

Health Consultation

Soil Sampling Review

LANDMARK FARM AND GARDEN, INCORPORATED
NORTH HAVEN, NEW HAVEN COUNTY, CONNECTICUT

CERCLIS NO. CT0001910694

MARCH 27, 1998

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

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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LANDMARK FARM AND GARDEN, INCORPORATED
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Prepared by:

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

The conclusions and recommendations in this Health Consultation are based on the data and information available to the Connecticut Department of Public Health (CT DPH) and the Agency for Toxic Substances and Disease Registry (ATSDR). The CT DPH and ATSDR will incorporate additional information if it becomes available. The incorporation of additional data could require changes in the conclusion and recommendation presented in this document.

BACKGROUND AND STATEMENT OF ISSUES

On December 4, 1997, the Environmental Protection Agency (EPA) requested that the Connecticut Department of Public Health (CT DPH) and the Agency for Toxic Substances and Disease Registry (ATSDR) review the chemical contaminant data from soil samples collected outside the main building at the Landmark Farm and Garden Center site in North Haven, Connecticut [1]. The samples were analyzed for pesticide contaminants. The purpose of this health consultation is to determine whether the concentrations of pesticides in the surface soil samples present a public health hazard to trespassers.

The Landmark Farm and Garden Center is located at 444 Sackett Point Road, North Haven, Connecticut. This facility was a warehouse and retail center for garden supplies until 1994. The warehouse had stored fertilizers, pesticides, herbicides, and other dry chemicals. The pesticides stored inside the warehouse, as well as the contaminated dust in the building, were a public health hazard [2]. This information was discussed in a health consultation by the CT DPH and ATSDR in September of 1997. The pesticides and dust in the warehouse have been remediated.

Because the Landmark Farm and Garden Center structure is a wooden building, there is concern about the possibility of fire. The primary concern is that a fire could cause the combustion of residual pesticides that would expose nearby residents and workers to ambient air levels of contaminants high enough to require evacuation [3]. Because of the fire and chemical hazards, EPA has stationed a 24-hour security guard at the facility.

Concern has been raised about the proximity of the warehouse to a pet grooming facility (Clip and Dip). Data from soil samples outside and dust samples inside the pet grooming facility were previously evaluated, and a report was issued on June 18, 1997 [4]. The results of those samples indicated that the levels of pesticides *in those limited locations* presented no public health hazard. Because EPA was conducting remediation efforts near the pet grooming shop, the shop was relocated [1].

The current health consultation will evaluate the contaminant levels measured in the surface soil outside the warehouse of the Landmark Farm and Garden Center.

DISCUSSION

Samples Collected

EPA coordinated the collection of 36 surface soil samples (surface soil is 0–3 inches below the surface) throughout the site. The samples were collected in two phases: June 19, 1997, and October 29, 1997.

Table 1 presents the maximum concentrations detected above health comparison values for the 36 samples. The analysis indicated that two of the soil pesticides, chlordane and dieldrin, were detected at levels above their respective health comparison values. *In general, exposures higher than the health comparison values do not necessarily result in health effects.* The maximum chlordane concentration was 2,500 parts per billion (ppb). This maximum concentration was detected in only one location: near the railroad car on the western side of the building. A total of three samples had chlordane concentrations above the health comparison value of 500 ppb. The sample locations and maximum chlordane concentrations are presented in Figure 1.

Table 1

Pesticides detected at levels above health comparison values in soil collected outside the warehouse at the Landmark Farm and Garden Center in North Haven [1].

Chemical	Maximum Concentration (ppb)	Comparison Value (ppb)	Sources	CT Remediation Standards (ppb)	
				Residential	Industrial/Commercial
chlordane	2,500.00	500.00	CREG	490.00	2,200.00
dieldrin	52.00	40.00	CREG	38.00	360.00

CREG: Cancer risk evaluation guide

ppb: parts per billion

Toxicological Evaluation

Exposure to chlordane and dieldrin on the Landmark site may have occurred in the past, and exposure may be occurring to persons who trespass on the site and contact the contaminated soils. Although trespassers have not been observed at the site, the potential exists, with one reason being that there are students in a school only one-half mile from the site.

Trespassing on this site could result in exposure to contaminants in the soil through ingestion or dermal contact. Children's exposure to contaminated soil may be the matter of most concern. The amount of chlordane ingested per kilogram of body weight was calculated for adults and children.

Chlordane and dieldrin have been classified by EPA as probable human carcinogens, carcinogenic and noncarcinogenic health risks were evaluated. Using these guidelines, a child or adult trespassing on the Landmark site would not be exposed to levels of chlordane or dieldrin that would pose a carcinogenic or noncarcinogenic health threat.

Conclusion

1. Based on the current data, exposure to the soil contaminants (including chlordane and dieldrin) outside the warehouse of the Landmark Farm and Garden Center site does not pose a health threat to individuals trespassing on the site.

Recommendation

1. If site activities change (including remediation efforts or future use), additional exposure to site contaminants might occur, and CT DPH will reevaluate the potential health threat of these exposures.

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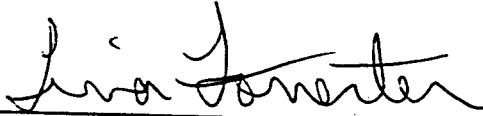
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CERTIFICATION

The Review of Soil Sampling at the Landmark Farm and Garden Center Site Health Consultation was prepared by the Connecticut Department of Public Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the Health Consultation was initiated.



Technical Project Officer, SPS, SSAB, DHAC

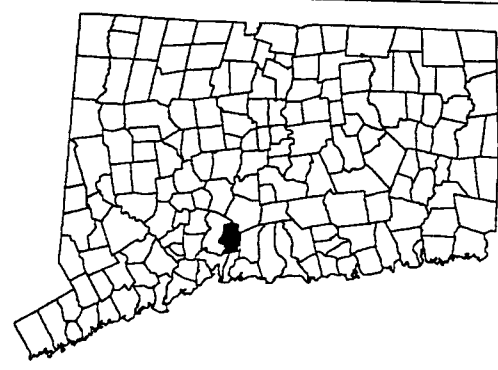
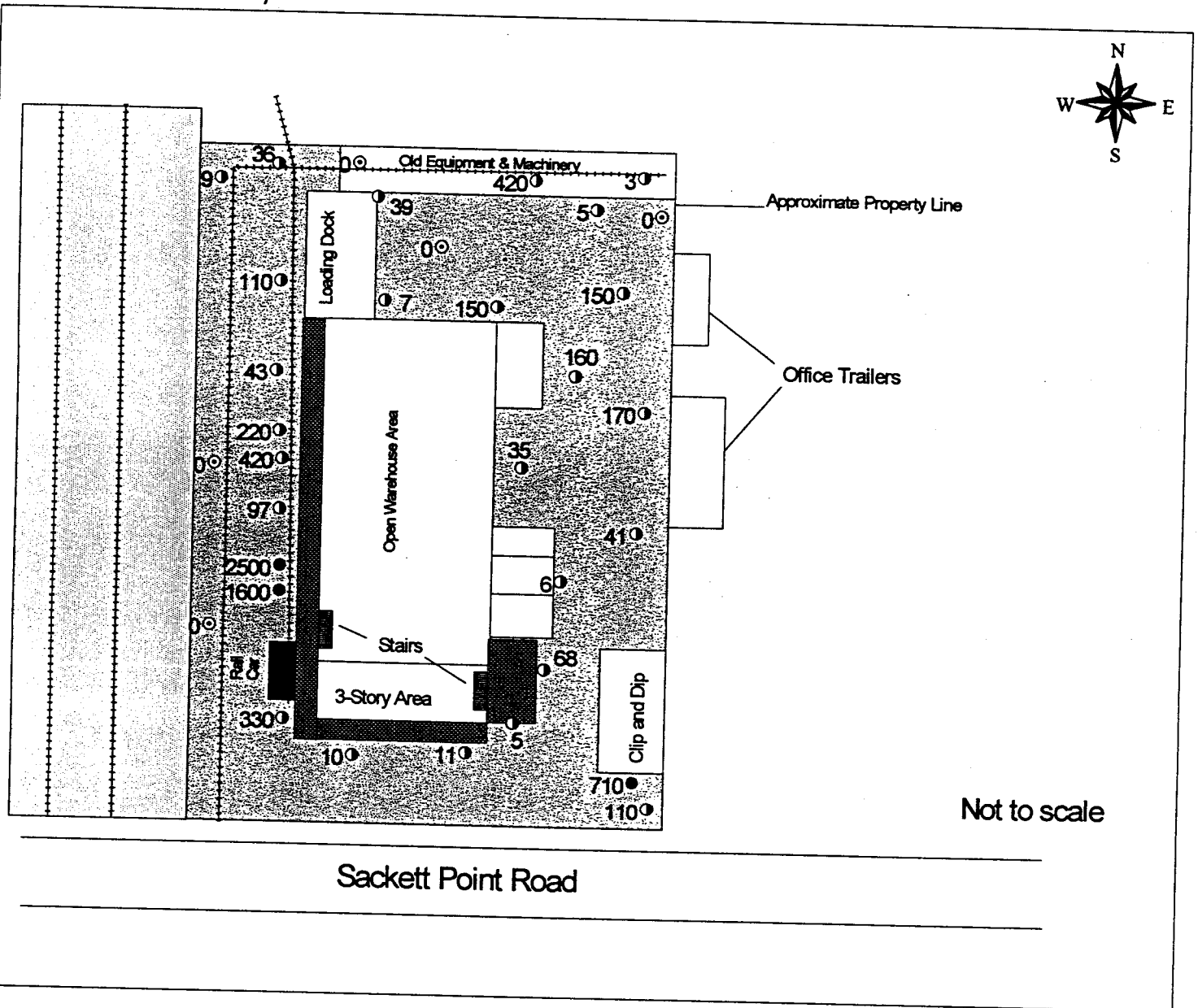
The Division of Health Assessment and Consultation, ATSDR, has reviewed this Health Consultation and concurs with its findings.



Chief, SPS, SSAB, DHAC, ATSDR

Figure 1

Figure 1. Surface Soil:
 Sample Locations and Maximum Chlordane Concentrations
 Landmark Farm and Garden Site
 444 Sackett Point Road
 North Haven, CT



Surface Soil Samples
 Maximum Chlordane Concentration (ppb)
 ○ 0
 ● 1 - 499
 ● 500 - 2500

Connecticut Department of Public Health
 Division of Environmental Epidemiology
 and Occupational Health

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