

Health Consultation

LANSON CHEMICAL/PUREX CORPORATION
EAST ST. LOUIS, ST. CLAIR COUNTY, ILLINOIS
EPA FACILITY ID: ILD984883678

FEBRUARY 23, 2005

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Agency for Toxic Substances and Disease Registry
Division of Health Assessment and Consultation
Atlanta, Georgia 30333

Health Consultation: A Note of Explanation

An ATSDR health consultation is a verbal or written response from ATSDR to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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HEALTH CONSULTATION

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Prepared by:

Illinois Department of Public Health
Under Cooperative Agreement with the
U.S. Department of Health and Human Services
Agency for Toxic Substances and Disease Registry

Purpose

In October 1998, the Agency for Toxic Substances and Disease Registry (ATSDR) released a Public Health Assessment (PHA) prepared by the Illinois Department of Public Health (IDPH) for the Lanson Chemical Company site. IDPH evaluated data collected during the site remedial investigation and emergency removal action and concluded the site posed no apparent public health hazard at that time. The purpose of this health consultation is to provide an update of activities at the Lanson Chemical Company site since the completion of the PHA.

Background and Statement of Issues

Site History

The Lanson Chemical Company site is at 800 31st Street in East St. Louis, St. Clair County, Illinois. The 5-acre site is at the edge of the Alta Sita neighborhood of East St. Louis. The Alton and Southern Railroad runs along the southern border, Piggott Avenue is along the northern border, and vacant land borders the eastern and western boundaries. Wetlands are south-southeast of the site (Attachment 1).

The Lanson Chemical Company began operations in 1962. Materials produced at the facility included resins and emulsions for use in the manufacture of paints, lacquers, varnishes, and floor waxes. Raw products used in the production processes included fatty acids and a variety of organic solvents. The facility operated under various ownerships until the early 1980s. Records indicate one of the last companies to operate at the facility produced oils for use in electrical equipment [1].

Throughout operations at the Lanson Chemical facility, a history of problems associated with manufacturing processes and waste disposal were noted. The Illinois Environmental Protection Agency (Illinois EPA) first inspected the facility in 1977 in response to citizen complaints of site-related odors and runoff from the facility entering neighboring residential property [1]. There were also complaints of solvent-like odors coming from the sanitary sewer system as a result of improper waste disposal at the facility. Illinois EPA inspections noted punctured/leaking barrels, liquid and solid materials spilled on the ground surface, areas of stressed vegetation, and unpermitted discharges to surface water sources.

In 1978, an explosion of a process vessel caused approximately 500 gallons of polychlorinated biphenyl (PCB) contaminated oil to be released onto surrounding site soils [1]. Facility records indicated manufacturing processes at the site ended in the early 1980s [1]. The facility was abandoned and corroded tanks and drums filled with a variety of products were left behind. Soil samples collected during a 1985 site investigation showed the presence of PCBs, solvents, and other site-related chemicals.

In 1992, vandalism at the site resulted in the release of approximately 5,000 gallons of resin material. As a result of this release, the U.S. Environmental Protection Agency (USEPA) determined that conditions at the site were likely to result in additional releases posing a threat to

the public health and environment and an emergency removal action was initiated. The emergency action included the removal of tanks, drums, liquid waste, sludge, and approximately 400 cubic yards of contaminated soil.

In 1992, representatives with USEPA and Illinois EPA collected surface soil samples from residential yards near the Lanson Chemical site. In 1993, IDPH staff collected additional soil samples from near-by residential yards, adjacent fields, and gardens neighboring the facility. No off-site soil samples identified site-related contaminants at levels above ATSDR soil comparison values.

In October 1998, ATSDR released a PHA completed by IDPH, which concluded site conditions at that time posed no apparent public health hazard [1]. Additionally, in response to concerns from area citizens about perceived increased cancer rates among community members, IDPH completed a cancer incidence study of the area. The results of the evaluation did not identify a statistically significant excess for total or individual cancers in either sex [1].

Site Visit

IDPH staff have visited the site several times, most recently on November 15, 2002. Site conditions did not appear to have changed much since the December 1997 visit. The main gate was locked, but access was available through a gap in the fence on the southwestern side of the site. A portion of the main building, the loading dock, and storage shed were still on the site. The storage shed was full of trash and household refuse. An abandoned mobile home was on the site near the main building. The site was overgrown with weeds and small trees.

At the time of the most recent visit, a resident of one of the adjacent properties spoke briefly with IDPH staff. The resident expressed concerns of a rumor that someone had purchased the Lanson Chemical property and may begin operations on the site.

Discussion

The site has remained inactive and abandoned. The property has not been recently purchased and it would be doubtful that any manufacturing operations would occur at the facility in its current condition. Illinois EPA hired a contractor in May 2003 to clear surface debris from the site. Weeds and small trees were cleared from the site in addition to most of the surface refuse and trash in the storage building. Portions of the perimeter fence remained incomplete.

In May and September 2003, Illinois EPA contractors performed preliminary site screening assessment activities at the site [2]. The screening activities included the collection of soil, sediment and groundwater samples for laboratory analysis of volatile and semi-volatile organic contaminants (VOCs and SVOCs), polycyclic aromatic hydrocarbons (PAHs), PCBs and metals. Soil samples were collected at depths ranging from 0.5 feet to 10 feet below the ground surface.

Groundwater monitoring wells also were surveyed to determine groundwater flow direction. Groundwater in the area flows to the west, away from residential areas.

Chemicals of Interest

IDPH compared the level of each chemical with appropriate screening comparison values developed by ATSDR to select contaminants for further evaluation [3]. A detailed discussion of each of the comparison values used is presented in Attachment 2. Chemicals exceeding comparison values or chemicals for which no comparison values were available, were further evaluated for carcinogenic and non-carcinogenic health effects, considering exposure to children and adults.

The chemicals of interest at this site are PCBs, arsenic, and manganese.

Exposure Evaluation

An elevated level of PCBs was detected in the sediment sample collected from the base of a storm grate and in some of the on-site soil samples. No other chemicals were identified at elevated levels in the sediment sample or any of the soil samples. It is not believed the area of contamination in the storm grate or in the soil at levels of 0.5 feet or deeper would be easily accessible to the occasional trespasser and should not present an increased risk of exposure to PCBs. The PCBs in the storm grate suggest that contamination has entered the storm sewer system.

Three soil samples were collected from one residential yard adjacent to the site. The samples were collected at depths of 0.5, 7, and 10 feet below land surface. The samples were analyzed for both organic and inorganic chemicals. No organic contaminants were found at elevated levels. The inorganic analysis reported levels at or below normal background levels for inorganics found within metropolitan areas in Illinois [4].

Arsenic and manganese were the only chemicals found in on-site groundwater samples at elevated levels. No one drinks on-site groundwater. No off-site private wells have been identified or sampled. A public water supply is available to the surrounding residential neighborhood. Currently, no VOCs or SVOCs have been found in groundwater samples at elevated levels.

Child Health Considerations

IDPH recognizes that children are especially sensitive to some contaminants. For that reason, IDPH includes children when evaluating exposures to contaminants. Children are the most sensitive population considered in this health consultation. Although the site is not well secured and children may trespass onto the site, no adverse health effects would be expected for children from site-related contaminants. Physical hazards still exist from the remaining building and loading dock area and could cause possible injury.

Conclusions

IDPH concludes that current conditions at the Lanson Chemical site pose no apparent public health hazard. Physical hazards remain on the unsecured site and could result in injury for trespassers.

Recommendations

IDPH recommends that Illinois EPA or the responsible parties provide repair and upkeep of the perimeter fence or the remaining structures should be demolished and the site cleared and graded.

Public Health Action Plan

IDPH will continue to monitor site activities. Should future sampling activities suggest contaminants are moving off the site, IDPH will reevaluate potential exposure to the surrounding population and respond accordingly.

IDPH reviewed the off-site residential soil sample results and forwarded the results to the homeowner.

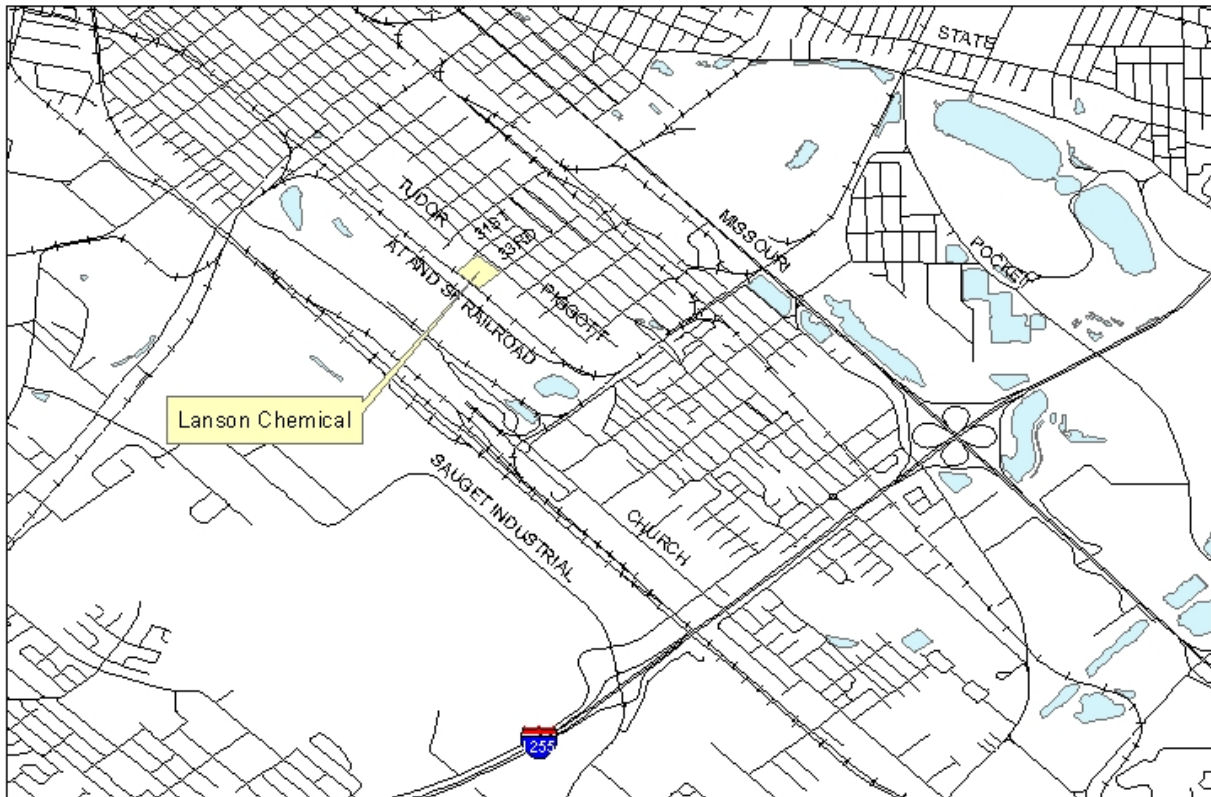
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References

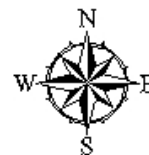
1. Agency for Toxic Substances and Disease Registry. Public health assessment for Lanson Chemical, East St. Louis, St. Clair County, Illinois. Atlanta: US Department of Health and Human Services; October 16, 1998.
2. WRS Infrastructure & Environment, Inc. Project Summary Letter Report to Illinois Environmental Protection Agency for Lanson Chemical, East St. Louis, St. Clair County, Illinois. Tallahassee, Florida. November 7, 2003.
3. Agency for Toxic Substances and Disease Registry. Comparison Values (expires September 2004).
4. Illinois Environmental Protection Agency. A Summary of Selected Background Conditions for Inorganics in Soil. Springfield, Illinois. August 1994.

Approximate Location of Lanson Chemical



Legend

- +—+— Rails
- Roads
- Surface Water



Source: Illinois Department of Public Health GIS

Comparison Values Used In Screening Contaminants for Further Evaluation

Environmental Media Evaluation Guides (EMEGs) are developed for chemicals based on their toxicity, frequency of occurrence at National Priorities List (NPL) sites, and potential for human exposure. They are not action levels but are comparison values. They are developed without consideration for carcinogenic effects, chemical interactions, multiple route exposure, or exposure through other environmental media. They are very conservative concentration values designed to protect sensitive members of the population.

Reference Dose Media Evaluation Guides (RMEGs) are another type of comparison value. They are developed without consideration for carcinogenic effects, chemical interactions, multiple route exposure, or exposure through other environmental media. They are very conservative concentration values designed to protect sensitive members of the population.

Cancer Risk Evaluation Guides (CREGs) are estimated contaminant concentrations based on a probability of one excess cancer in a million persons exposed to a chemical over a lifetime.