

Health Consultation

**BUELLS GREENHOUSES INCORPORATED
EASTFORD, WINDHAM COUNTY, CONNECTICUT**

CERCLIS NO. CTD018646752

SEPTEMBER 18, 1997

**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**

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.

HEALTH CONSULTATION

BUELLS GREENHOUSES INCORPORATED

EASTFORD, WINDHAM COUNTY, CONNECTICUT

CERCLIS NO. CTD018646752

Prepared by:

Connecticut Department of Public Health
Under a 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 made available to the Connecticut Department of Public Health and the Agency for Toxic Substances and Disease Registry. The Connecticut Department of Public Health and the Agency for Toxic Substances and Disease Registry will incorporate additional information if and when it becomes available. The incorporation of additional data could change the conclusions and recommendations listed in this document.

BACKGROUND AND STATEMENT OF ISSUES

On July 25, 1997, the U.S. Environmental Protection Agency (EPA) requested that [1] the Agency for Toxic Substances and Disease Registry (ATSDR) examine environmental data available for the Buell's Greenhouse Site in Eastford, Connecticut. The EPA requested CT DPH and ATSDR determine whether the PCBs-contaminated soil represents a public health hazard.

Buell's Greenhouse is a plant nursery which began operations in 1942. The facility is located at 218 Weeks Road in Eastford, Connecticut. The site comprises 4 acres including about 22,000 square feet of greenhouse space. The main facility includes six greenhouses, an office, a boiler room, storage areas, and the Buell's residence. Above ground storage tanks and under ground storage tanks were present in various locations of the site. The sizes of the tanks range from 275 to 40,000 gallons. A total capacity for the storage tanks exceeding 100,000 gallons has been estimated. Northwest of the main building is an earthen berm in an area formerly used as a tank farm. Residential properties surround the site. Each residence has a private well as their drinking water source [1].

Waste oils (some containing polychlorinated byphenyls (PCBs) and solvents) are used for heating. This oil was and is still burned in industrial boilers. This method does not burn the oil at a high enough temperature to destroy the PCBs. This practice may have lead to releases of unknown by-products into the air and soil. The owner sold surplus waste oil for burning processes to other businesses [1].

Oil samples collected in 1982 indicated that waste oil contained PCBs at concentrations up to 70 parts per million (ppm) [1]. Samples from the berm were contaminated with PCBs at a concentration of 76 ppm. In 1982 the Connecticut Department of Environmental Protection issued an order to stop burning waste oils containing PCBs at concentrations above 50 ppm. The greenhouse has continued burning waste oil since the order was issued. As of 1982, nearly 43,000 gallons of contaminated waste oil was burned [1].

Groundwater was sampled in 1982 from six water supply wells located downgradient of the site contained volatile organic compounds (VOCs) in four samples.

A fire in the boiler room which caused roof and electrical damage occurred in early December of 1992. A second fire occurred in November 11, 1994. In the spring of 1996, the CT DEP responded to a five-hundred gallon spill incident at the greenhouse. This oil flowed from the boiler room, down Weeks Road, into a storm drain, and into a small brook 1/4 mile away. This spill was later contained and remediated [1].

In the spring of 1997, under the direction of the CT DEP, the owner hired a contractor to excavate PCB contaminated soil in the earthen berm. The remediation efforts lead to the filling of fourteen roll-offs with soil. Site remediation activities ceased when the owner lacked sufficient funds to remove additional soil.

The EPA conducted a Site Investigation in June of 1997. Ninety-nine soil samples were collected from areas identified as potentially PCB contaminated. These sampling locations are presented in Table 1.

Table 1. Soil Collection Locations From the Buell's Greenhouse in Eastford, CT [1].

Location	Number of Samples (total=99)
Berm/Pit Area	34
Drum storage Area	21
Roll-offs Storage Area	28
Soil Mound	10
Weeks Road Area	6

A site visit was conducted by the CT DPH on July 31, 1997. This site visit focused on the section of the site where the fourteen roll-offs are stored. The following observations were made:

The distance from the greenhouse to the roll-off area was several hundred yards. The roll-offs are not where people going to the green house would trespass. The area is essentially hidden by trees and a long dirt road. Located east of the roll-off area (by about 100-200 feet) is a home, reportedly where children live.

Each roll-off was covered with a tarpaulin, held down by bungie cords. The tops of the tarpaulins were extended above the edges of the walls of the roll-offs. The extensions were uniform and appeared to be the result of structural support underneath the tarpaulin. Although this was designed presumably to prevent water from pooling up on the tarpaulins, there were several coverings which had standing water on them. Several of the tarpaulins had patches on them indicating repairs were made at one time. One of these patches appeared to be peeling.

The soil surrounding the roll-offs consisted of patches of bare ground and areas of vegetation 4 feet high.

The covers of a few roll-offs are no longer completely covering the top. Many bungie cords have broken or are no longer secured properly. Several roll-offs have evidence of soil on the exterior the storage unit. The soil was dry and light brown colored. There was one drinking water cup on the ground, otherwise there was no indication of trespassing on this area of the site.

Two 55 gallon storage drums were located within the roll-off storage area. These were reportedly used by the EPA to rinse equipment during the sampling.

DISCUSSION

Sampling locations and results

The 99 soil samples were collected during June 10 - 11, 1997. Twenty-eight of these samples were directly taken from the fourteen roll-offs. The sampling locations were collected from areas the CT DEP identified as potentially PCB contaminated. The areas included four main locations (see Table 2). One PCB designated, arochlor-1260, was detected in 53 of 99 samples. The maximum PCB concentration was 25 ppm was detected in a soil sample from one of the roll-offs. The remaining samples contained less than 10 ppm [1].

Table 2. Soil Sampling Locations and Maximum PCB Concentration
 Buell's Greenhouse, Eastford, CT [1].

Sample location	Maximum PCB Concentration (ppm)	Comparison Value ppm	Source
Excavation area	< 10	0.4	CREG
Soil placed in the roll-offs	25		
A former drum and tank storage area	< 10		
Areas with historic spills	< 10		

CREG - Cancer Risk Evaluation Guide for 1×10^{-6} excess cancer risk over lifetime exposure
 ppm - parts per million

Two samples were taken from each roll-off with concentrations ranging from 2.5 to 25 ppm PCBs. The average concentration was 8.9 ppm. All values detected in the roll-offs are above the health comparison value of 0.4 ppm.

The fourteen roll-offs contain soil contaminated with PCBs. The roll-offs are not under a maintenance schedule. If the roll-offs are left unattended, they are likely to no longer reliably prevent access to the PCB contaminated soil. These storage units are currently covered with a tarpaulin held in place by elastic cords. If these are left unattended, the elastic cords are likely to decay and have reduced integrity. This may result in the tarpaulins being blown or torn by the wind. The potential then will exist for contaminated soil to become accessible to trespassers or to escape into the nearby environment. Once on the ground any child or adult who accesses the area where the roll-offs are stored may contact the contaminated soil.

Conclusions (Based on the Available Sampling Data)

Polychlorinated biphenyls (PCBs) detected in the soil now stored in the fourteen roll-offs represents a potential health hazard. The integrity of the current containment system is suspect, as the tie-downs holding the roll-offs covers are in various stages of breakage. Once the roll-off covers are not secure, PCB contaminated soil may be distributed to the surrounding area.

Recommendations

The CT DPH recommends that potential for exposure to PCB-contaminated soil in the roll-offs be removed.

PREPARER OF HEALTH CONSULTATION

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Site Diagram. Buell's Greenhouse, 11 Weeks Road, Eastford, CT

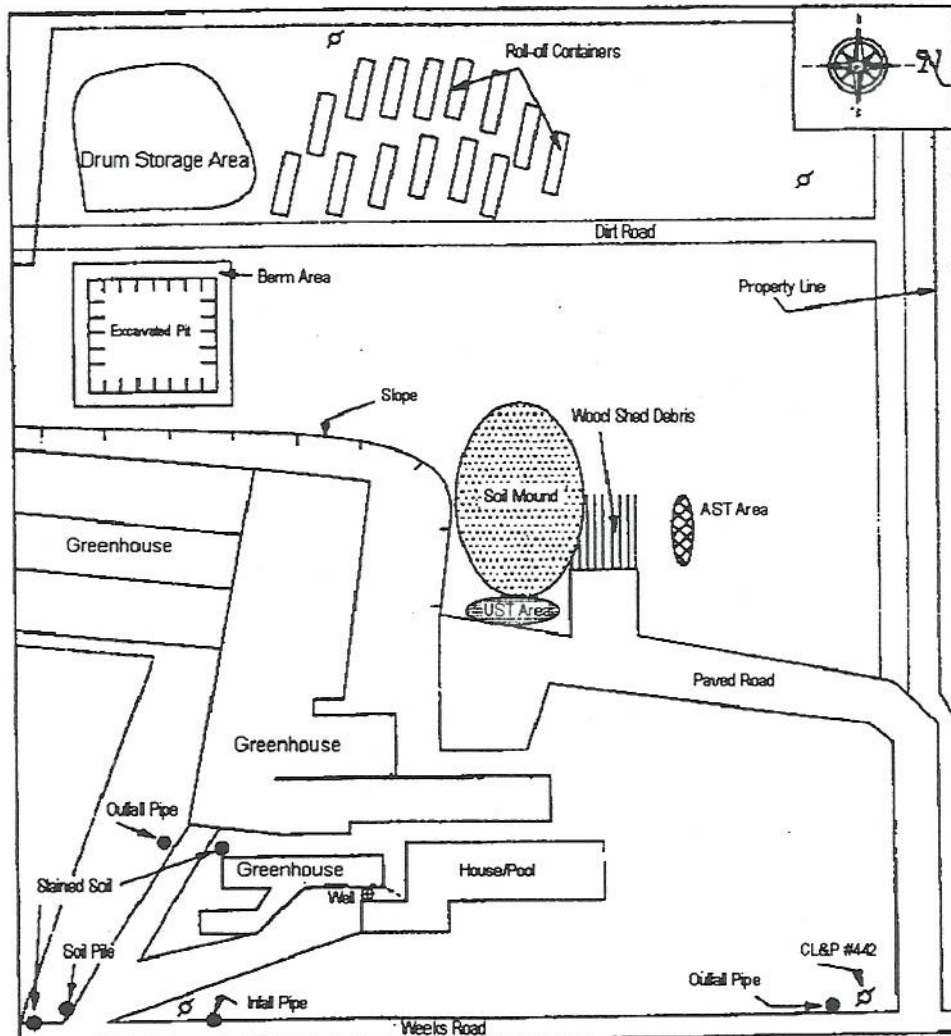


FIGURE 2
SITE DIAGRAM
BUELL GREENHOUSE
11 WEEKS ROAD
EASTFORD, CONNECTICUT

NOT TO SCALE



REGION I SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

KEY	DRAWN BY	DATE	PCB No./FILENAME
● = Sample point	C. Gordon	July 1997	2674/FIG2.DRW
	APPROVED BY	DATE	TOD No.
	MJM	7/97	97-08-007

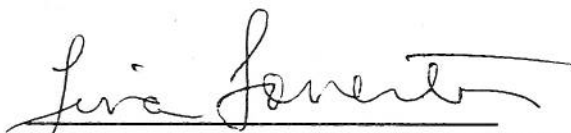
Source: U.S. EPA Emergency Planning and Response Branch. Roy F. Weston. Removal Program Preliminary Assessment/ Site Investigation Report for the Buell Greenhouse, Eastford, CT. July 1997.

REFERENCE

1. Correspondence from Susan Simon (ATSDR Region One Representative) to: Brian Toal, Epidemiologist (Connecticut Department of Public Health - Division of Environmental Epidemiology and Occupational Health). July 25, 1997 10:59 am.

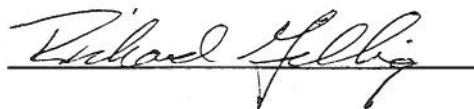
CERTIFICATION

The Buell Greenhouse 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.

A handwritten signature in cursive script, appearing to read "Lisa Lovato", written over a horizontal line.

Technical Project Officer, SPS, SSAB, DHAC

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

A handwritten signature in cursive script, appearing to read "Richard Gellig", written over a horizontal line.

Chief, SPS, SSAB, DHAC, ATSDR