

**PRELIMINARY
Health
Assessment
for**

VENTRON/VELSICOL

WOOD-RIDGE BOROUGH, BERGEN COUNTY, NEW JERSEY

CERCLIS NO. NJD980529879

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE
Agency for Toxic Substances and Disease Registry

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, risks 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.

The conclusion and recommendations presented in this Health Assessment are the result of site specific analyses and are not to be cited or quoted for other evaluations or Health Assessments.

Use of trade names is for identification only and does not constitute endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

PRELIMINARY HEALTH ASSESSMENT
VENTRON/VELSICOL
WOOD-RIDGE BOROUGH, NEW JERSEY

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

Background

The Ventron/Velsicol Site (VVS) is listed by the U.S. Environmental Protection Agency on the National Priorities List. The 40-acre site is located in Wood Ridge and Carlstadt Borough (Bergen County), New Jersey. VVS is a former chemical process operation. Approximately 160 tons of process waste is estimated to be buried on-site. Two warehouses are constructed on the 7-acre parcel which housed the mercury processing facilities. It was reported that 1 of the 2 warehouse tenants operates a food distribution center. Access to the site is restricted. Removal operations have not occurred.

The following document was reviewed by ATSDR: The Hazard Ranking Package, June 22, 1983. This document forms the basis of this Preliminary Health Assessment.

Environmental Contamination and Physical Hazards

Preliminary on-site soil sampling results have identified mercury (2 to 123,000 ppm), lead (92 to 5,710 ppm), cadmium (2 to 78 ppm), nickel (13 to 164 ppm), arsenic (less than 0.5 to 148 ppm), and zinc (42 to 128,454 ppm). In addition, mercury was also identified in surface water (1 to 16 ppm), sediment (147 to 4,480 ppm), and groundwater (1 to 30,890 ppb). Preliminary off-site sampling results identified mercury (less than 0.3 to 88 ppb in surface water, and 2,825 to 89,162 ppb in sediment), cadmium (4 to 20 ppb in surface water), and zinc (40 to 230 ppb in surface water, and 20 to 1,500 ppm in sediment). No further sampling information was reported. Physical hazards were not reported.

Potential Environmental and Human Exposure Pathways

Potential environmental pathways include migration of contaminated groundwater, surface water, soil and sediment, and entrainment of resuspended dust and volatilization of contaminants in ambient air. In addition, bioaccumulation of contaminants in fish, water fowl, livestock, and commercial agricultural products may be other environmental pathways.

Potential human exposure pathways include ingestion and direct contact with groundwater, surface water, soil and sediment, and possible ingestion of bioaccumulated contaminants in the food chain. In addition, inhalation of volatilized contaminants or contaminants entrained in air are other potential sources for human exposure.

Demographics

VVS is located in a densely populated and industrialized area. There are about 11,600 people living within a 1-mile radius of the site. The distance from VVS to the nearest residence is unknown.

Evaluation and Discussion

Private wells exist within the vicinity of the site and have been reported to be used for potable purposes. There is reason to believe that area wells are contaminated. However, information on the number of contaminated wells and the area residents who may possibly be ingesting contaminated water has not been reported. Municipal wells within the vicinity of the site have been reported not to contain site-related contaminants. Sampling information has reportedly confirmed the presence of site-related contaminants off-site. However, sampling information was not reported.

Area surface water exists within the vicinity of the site and is used for recreational purposes (i.e., fishing). It was reported that raw process waste was discharged into the creek. No further surface water usage information was reported.

On-site and off-site soil has been reported to be contaminated. Although contamination of on-site soil has been confirmed, sampling results have not confirmed the presence of site-related contaminants off-site.

Two warehouses exist on-site. These warehouses housed the mercury processing facilities. Currently, one of the warehouse tenants operates a food distribution center on-site. Air sampling measurements have confirmed the release of volatiles and particulates on-site. No further air sampling information was reported. Air sampling and wipe sampling information from the warehouses are necessary to insure the safety of employees and to determine the possibility of contamination in the food distribution center.

Commercial crops, residential gardens, and livestock are not reported to be a factor regarding VVS. However, recreational fishing occurs in the area. In addition, contamination of fish tissue caught from area surface waters has been confirmed. Fish flesh sampling information has not been reported. 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. Direct contact and ingestion of soil, sediment, groundwater, and surface water by area residents and trespassers are likely routes of exposures. Ingestion of fish caught in contaminated waters and inhalation of volatilized

contaminants (especially inside the warehouse in operation as a food distribution center) or contaminants entrained in air may possibly be other routes of exposure. Therefore, restrict access to the site in order to limit exposure to area residents and possible trespassers. In addition, sample food distribution center for possible mercury contamination and insure that food being distributed from the warehouse complies to Food and Drug Administration requirements.

Additional information on contaminants released, populations potentially exposed, and environmental pathways through which the contaminants can reach these populations is necessary. At a minimum, future investigations of this site should include a characterization of the site and site contaminants, an accounting of private wells in the area and whether area residents are using these wells for potable purposes, 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.