

**PRELIMINARY
Health
Assessment
for**

WILSON CONCEPTS OF FLORIDA, INC.

CERCLIS NO. FLD041184383

POMPANO BEACH, FLORIDA

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Agency for Toxic Substances and Disease Registry
U.S. Public Health Service

PRELIMINARY HEALTH ASSESSMENT
Wilson Concepts of Florida, Inc.
Proposed National Priorities List Update #7 Site
Pompano Beach, Florida

Prepared by:
Florida Department of Health and Rehabilitative Services
Under Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry

Background

The Wilson Concepts site, is located at 1408 S.W. 8th Street in an industrial area of Pompano Beach in northeastern Broward County, Florida. The site has been manufacturing precision-machined parts since 1976. Waste cleaners, coolants, and lubricants were discharged directly onto the ground or overflowed from underground holding tanks subsequently spilling into an on-site dry-well storm drain.

Wilson Concepts, Inc., is no longer an active site: the operation ceased production in 1988. Carter and Crawley, a computer parts manufacturing company, began operation at the site on January 3, 1989. The former Wilson Concepts facility consists of a large metal building located on four acres bounded to the west by Chemform Inc. proposed NPL site to the south by Industrial Access Road, to the north by S.W. 8th Street and to the west by a truss factory. At least four municipal well fields are located within three miles of the site. The closest Broward County District well fields 1B and 1C are located approximately one mile south of the site. (Figure #1).

The following documents were reviewed by the Florida Department of Health and Rehabilitative Services:

1. Hazard Ranking System Document of Wilson Concepts, Inc., Broward County, Florida, U.S. Environmental Protection Agency (EPA)-Region IV, J.J. DuPont-8/25/87.
2. Status of Resource Conservation and Recovery Act (RCRA) hazardous waste generators at sites proposed for listing on the NPL in Update #7 by S. Heare-1988.
3. Site Screening Investigation Report, and Appendices, 1986, Chemform, Inc./Wilson Concepts, Inc. site; Pompano Beach, Florida, NUS Corporation Superfund Division.

Environmental Contamination and Physical Hazards

On-Site Contamination

The 1986 analytic results reported in the NUS Site Screening Investigation (EPA, 1986) indicated that ground water on-site contains elevated concentrations of 1,1,1-trichloroethane, vinyl chloride, 1,1-dichloroethene, cyanide, lead, nickel, and copper. The 1986 analytic results reported in the Hazard Ranking System documentation indicated that on-site drainage waters contain elevated concentrations of 1,1,1-trichloroethane, 1,1-dichloroethane, and 1,1-dichloroethene. The soil and subsurface soil contamination levels did not exceed health concern screening levels.

<u>Media</u>	<u>Contaminants</u>	<u>Range (units)</u>
Ground Water	Cyanide	J 80 ug/L
	Copper	J 120 ug/L
	1,1-dichloroethane	2,200 ug/L
	1,1-dichloroethene	25 - 560 ug/L
	Lead	21 ug/L
	Nickel	21 - 58 ug/L
	1,1,1-trichloroethane	J 2,300 - J 4,800 ug/L
	Vinyl Chloride	J 10 - J 190 ug/L
Drainage Water	1,1,1-trichloroethane	J 4,800 ug/L
	1,1-dichloroethane	J 2,200 ug/L
	1,1-dichloroethene	J 150 ug/L

J = Estimated value, NUS supports the use of these values for data evaluation.

Off-Site Contamination

Three off-site ground water and three off-site soil samples were collected. The analyses indicated the samples did not contain contaminants at levels of concern; however, the samples were not collected downgradient of the site.

Physical Hazards

A site visit was conducted by Florida Department of Health and Rehabilitative Services and Agency for Toxic Substances and Disease Registry staff in February 1989. The assistant manager from the new company leasing the site conducted a site tour and no physical hazards were noted at the site.

Potential Environmental and Human Exposures Pathways

On the basis of estimated values of contaminants likely to be of health concern that are available to date (reported in the Environmental Contamination and Physical Hazards section above), sources of environmental contaminants identified thus far at the former Wilson Concept are ground water and storm drain surface water on site.

Ground Water: Copper, cyanide, 1,1-dichloroethene, lead, nickel, 1,1,1-trichloroethane, 1,1-dichloroethane, and vinyl chloride were found in ground water on site above probable health concern levels. This is based on the assumption the estimated values are correct. On the basis of information reviewed, ground water appears to be an environmental pathway for migration of contaminants off site. The aquifer underlying the site is the unconfined Biscayne Aquifer which supplies all municipal water in

Broward County. At the site, quartz sand underlain by limestone comprise this aquifer, and the numerous cavities in the limestone result in high horizontal and vertical permeabilities which facilitate movement of contaminants into ground water as well as the movement of contaminated ground water.

Surface Water: Surface water from the storm drain on site was found to be contaminated with 1,1,1-trichloroethane, 1,1-dichloroethane, and 1,1-dichloroethene. According to the 1987 Hazard Ranking System document, the site was cited by the county for violations in connection with discharge of industrial wastes onto the ground and the overflow of wastes from two 1,200-gallon underground tanks into a storm drain. The discharges subsequently percolated into the soil. Because the site is located in a flat area, storm water has a tendency to remain on site (at the old percolation ponds) and recharge the Biscayne Aquifer on-site. Storm water becomes an environmental pathway of concern during periods of high rainfall.

Off-site contamination was not adequately addressed, and on-site air and plants and animals were not sampled in the material reviewed for this Preliminary Health Assessment. The contamination of ground water and surface water could result in the following potential human exposure pathways.

1. Inhalation of vinyl chloride, 1,1,1-trichloroethane, 1,1-dichloroethane and 1,1-dichloroethene volatilized from contaminated ground water and 1,1,1-trichloroethane, 1,1-dichloroethane, and 1,1-dichloroethene volatilized from the storm water drain could be a concern for nearby workers and on-site workers. The high level of volatile organic contaminants in ground water and drainage water is of potential health concern if estimated levels are correct. Currently, information on contamination on site is incomplete and off-site media have not been sampled.
2. Ingestion, inhalation or dermal absorption of contaminants from ground water would be of concern for residences within three miles of the site who use private wells for domestic water. Levels of 1,1,1-trichloroethane, 1,1-dichloroethene and vinyl chloride in ground water downgradient of the site have not been addressed in any media but are known to be present on site because ground water and surface water have undergone limited sampling. Ground water movement of contaminants should not be a concern to residents using municipal water. The municipal well fields within three miles of the site are not in the flow path of the ground water plume from the Wilson Concepts site.

Demographics

The site is located in an industrial area of Pompano Beach in northeastern Broward County, Florida. This industrial area is not heavily developed; this facility and the truss factory southwest of the site appeared to be

the only active business in the immediate area at the time of the site visit. Four municipal well fields, the City of Pompano Beach's Palm-Aire field, Eastern Pompano Beach field, and the Broward County District 1B and 1C fields, are located at least partially within a three-mile radius of the site. Water from two currently active well fields plus two standby well fields is supplied to approximately 93,000 people.

Evaluation and Discussion

Elevated levels of cyanide, copper, 1,1-dichloroethane, 1,1-dichloroethene, lead, nickel, 1,1,1-trichloroethane, and vinyl chloride in ground water; and 1,1,1-trichloroethane, 1,1-dichloroethane and 1,1-dichloroethene in drainage water indicate possible avenues for future off-site migration. Further investigation should be conducted to characterize the full extent of ground water and surface water contamination.

Conclusions and Recommendations

Based on the available information, this site is considered to be of potential public health concern because of the risk to human health caused by the possibility of exposure to hazardous substances via inhalation, ingestion, and dermal absorption of contaminants. The contaminants include vinyl chloride, 1,1,1-trichloroethane, cyanide, copper, 1,1-dichloroethene, lead, nickel, and 1,1-dichloroethane in ground water and 1,1,1-trichloroethane, 1,1-dichloroethane and 1,1-dichloroethene in storm water. To date, the population identified to be of greatest concern is on-site workers.

The ground water plume should be delineated. This may require off-site, downgradient sampling. To protect public health, soil in the area of off-site drainage should also be tested, and the area should be surveyed for edible plants and animals. Permanent surface water is not present in the immediate vicinity of the site. Air sampling has not been done on site.

In accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as amended, the Wilson Concepts Site, Pompano Beach, Florida has been evaluated for appropriate follow-up with respect to health effects studies. Although there are indications that human exposure to on site and off site contaminants may possibly be currently occurring and may have occurred in the past, this site is not being considered for follow-up health studies at this time because no exposed population had been identified. When indicated by public health needs, and as resources permit, the evaluation of additional relevant health outcome data and community health concerns is recommended.

This Health Assessment was prepared by the Florida Department of Health and Rehabilitative Services Office of Toxicology and Hazard Assessment under a cooperative agreement with ATSDR. The Division of Health Assessment and Consultation and the Division of Health Studies of ATSDR have reviewed this Health Assessment and concur with it's findings.

Preparers of Report

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Appendices

Figure 1. Site Location Map of Wilson Concepts Inc. and the district well fields 1B and 1C.

Figure 2. Site Map of Wilson Concepts of Florida Inc.

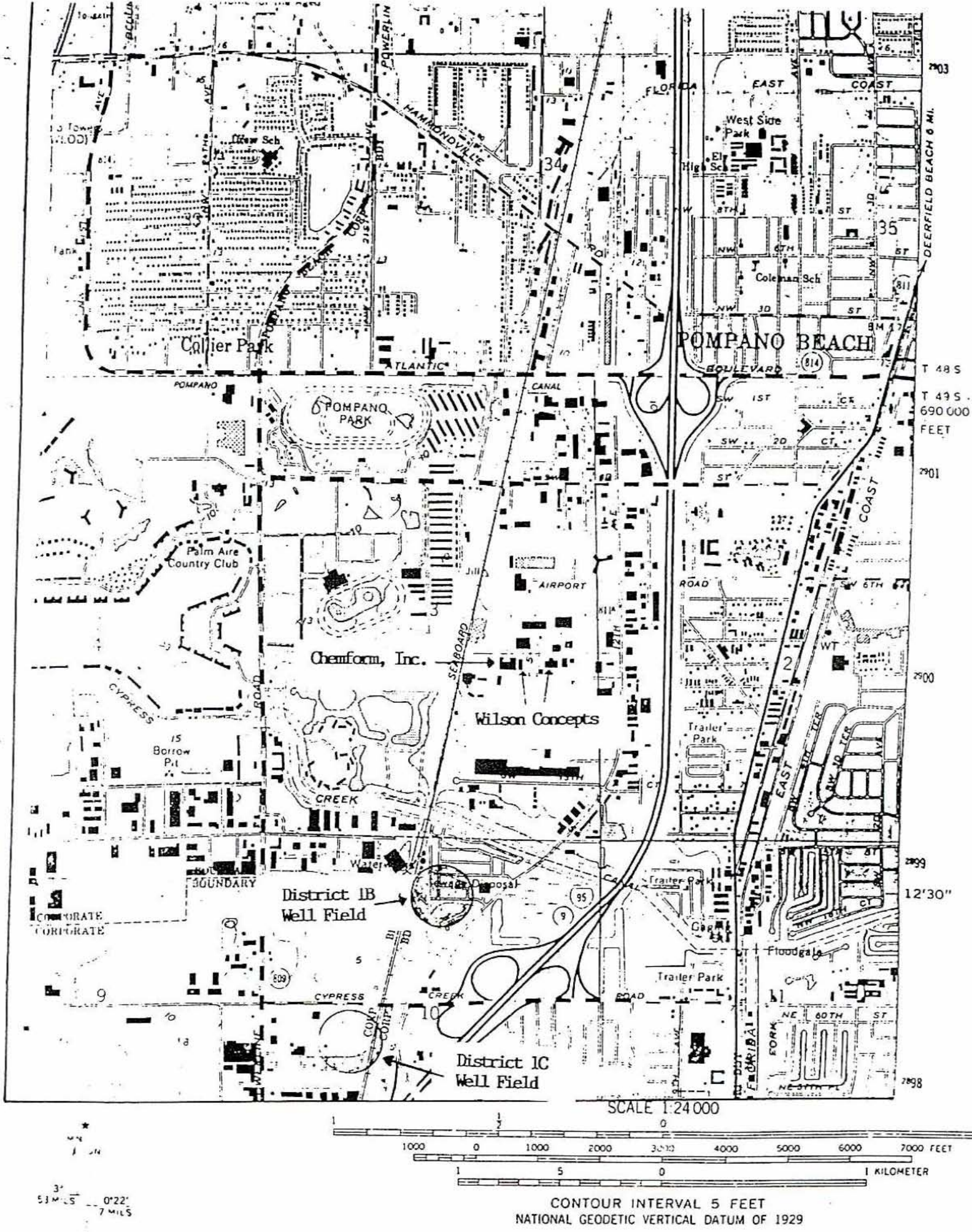


FIGURE 1. SITE LOCATION MAP OF CHEMFORM INC., WILSON CONCEPTS

A GRID AND 1983 MAGNETIC NORTH

FIGURE 2. SITE MAP OF WILSON CONCEPTS OF FLORIDA INC.

