

Health Consultation

INTERSTATE HEAT TREATING, INC.

WESTVILLE, VERMILION COUNTY, ILLINOIS

EPA FACILITY ID: ILN000508989

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

INTERSTATE HEAT TREATING, INC.
WESTVILLE, VERMILION COUNTY, ILLINOIS

EPA FACILITY ID: ILN000508989

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 and Statement of Issues

At the request of the Illinois Environmental Protection Agency (Illinois EPA), the Illinois Department of Public Health (IDPH) evaluated residential soil and groundwater samples collected as part of the investigation of the Interstate Heat Treating, Incorporated site in Westville, Illinois. This health consultation evaluates whether inorganic or volatile organic chemicals (VOCs) are present in soil or groundwater at the site, and, if so, whether the site poses a public health hazard.

Background

Site History

The former Interstate Heat Treating, Inc. metal shaping plant is at 2603 Georgetown Road in Westville, Vermilion County, Illinois (Attachment 1). Heat-treating operations took place from 1997 until 2000. Prior to 1997, Estad used the site for electroplating until 1984, then TMF Center, Inc. used it for the same purpose until 1997. The site occupies about 2 acres in a primarily residential and light commercial area [1]. It is bordered to the north by Lete Lane, which is a residential street, to the south by a residence, to the east and southeast by farm fields, and to the west by Georgetown Road, Middlefork School, and more farm fields. One building is located on the southern portion of the site. The site is accessible from Georgetown Road by two entrance doors on the west side of the building, and by a gate northwest of the building. A gravel road runs through the gated area to a paved parking lot on the building's west side.

Illinois EPA and Vermilion County Health Department staff visited the site in June 2003 in response to a citizen complaint about abandoned automobiles on the site. In addition to observing abandoned vehicles, tanks and other containers suspected of containing hazardous substances were discovered. Several drums within the building were labeled "Barium Chloride." In July 2003 Illinois EPA returned to the site on three occasions, collecting more than 20 samples from storage drums, process tanks, and other containers. Analytical results of the samples collected inside the building revealed some hazardous substances [2].

Illinois EPA placed warning signs on the fence and building, indicating that the site could pose an immediate danger to the environment and to public health. Access to the building was restricted by securing the doors with locks and chains. In addition, Illinois EPA referred the site to the Illinois Attorney General's Office (IAGO) for action against the property owners [2].

In August 2003 the U.S. Environmental Protection Agency (USEPA) visited the site and further secured it by adding fencing to gaps behind the site's east side and boarding up windows to prevent access by trespassers [3]. With funds from the Used Tire Fund, Illinois EPA collected and properly disposed of several thousand used tires that had been dumped on the site. This action removed some breeding grounds for mosquitoes and removed the potential for a major tire fire [4].

In December 2003, USEPA performed a time-critical removal action at the site that included the removal of approximately thirty 55-gallon drums, dozens of 15-gallon containers, other various sized containers, and sludge from the building. Some of the containers held hazardous levels of barium. Containers of non-hazardous waste and potentially contaminated soil found throughout the site were also removed. During this time, Illinois EPA staff collected soil and groundwater

samples from the site and surrounding neighborhood, including soil samples at the school across the highway.

Site Visit

On August 8, 2003, IDPH staff accompanied Illinois EPA staff to the site. Staff used this site visit to 1) learn whether anyone lived near the site and to obtain residential addresses for the Illinois EPA mailing list, 2) to learn whether the site was accessible, and 3) to evaluate any exposure pathways that could affect residents and trespassers. Staff walked around the perimeter of the site, but did not enter the building. Several abandoned vehicles — including a sailboat — were observed on the site. About a dozen 55-gallon drums, an abandoned railroad refrigerator car, and miscellaneous pieces of industrial equipment were observed in the site's central area. Tires and auto batteries stacked on a wood pallet also were observed.

Staff collected 28 residential addresses and one business address. Nine residents were home during the visit. Six pre-teenage boys were observed riding bicycles north of the site on Lete Lane. Some of the boys admitted that they and some of their friends have played on the site. They were encouraged not to do that because of potential physical and chemical hazards. Residences in the area have access to the Consumer Illinois Water Company public water supply. The water main for this area was installed in 1929. Houses north of the site were built prior to 1950 [5]. A resident living to the east of the site stated that about 12 years ago a “milky-looking” substance that appeared to be coming from the site drained from a field tile into a nearby pond.

On April 21, 2004, IDPH staff conducted a second site visit to document then-current site conditions. The front gate and office doors off of Georgetown Road were secured with padlocks. Except for one area located north on Lete Lane, the perimeter fence appeared secure — the fence was breached about 0.20 miles from Georgetown Road. Nevertheless, this area had a barrier of shrubs that would make the fence opening difficult to navigate. Still scattered throughout the site were abandoned vehicles, scrap metal, and piles of non-hazardous waste.

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, however, that if exposure occurs the chemical will cause adverse health effects.

On-site Groundwater

During the December 2003 Illinois EPA site investigation, four groundwater samples were collected from three locations. Samples of groundwater were collected from depths of 11 to 20 feet below ground surface. No organic chemicals, pesticides, polychlorinated biphenyls, or inorganic chemicals were detected in the on-site groundwater samples at levels greater than comparison values.

Off-site Private Well

Only one private water well was identified and sampled near the site. No organic chemicals, pesticides, polychlorinated biphenyls, or inorganic chemicals exceeding drinking water comparison values were detected in the private water well samples. No information was available concerning the direction of groundwater flow around the site.

On-site Soil

During the December 2003 Illinois EPA site investigation, 21 soil samples were collected at 20 locations. These samples were primarily obtained from 0 to 6 inches below the ground surface. No organic chemicals, pesticides, polychlorinated biphenyls, or inorganic chemicals exceeding soil comparison values were detected at on-site locations.

Off-site Soil

During the December 2003 sampling period, 11 soil samples were collected off the site. Nine of the samples were collected at a school and at a residential area. The residential samples were collected from depths of 0 to 6 inches below the ground surface. The other two samples were collected southeast of the site in an agricultural field from depths of 1.5-7.5 inches below the surface. No organic chemicals, pesticides, polychlorinated biphenyls, or inorganic chemicals exceeding soil comparison values were detected at any off-site location.

Exposure Assessment

A review of the December 2003 on-site and off-site environmental data did not reveal the presence of any chemicals at levels exceeding health-based comparison values.

Although some drums located inside the building contained high levels of barium chloride, there was no evidence to indicate that trespassers might have been exposed to this potentially hazardous chemical. A subsequent cleanup has removed even that future exposure potential from the site. While some physical hazards remain, the site is now secure and less likely to be visited by trespassers. Currently, no one should be exposed to site-related chemicals at levels that would cause adverse health effects.

Child Health Considerations

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

Conclusions

Using the sampling data reviewed, IDPH concludes that current site conditions pose no public health hazard. Soil contamination remains on the site, but not at levels that would cause adverse health effects. Abandoned vehicles on the site could, however, pose a physical hazard to trespassers.

Recommendations

IDPH recommends that the site owners continue to restrict site access. This will reduce the likelihood of trespassers — especially children — playing around abandoned vehicles, which might present a potential physical hazard.

Public Health Action Plan

In April 2004 IDPH mailed letters to the five addresses where environmental sampling was conducted to inform residents that the results did not indicate a public health hazard.

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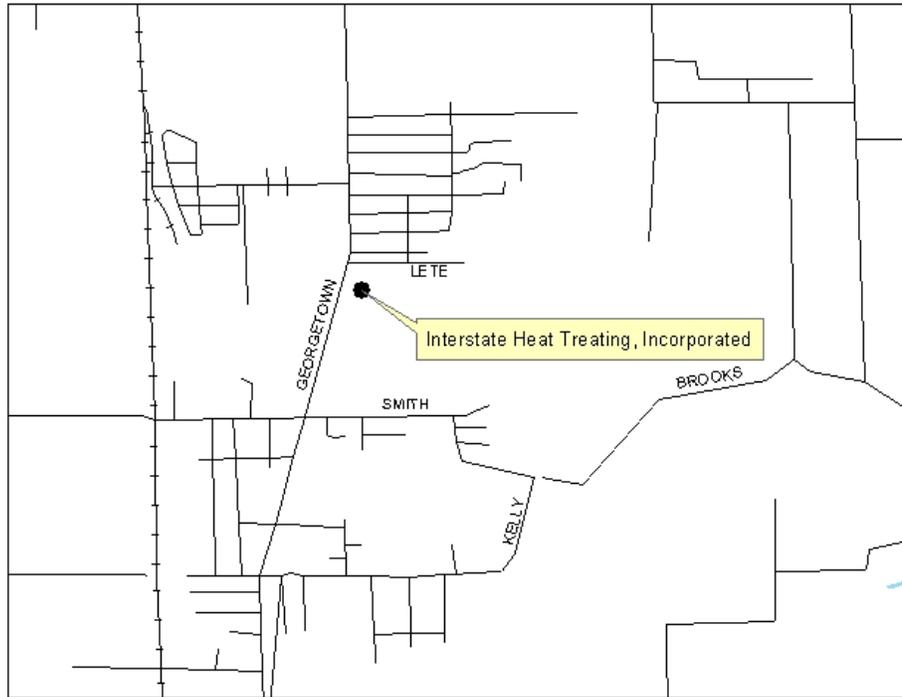
References

1. United States Environmental Protection Agency. December 2003 action memorandum – request for a time-critical removal action at the Interstate Heat Treating, Incorporated site. Chicago: EPA Region 5.
2. Illinois Environmental Protection Agency. Interstate Heat Treating, Incorporated Site Fact Sheet #1. Springfield, Ill; August 2003.
3. Illinois Environmental Protection Agency. Interstate Heat Treating, Incorporated sampling file. Springfield, Ill; December 2003.
4. Illinois Environmental Protection Agency. January 2004 update status letter to William B. Black, Illinois House of Representatives, Interstate Heat Treating, Incorporated. Chicago: EPA Region 5.
5. Fuller C. August 2003 Interstate Heat Treating site visit memorandum. Springfield, Ill: Illinois Environmental Protection Agency, Office of Community Relations.

Attachment 1: Approximate Location of Interstate Heat Treating, Inc.

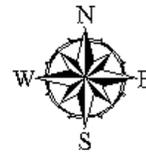
Attachment 1

**Approximate Location of
Interstate Heat Treating, Inc.**



Legend

- +—+— Rails
- Roads



Source: Illinois Department of Public Health GIS

Attachment 2: 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 1×10^{-6} (one in a million) excess cancer risk. They are derived using cancer slope factors published by USEPA.