

# Health Consultation

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CORNELL DUBILIER ELECTRONICS INCORPORATED  
SOUTH PLAINFIELD, MIDDLESEX COUNTY, NEW JERSEY

CERCLIS NO. NJD981557879

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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

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Prepared by:

Exposure Investigations and Consultation Branch  
Agency for Toxic Substances and Disease Registry  
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## Background and Statement of Issues:

The Region II, U.S. Environmental Protection Agency (EPA) has requested that the Agency for Toxic Substances and Disease Registry (ATSDR) determine the health implications to emergency personnel (e.g. police, fire, medical) who may come in contact with polychlorinated biphenyls (PCB) contamination at the Cornell-Dubilier Site in South Plainfield, New Jersey.

The Cornell-Dubilier Electronics, Inc. facility operated on the 25 acre site until the early 1960's. The company manufactured electronic parts and components, and tested transformer oils. Discarded electronic components were landfilled on-site, and transformer oils contaminated with PCBs were reportedly dumped onto site soils [1]. The site is currently known as the Hamilton Industrial Park and is occupied by approximately 15 industrial businesses [1].

At the request of EPA Region II, health consultations were conducted by ATSDR in October 1996 and May 1997 addressing outdoor and indoor PCB contamination, respectively, at the site [1,2]. ATSDR concluded that the PCB contamination both in the outdoor soils and the interior surfaces pose a potential long-term health threat to workers and other individuals who would come in frequent contact with the contamination [1,2]. Although EPA has initiated some interim measures to prevent access to contaminated soils, there have been concerns expressed by emergency personnel (fire, police, medical, etc.) who may, in the course of their duties, access the site and come in contact with the PCB contaminated soils. There is also concern for those personnel who may enter the buildings and come in contact with PCB-laden dust on interior surfaces.

## Discussion:

PCBs persist in the environment for years and have the ability to collect in human fatty tissue. The PCBs represent a health threat to humans exposed chronically and have been shown to affect the skin and liver [3]. Reproductive, endocrine, immunosuppressive, and carcinogenic effects have been observed in animal studies [3,4].

Exposure to emergency and other personnel entering the site would likely be through inhalation and/or ingestion of PCB-contaminated dust, or absorption of PCBs through the skin. Inhalation of PCBs and its combustion products could also occur in the event of a fire. Contamination may also be carried home on shoes and clothing exposing other members of the family.

Emergency personnel responding to events at the facility would likely be there for only short periods of time on an infrequent basis. It is unlikely that such limited contact with the facility would result in exposures to PCBs that would pose a

health hazard. If a fire occurred at the facility, the heat could volatilize the PCBs. Unprotected personnel could be exposed to PCBs and their thermal degradation products by inhalation or by deposition on uncovered skin. However, fire fighters at the facility would be protected from such exposures by normal protective equipment, including respirators and protective outerwear.

If emergency personnel and others come in contact with contaminated soil or dust, there is a potential for shoes, clothing, and equipment to transport contamination off site. Contamination carried into the home can persist for long periods of time exposing family members. Children are at an increased risk due to more frequent contact to dusty floor surfaces, hand-to-mouth activities, and low relative body weights resulting in greater exposure.

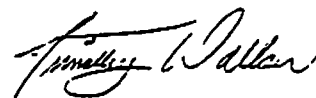
**Conclusions:**

Based on the available information:

1. The site does not pose a health threat to fire fighters, police, medical personnel, or other emergency personnel due to the anticipated short duration of exposure to PCB contamination.

**Recommendations:**

1. Ensure that personnel accessing the site and coming in contact with contaminated areas perform appropriate decontamination procedures prior to exiting the site.



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**References:**

1. ATSDR Health Consultation for the Cornell-Dubilier Site, October 7, 1996.
2. ATSDR Health Consultation for the Cornell-Dubilier Site, May, 1996.
3. Toxicological Profile for Polychlorinated Biphenyls, U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry, April 1993.
4. ATSDR Case Studies in Environmental Medicine, Polychlorinated Biphenyl Toxicity, U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry, June 1990.