

SITE REVIEW AND UPDATE

PJP LANDFILL

JERSEY CITY, HUDSON COUNTY, NEW JERSEY

CERCLIS NO. NJD980505648

Prepared by:

**New Jersey Department of Health
Under Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry**

SUMMARY OF BACKGROUND AND HISTORY

PJP Landfill is an inactive landfill located at 400 Sip Avenue, Jersey City New Jersey. The site occupies approximately 87 acres of former marsh land along the Hackensack River. Land use in the area is primarily industrial and commercial, although two high-rise apartment complexes are located within one half mile of the site. Surrounding businesses include a bus and recreational vehicle scapyard, a Hartz Mountain warehouse, an automobile junkyard, a truck terminal, a construction material recycling operation, and a church cemetery. The Pulaski Skyway, an elevated highway, passes over the site in an east/west direction. A small stream called the Sip Avenue Ditch cuts through the site and runs west to the Hackensack River.

The PJP Landfill was operated as a commercial landfill, accepting chemical and industrial waste, including drums, from about 1968 to 1974. An unknown quantity of hazardous substances were disposed at the site during and after these dates. From 1970 to 1985 subsurface fires, which were attributed to spontaneous combustion and decomposition of landfill materials, burned almost continuously at portions of the landfill. These fires were known to emit large amounts of smoke. All fires at the site were extinguished by 1986. The site was placed on the National Priorities List (NPL- a.k.a. Superfund) in 1983.

The landfill is no longer active and was partially capped with soil and seeded during interim remedial measures (IRM) preformed in 1986. As part of the IRM, some 4,559 cubic yards of soil, 4,700 drums of chemical waste, 60 lab pack drums, 136 compressed gas cylinders, and other contaminated debris were removed from the landfill. In addition, 49 gas vents and a gravel lined ditch around the cap were added. The ditch transports drainage water from the landfill cap to the Hackensack River. The landfill was fenced along its southern and eastern borders.

In 1990 an investigation was conducted to characterize the nature and extent of the contamination including: geophysical investigations; installation of 24 groundwater monitoring wells; collection and analysis of all environmental media and; a buried drum investigation. During the Remedial Investigation/Feasibility Study (RI/FS) the New Jersey Department of Environmental Protection and Energy (NJDEPE) split the site into two operable units (OU). The first, OU1, will deal with the landfill, on-site surface water, and gas venting system. OU2 will cover groundwater and off-site surface water. As of summer 1993, a Record of Decision (ROD) for OU1 has been drafted, but has not been signed.

A Preliminary Health Assessment was prepared by the Agency for Toxic Substances and Disease Registry (ATSDR) on October 11, 1988. The Health Assessment identified that contaminated surface water and inhalation of volatile contaminants from the gas venting system were the major human exposure pathways at the landfill. The route of human exposure from surface water was through contact with contaminated water by swimming, boating, and other public uses.

The Preliminary Health Assessment also concluded that: potential human exposure pathways to

contamination were associated with contact (dermal and ingestion) with on-site soils, and contamination of the groundwater resulting from percolation through the on-site soils from surface water and leachate. It was noted that actions taken in the IRM (eg. capping) diminished the importance of some exposure pathways including inhalation of and/or human contact with on-site surface soils.

The major contaminants identified in the previous Health Assessment consisted of chromium, phenols, various pesticides, and volatile organic compounds (VOC's) in the groundwater and VOC's and lead in the Sip Avenue ditch leachate.

The Preliminary Health Assessment did not report site-related community health concerns. ATSDR found, based on the available data, the PJP Landfill site to be of potential public health concern because of the risk to human health from possible exposure to site-related contaminants. The report recommended additional data be collected regarding on-site and off-site soil and groundwater contamination, to help in assessing exposure pathways.

CURRENT CONDITIONS OF SITE

On June 29, 1993, J. Pasqualo and J. Winegar of the New Jersey Department of Health (NJDOH) visited the PJP Landfill site accompanied by a representative of the New Jersey Department of Environmental Protection and Energy (DEPE). Also present for the site inspection were three representatives of the potentially responsible parties (PRP) for the PJP Landfill site. The following observations were made during the site visit:

- The landfill was a relatively flat featureless area which was well vegetated, primarily with grasses. No buildings or other structures were noted on-site, except for a small empty shed located on a cement surfaced area at the southern end of the site. This area also had approximately six 55 gallon drums purported to contain borings from monitoring wells.
- The landfill cap appeared to be well maintained. No signs of soil erosion were seen at the site.
- In the area where the landfill cap met the Hackensack River, a small sign of leachate was noted. Similar signs of leachate were observed in the Sip Avenue Ditch.
- The site is only partially fenced and access to the area, including the Sip Avenue ditch, by site trespassers is possible.
- Several large apartment buildings were observed to be within 0.5 miles and south of the

site.

Conditions at the PJP Landfill site, since the 1988 Health Assessment, have not changed physically. There was, however, significant amounts of new environmental sampling performed at the site since that time. These data were collected as part of a 1990 Remedial Investigation conducted for the New Jersey Department of Environmental Protection and Energy (NJDEPE) and serve to further characterize the geophysical and environmental conditions of the site.

CURRENT ISSUES

Past public health concerns, regarding potential human exposure pathways associated with the site, appear to be valid. There are, however, no documented on-going exposures to site-related contaminants associated with the PJP Landfill.

The Record of Decision (ROD) for OU1 is planned to be signed within FFY 1994. Once the ROD is complete the design phase for the landfill will begin. Once in place, the selected remedial alternatives will prevent future exposure from two of the suspected human exposure pathways; exposure to on-site surficial contamination, and inhalation of volatile contaminants from the gas venting system.

The design of OU1 will address on-site surface water contamination, specifically the problem of leachate entering the Sip Avenue Ditch. The Sip Avenue Ditch originates off-site, therefore, according to the DEPE, the ditch must be diverted from the site or the section of the ditch which passes through the site must be enclosed.

The OU1 design of the final landfill cap will include a new gas venting system. The new venting system will replace the system installed during the IRM and are to be designed to meet current New Jersey and Federal air quality standards.

Contamination of area groundwater, as well as an examination of off-site surface water and soil, are to be investigated in OU2. There are no reported private or municipal wells in the area.

As per the Jersey City Health Department and the DEPE Community Relations Coordinator, members of the community were concerned in the past about the health effects of the smoke from the landfill fires. Complaints from nearby residents and workers related primarily to smoke odors and respiratory symptoms. A Community action group requested a health study of the neighborhood in the vicinity of the landfill. Concerns were raised regarding possible acute and long-term adverse health impacts resulting from intermittent exposure to the burning landfill.

In 1986 the NJDOH conducted a health survey to address the community health concerns and found the following: 1) There was no statistical difference for cancers in residents near the landfill compared to the New Jersey State rates; and 2) Hospital discharge data suggest that the locations

in closer proximity to the landfill had increased rates of discharges for asthma among children. The emergency room data did not indicate ongoing increases in rates of respiratory disease for census tracts with higher exposure to PJP Landfill smoke. The study raised the possibility of increased respiratory disease during the period of time that the landfill was burning but failed to find a persisting effect after the fires were extinguished. Air pollution sources other than the burning landfill were thought to be another important source of exposures.

The previous Health Assessment did not report specific site-related community health concerns. Recent inquiries of state and local officials has failed to identify any current health concerns.

CONCLUSIONS

The conclusion of the 1988 Health Assessment that the PJP Landfill is considered to be of potential public health concern is still valid. Presently the site has been evaluated by the NJDOH and ATSDR as posing an indeterminate public health hazard.

A "potential" human exposure pathway is associated with the Sip Avenue Ditch. Although not readily accessible or utilized for any discernable purpose, trespassers may be exposed, and were likely exposed in the past, to contaminated water found in the ditch. The conclusion would not be valid, however, for off-site surface water (e.g., Hackensack River), based on current site conditions. The Hackensack River, near the PJP site, has no known uses which could reasonably be considered to cause humans exposure, at levels of public health concern, to site-related contaminants.

The previous Health Assessment noted the inhalation of volatile contaminants emanating from the gas venting system as a potential exposure pathway. It did not, however, list this possibility of exposure in its conclusions. Current site conditions would lead to the conclusion that this is a viable potential exposure pathway.

In its final conclusion, the 1988 Preliminary Health Assessment noted that there was insufficient data collected to evaluate the soil and groundwater pathways at the site. The recommendation for additional data has been partially satisfied. There has been a considerable amount of on-site soil sampling performed to further characterize the levels and types of contaminants at the PJP Site as part of the RI for OU1. It is likely that there were past exposures to contaminated on-site soil by both trespassers and landfill workers.

The groundwater, and in particular the bedrock aquifer, will be examined as part of the future OU2 study. Depending on the results of data collected during future evaluations of OU2, further examination of off-site soil and site groundwater maybe needed by NJDOH and ATSDR.

RECOMMENDATIONS

Recommendations made in the original health assessment concerning the need for further environmental characterization are still valid. Although partially satisfied, there is a need for additional data regarding levels of contamination in groundwater and off-site soils. In the case of the groundwater, the immediate need for these data from a public health standpoint, is lessened by the fact that there are no known private or municipal users of groundwater in the vicinity of the site.

ATSDR and NJDOH should consider two separate Health Consultations or other appropriate mechanisms for providing input to the remedial design and to address human exposure issues at the site. Consideration of these include:

- 1) An evaluation of past and present exposures to contaminated media in the Sip Avenue Ditch and past exposures to on-site soil. In addition, health issues could arise from the selected remedy for the Sip Avenue Ditch which may require ATSDR and NJDOH comment.
- 2) Design of the new landfill venting system. This consultation is needed to address the human health risk (to nearby workers and area residents) from the inhalation of site-related contaminants, which may be vented into the ambient air via the gas collection system.

New environmental, toxicological, health outcome data, or changes in conditions as a result of implementing the proposed remedial plan, may determine the need for other additional actions at this site.

These data and information developed in the Site Review and Update have been evaluated to determine if follow-up actions may be indicated. Further site evaluation is needed to determine appropriate public health actions.

DOCUMENTS REVIEWED

1. Phase I Remedial Investigation Report for PJP Landfill, Jersey City, New Jersey, IFC Technology Incorporated, April 1990.
2. Draft Proposed Plan for PJP Landfill, Jersey City, New Jersey, NJDEPE, August, 1992.
3. Health Assessment for PJP Landfill, Hudson County, Jersey City, New Jersey, ATSDR, October 11, 1988.
4. Community Respiratory Status Relative To A Burning Landfill, Jersey City, New Jersey, New Jersey State Department of Health, 1986.

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