundwater use in the area is needed. No information on surficial soil contamination is available so the potential impact of soil contact cannot be addressed.

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 contaminated

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surface water. Further information is needed regarding soil and groundwater contamination before these pathways can be evaluated.

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 become available, e.g., the completed RI/FS, such material will form the basis for further assessment by ATSDR at a later date.

Prepared by Clifford L. Moseley: FTS-8-236-4558, ASYNC 329-1185