

# Health Consultation

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DIXIE AUTO SALVAGE

DANVILLE, VERMILION COUNTY, ILLINOIS

EPA FACILITY ID: IL0001086842

SEPTEMBER 30, 2006

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

DIXIE AUTO SALVAGE

DANVILLE, VERMILION COUNTY, ILLINOIS

EPA FACILITY ID: IL0001086842

Prepared By:

Illinois Department of Public Health  
Under Cooperative Agreement with the  
Agency for Toxic Substances and Disease Registry

## **Purpose**

The Illinois Department of Public Health (IDPH) under cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR) prepared this health consultation for the Dixie Auto Salvage (Burriss Property) site to evaluate any potential for adverse health effects from exposure to site-related contaminants. The purpose of this health consultation is to evaluate, based on information currently available, any known potential adverse health hazards related to the site, including potential off-site migration of site-related chemicals in groundwater.

## **Background and Statement of Issues**

### **Site History**

The Dixie Auto Salvage site is located between the North Fork of the Vermilion River and State Route 1, about 3 miles north of Danville, in Vermilion County, Illinois (Attachment 1). The site is a semi-rural, partially-wooded 15-acre property bounded by Illinois Route 1 to the west, a ravine and wooded area to the north, residences and a business to the south, and the North Fork of the Vermilion River to the east [1].

During the 1960s and 1970s, portions of the site were contaminated by a former owner who operated the Dixie Auto Salvage Yard. The former owner allegedly disposed of and burned numerous materials, such as auto parts, wire, and small lighting capacitors, to recover metals for resale. The former owner also dumped small capacitors and other items that contained hazardous materials such as lead and polychlorinated biphenyls (PCBs) into several on-site ravines as fill material. The source of the lead was believed to be from vehicle batteries and ballasts used to contain the capacitors. The sources of the PCBs were capacitors from lighting units and other related wastes. Asphaltic material derived from the same source as the capacitors was also disposed of at the site. A fire in the mid-1960s at the site caused a large quantity of the asphaltic material to flow from the ravines towards and partially into the adjacent river [1].

A family purchased the property in 1987 and maintained a home and a small business on about an acre of the site, until the final cleanup action began in 1998. GE purchased the majority of the site from the family in 1998 [2]. The home has been removed from the property, but the workshop building remains.

The Illinois Environmental Protection Agency (Illinois EPA) was made aware of possible contamination at the site in March 1994. Illinois EPA inspected the site in April 1994 and identified several areas of potential hazards. Illinois EPA then referred the site to the U.S. Environmental Protection Agency (USEPA) in August 1994. Subsequently, USEPA evaluated the site in late 1994 and determined that the General Electric Company (GE) was a potentially responsible owner. In 1995, under an Administrative Order on Consent, GE removed more than 800 tons of contaminated soil and other debris to stabilize the site and erected a fence around potentially contaminated areas to prevent access. In addition to installing four groundwater

monitoring wells and collecting samples, GE sampled soil from surface and subsurface locations on the property [2].

In June 1998, USEPA issued a proposed plan for completion of removal activities at the site. Next, GE evaluated residual contamination levels at the site and conducted a non-time critical (NTC) removal action beginning in October 1998 [2]. The removal action was the final cleanup action for the site and included:

- excavation and on-site consolidation of contaminated soil, sediments, and debris,
- construction of a cap over the area of waste consolidation,
- installation of a leachate collection and monitoring system, and
- groundwater monitoring and restriction of property use in the area of waste consolidation.

This NTC removal action was completed in the summer of 1999. Since then, GE has continued to maintain the cap, operate the leachate collection system, and periodically sample groundwater beneath the site. Groundwater was sampled in 2000 and 2001.

USEPA conducted a five-year review of the site cleanup remedy in April 2003. The next USEPA review will be conducted in the spring of 2008.

### **Site Visit**

IDPH staff visited the site on June 2, 2005 and collected a water sample from a nearby private well. The on-site home has been removed, but a vacant workshop sat immediately west of the site, just east of State Route 1. The workshop and 1.34 acre property are for sale. The North Fork of the Vermilion River lies along the eastern boundary, and wooded areas lie to the north and south of the site. The site was secured with a locked gate and 6-foot chain-linked fence topped with barbed wire. Tall grass and ground cover was observed on the landfill cap, as well as surrounding the perimeter of the site. About a dozen bluebird and bat houses were scattered throughout the site. The heavy vegetation and rain during the site visit prevented access around the entire perimeter of the site.

Homes are located directly to the north and to the west of Route 1. Although groundwater beneath the site is not used, residences in the vicinity of the site use private wells. A recreational vehicle and camper sales and service business was located directly south of the remaining residential property. The site drains east toward the river, which flows about 3 miles downstream into Lake Vermilion. This lake is used as Danville's municipal water supply. Recreational fishing likely occurs in the Vermilion River downstream from the site.

## **Discussion**

### **Chemicals of Interest**

IDPH compared the results of each environmental sample with the appropriate screening comparison values to select chemicals for further evaluation for carcinogenic and non-carcinogenic health effects (Attachment 2). Chemicals at levels exceeding comparison values or those for which no comparison values exist were selected for further evaluation. The listing of a chemical of interest does not necessarily mean that exposure to the chemical will cause adverse health effects.

### **On-Site Groundwater Monitoring**

In the summer of 1995, the groundwater investigation consisted of installing four groundwater-monitoring wells around the perimeter of the site. Water samples were analyzed for volatile organic chemicals, semi-volatile organic chemicals, pesticides, polychlorinated biphenyls (PCBs), and inorganic chemicals. Results did not indicate that the groundwater was impacted by the surface contamination [2]. Additional water samples were collected in 2000 and 2001. The results did not show any site contaminants moving from the waste consolidation area (capped landfill) into the groundwater. One groundwater sample during this time period had elevated PCBs. Subsequent resampling found no PCBs in the groundwater [2]. Hence, it was determined that the one-time detection of PCBs was found in error rather than a real contaminant in the groundwater.

All groundwater samples showed traces of lead. The detected levels were between 3 and 150 parts per billion (ppb) [2]. The USEPA action level for lead is 15 ppb. The upgradient groundwater monitoring well (MW-1 located next to Illinois Route 1) generally showed the highest lead levels. However, this water is not used for drinking.

### **On-Site Soil**

No additional soil samples have been collected since on-site consolidation of contaminants was conducted, and a soil cover (cap) was placed over the landfill area.

### **Off-Site Groundwater**

In June 2005, IDPH collected water samples from a private water supply located immediately south of the site. The 120-foot-deep well services a business. It was reported that employees do not drink the water due to aesthetic reasons. Water samples were analyzed for lead. No lead was detected at levels greater than the USEPA action level [3].

## **Exposure Assessment**

The potential for exposed persons to experience adverse health effects depends on several factors, including:

- how much of each chemical to which a person is exposed,
- how a person is exposed,
- how long a person is exposed, and
- the health condition of the exposed person.

Because remediation activities have removed and consolidated contaminants in a capped landfill area, a leachate collection system has been installed, and a fence installed around the perimeter of the consolidated area, the potential for exposure to site contaminants should be eliminated. Also, institutional controls prevent any future improper re-use of the property. Therefore, no one should be exposed to site-related contaminants.

## **Child Health Considerations**

Children are a sensitive sub-population for exposure to some chemical contaminants. For that reason, IDPH considered children when evaluating this site. Current conditions at the site indicate that children would not be exposed to chemicals from the site.

## **Conclusions**

Based on the site data reviewed, IDPH concludes that current conditions at the Dixie Auto Salvage site pose no apparent public health hazard. Some contamination remains on the site, but it is contained by the physical barriers of a landfill cap, a leachate collection system, and a perimeter fence. Monitoring well water data show that site contaminants have not moved into the area groundwater.

## **Recommendations and Public Health Action Plan**

IDPH recommends that the owner of the site continue to maintain the physical barriers and abide by the land use restrictions. This will reduce the likelihood that anyone will come in contact with site contaminants. Since the site poses no apparent public health hazard at this time, IDPH has no public health action plan for this site.

## **Preparer of Report**

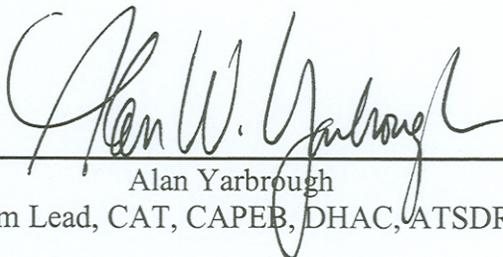
Cary Ware  
Environmental Health Specialist  
Illinois Department of Public Health

## Certification

This Dixie Auto Salvage public health consultation was prepared by the Illinois Department of Public Health under a cooperative agreement with the federal Agency for Toxic Substances and Disease Registry (ATSDR). It was completed in accordance with approved methodologies and procedures existing at the time the health consultation was initiated. Editorial review was completed by the Cooperative Agreement partner.

  
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Charisse J. Walcott  
Technical Project Officer, CAT, CAPEB, DHAC

The Division of Health Assessment and Consultation (DHAC), ATSDR, has reviewed this health consultation and concurs with its findings.

  
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Alan Yarbrough  
Team Lead, CAT, CAPEB, DHAC, ATSDR

## References

1. US Environmental Protection Agency. June 1998 Proposed Plan for the Dixie Auto Salvage site. Danville, Illinois. Chicago: EPA Region 5.
2. US Environmental Protection Agency. April 2003 First Five-Year Report for the Dixie Auto Salvage (Non-NPL) Site. Danville, Illinois. Chicago: EPA Region 5.
3. Illinois Department of Public Health. July 2005 Private well water samples for the Dixie Auto Site. Danville, Illinois. Champaign: Champaign Regional Office.



## Comparison Values Used In Screening Contaminants for Further Evaluation

Comparison values (CVs) are the calculated levels of a chemical in air, water, food, or soil that is unlikely to cause adverse health effects in exposed people. CVs are used as a screening level during the public health assessment process. Substances found in amounts greater than their CVs might be selected for further evaluation in the public health assessment process.

There are three different types of comparison values, environmental media evaluation guides (EMEGs), reference dose media evaluation guides (RMEGs), and cancer risk evaluation guides (CREGs). These values are used to screen chemicals and determine those that need to be evaluated further.

Environmental media evaluation guides (EMEGs) are derived from minimal risk levels presented in ATSDR Toxicological Profiles. Standard exposure assumptions for children and adults (body weights; ingestion rates for water, soil and air; and frequency and duration of exposure) are used. Individual EMEGs do not consider cancer, chemical interactions or multiple routes of exposure. They do help to identify specific chemicals needing further evaluation.

Reference dose media evaluation guides (RMEGs) are derived from the oral RfDs developed by USEPA using standard exposure assumptions for children and adults (body weights; ingestion rates for water, soil and air; and frequency/duration of exposure). Like EMEGs, RMEGs do not consider carcinogenic effects, chemical interactions, or multiple exposures.

Cancer risk evaluation guides (CREGs) represent levels of environmental chemicals that may pose a  $1 \times 10^{-6}$  (one in a million) excess cancer risk. They are derived using cancer slope factors published by USEPA.