

SITE REVIEW AND UPDATE

PETROLEUM PRODUCTS CORPORATION

PEMBROKE PARK, BROWARD COUNTY, FLORIDA

CERCLIS NO. FLD980798698

Prepared by

The Florida Department of Health and Rehabilitative Services  
Under Cooperative Agreement With the  
Agency for Toxic Substances and Disease Registry

## **Petroleum Products**

### **Summary of Background and History**

The purpose of this Site Review and Update report is to summarize site activities since the 1989 Public Health Assessment document and determine if we should reevaluate the public health threat.

#### **Site Location and Description**

The U.S. Environmental Protection Agency (EPA) listed the Petroleum Products Company (PPC) site on the Superfund National Priorities List (NPL) in 1987. This seven-acre site is located on Pembroke Road in Pembroke Park about 0.2 miles west of Interstate 95 and 1.5 miles north of the Broward County - Dade County line. The surrounding area is highly developed containing residential areas, commercial areas and light industrial facilities (See Figure 1). A fenced area in the southeastern portion of the site is the only part of the previous PPC facility left unpaved (See Figure 2). It contains a groundwater treatment system and drums of drilling mud from the groundwater well installation. The site lies within the radius of influence of the Hallandale and Hollywood municipal well fields <sup>1</sup>. The Hallandale Well Field provides all drinking water for the area <sup>2</sup>.

#### **Site History**

Petroleum Products Company (PPC) began recycling motor oil on this site in 1958. PPC distilled and sold most of the oil as fuel. They disposed of the left over sludge in an unlined pit <sup>2</sup>. Community concern increased in 1970 after the disposal pit overflowed during a heavy rain and caused an oil slick on the trailer park lakes south of the site. In 1971, PPC ended operations, filled the disposal pit and spread the contaminated fill across the southern part of the site. They paved most of the site and built rental storage units <sup>2</sup>.

In 1979, the Broward County Environmental Quality Control Board (BCEQCB) inspected the site and issued two warning notices due to oil discharges. PPC cleaned up two oil soaked areas, rehabilitated the tank farm and filled low spots with clean fill. In 1983, Department of Environmental Regulation (DER), now known as Florida Department of Environmental Protection (FDEP), Southeast District, issued a notice of violation based on a 1980 complaint. They estimated between 20,000-60,000 gallons of waste oil was floating on the groundwater beneath the site <sup>3</sup>. The waste oil contains lead, PCB's, volatile and semivolatile organic compounds. PPC removed drums, storage tanks and contaminated surface soil from the site in April 1985. At the same time, FDEP installed a groundwater treatment system to remove the layer of oil floating on the

shallow groundwater. EPA added the site to the National Priorities List in 1987<sup>2</sup>. In 1988, the Remedial Investigation conducted by FDEP estimated the surface and subsurface soil contamination extended across the central and southern portion of the site. They identified the chromium contaminated groundwater extends 3000 feet east and south of the site but the source of chromium is unidentified<sup>4,2</sup>. FDEP proposed water treatment to remove metals from groundwater and washing contaminated soils with a solvent solution<sup>2</sup>.

In April 1989, the Florida Department of Health and Rehabilitative Service (HRS) in cooperation with the Agency for Toxic Substances Disease Registry (ATSDR) assessed this site and produced a Health Assessment document. They concluded current site conditions posed a potential health concern. They noted human exposure to waste oil, lead, chromium, aluminum, iron, manganese and benzene may occur through contact with contaminated groundwater. Human exposure to lead may also occur through contact with contaminated surface water run off and surface soils. Florida HRS and ATSDR recommended testing for lead in surface water runoff. They did not recommend a health study, however, due to insufficient information about the population at risk<sup>5</sup>.

In 1991, use of the well installed by DER in 1985 ended after it recovered about 7,000 gallons of oil. In 1992, EPA reported in the supplemental Remedial Investigation, health risks resulting from potential exposure to the site's contaminants are greater than the levels considered acceptable. These risks are due to potential future consumption of contaminated groundwater and potential future exposure to contaminated surface soil<sup>6</sup>. In 1993, EPA installed eight new wells along the southern site boundary. In 1994 they began treating the contaminated groundwater using an air stripper and activated carbon adsorption. They used an infiltration gallery to return the clean groundwater to the shallow aquifer. In 1994, EPA sampled air inside the warehouses. They determined the volatile contaminants are not concentrating inside the warehouses or in the trailer park and that the rotten egg smell was hydrogen sulfide from the air stripper<sup>6</sup>.

## **Current Conditions of Site**

### **Site Visit**

Mr. Randy Merchant and Ms. Julie Smith of HRS, Environmental Toxicology, visited the site on October 27, 1995. Most of the site is a mini warehouse industrial park consisting of warehouses and small businesses. With the exception of a small fenced in area in the southeast corner, the site is open to the public. Upholstery shops, wood craft shops, boat repair, painting shops, mirror and glass shops, awning shops, cabinet shops and a

sandwich shop are in the park. Some of the businesses are creating wastes. Mr. Merchant and Ms. Smith noticed two leaking drums containing refrigerant and latex/adhesive.

The area around the site is residential, recreational and industrial. Bamboo Paradise and Bamboo Lake, directly south of the site have about 150 residents<sup>5</sup>. Waste oil and storm water run-off from the site overflowed into these trailer parks in 1970. The Pembroke Park area has a population of about 20,000 people<sup>5</sup>.

PPC paved most of the site but the southeast corner is covered with grass and shrubs. The vegetated areas include Carolina Road between Park Road and Southwest 31<sup>st</sup> Avenue, Park Road, the Park Road entrance into the warehouse complex and the Kennel areas north of the Park Road entrance (See Figure 2). PPC posted signs around the industrial park warning people not to disturb the soil.

The unpaved corner of Carolina Road and 31<sup>st</sup> Street houses the waste oil recovery wells, air strippers and drilling mud from remediation activities. A six-foot fence topped with razor wire surrounds this part of the site. The fence is intact and no signs of trespassing exist; however, the entrance gate is loosely chained leaving a gap large enough for a child or adult to slip into this area. Warning signs are posted at intervals along the fence.

The site has changed since 1985. During the September 8, 1988 site visit, HRS staff saw no traces of seeping waste oil. The EPA project manager, however, reported seeping waste oils<sup>5</sup>. On October 27, 1995, Mr. Merchant and Ms. Smith observed viscous waste oil seeping up through the asphalt in the industrial park. They also detected a slight mist and petroleum odor from the air stripper.

### **Current Issues**

One issue raised by the 1989 HA is concern about residents living near the site and workers working in warehouses built over contaminated soil and groundwater. Residents could come in contact with groundwater from irrigation wells in the area. Future exposure may occur from ingestion of contaminated drinking water if the Floridian aquifer becomes contaminated. Local geologic and hydrogeologic conditions and characteristics, however, minimize the waste's mobility. This reduces the threat to municipal water supplies<sup>2</sup>.

The supplemental RI concluded that free product could move offsite undetected. Chromium contaminated groundwater is migrating south of the site but studies have not established a direct linkage to the site<sup>2</sup>. Exposure to waste oil in the warehouse area is a new concern since seepage was not observed during previous site visits by HRS staff.

The community as a whole is unconcerned about the site. This might be due to the transient nature of the residential population; about half the residents are present only

during the winter months <sup>7</sup>. During the 1990 public meeting, the community expressed concerns about the cost of the cleanup, the responsibility of the Potentially Responsible Parties, monitoring well construction, and questions about the alternatives <sup>8</sup>.

### **Conclusions**

1. Additional investigations by EPA and PPC since 1989 found the waste oil floating on top of the surficial aquifer has not moved off-site. EPA and PPC have installed an improved oil recovery and groundwater treatment system.
2. Since 1989, EPA and PPC collected and analyzed additional surface soil and surface water run-off samples.
3. In 1994, EPA sampled the air quality inside some of the on-site mini warehouses. They determined volatile contaminants were not concentrating inside the warehouses and that the rotten egg smell was from hydrogen sulfide from the air stripper.
4. On October 27, 1995, we observed waste oil seeping up through the asphalt outside one of the mini-warehouse units on the south eastern part of the site. With the exception of a small fenced in area in the south east corner, the site is open to the public. Therefore, people may come in contact with the waste oil. The potential health threat from exposure to this waste oil should be evaluated.

### **Recommendations**

Florida HRS, in cooperation with ATSDR should evaluate the public health threat from exposure to waste oils seeping through the asphalt at this site. Based on this evaluation, Florida HRS / ATSDR may recommend actions to reduce or eliminate this exposure.

### **Preparer Of Report**

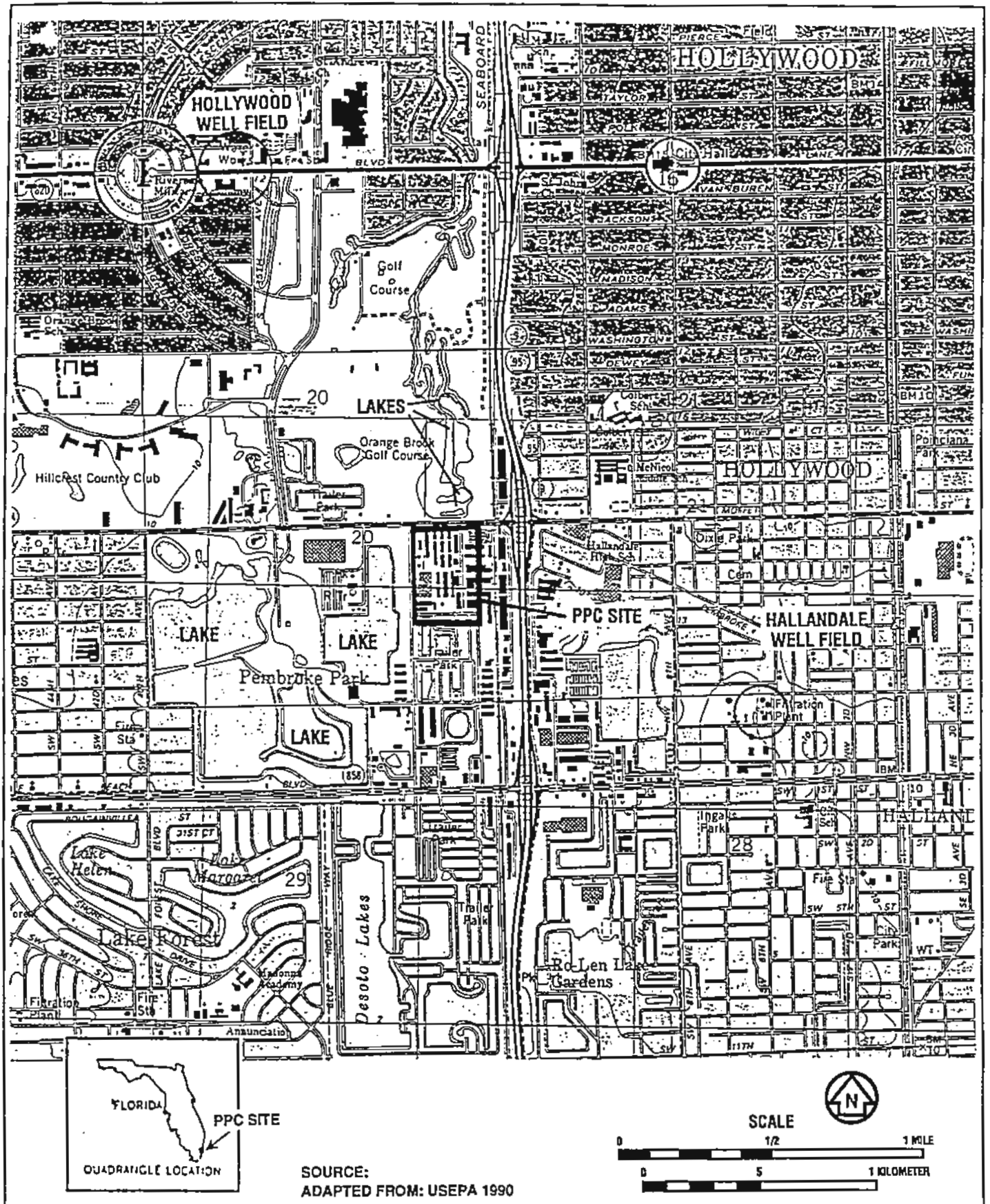
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Office of Environmental Toxicology  
Florida Department of Health and Rehabilitative Services

## References

- <sup>1</sup> USEPA. Interim Action Record of Decision for Petroleum Products Corporation Site. Operable Unit # 1. Atlanta, Georgia. October 5, 1990.
- <sup>2</sup> Ecology and Environment, Inc. Remedial Investigation of Petroleum Products Corporation Site, Volume 1 - Report; prepared for Florida Department of Environmental Regulations. March 1988.
- <sup>3</sup> Betchel Environmental Inc. Remedial Investigation Report for the Petroleum Products Corp. Site. Oak Ridge, TN. January 1992.
- <sup>4</sup> USEPA, Region IV. Interim Action Proposed Plan Fact Sheet, Petroleum Products Corporation NPL Site. Atlanta, GA. July 1990.
- <sup>5</sup> Florida Health and Rehabilitative Services. Health Assessment, Petroleum Products Company Site. Prepared for ATSDR. Tallahassee, Florida. March 24, 1989.
- <sup>6</sup> Blasand, Bouck and Lee South East Inc. Remedial Actions Plan, prepared for Petroleum Products Corporation Cooperating Parties. Boca Raton, Florida. July 5, 1995.
- <sup>7</sup> Florida Department of Environmental Regulations. Community Relations Plan,0. Petroleum Products Corporation Site. March, 1988.
- <sup>8</sup> USEPA Region IV. Petroleum Products Corporation NPL Site Public Meeting Transcript. Pembroke Park, Florida. August 14, 1990.

Petroleum Products Corporation Site  
Pemborke Park, Florida

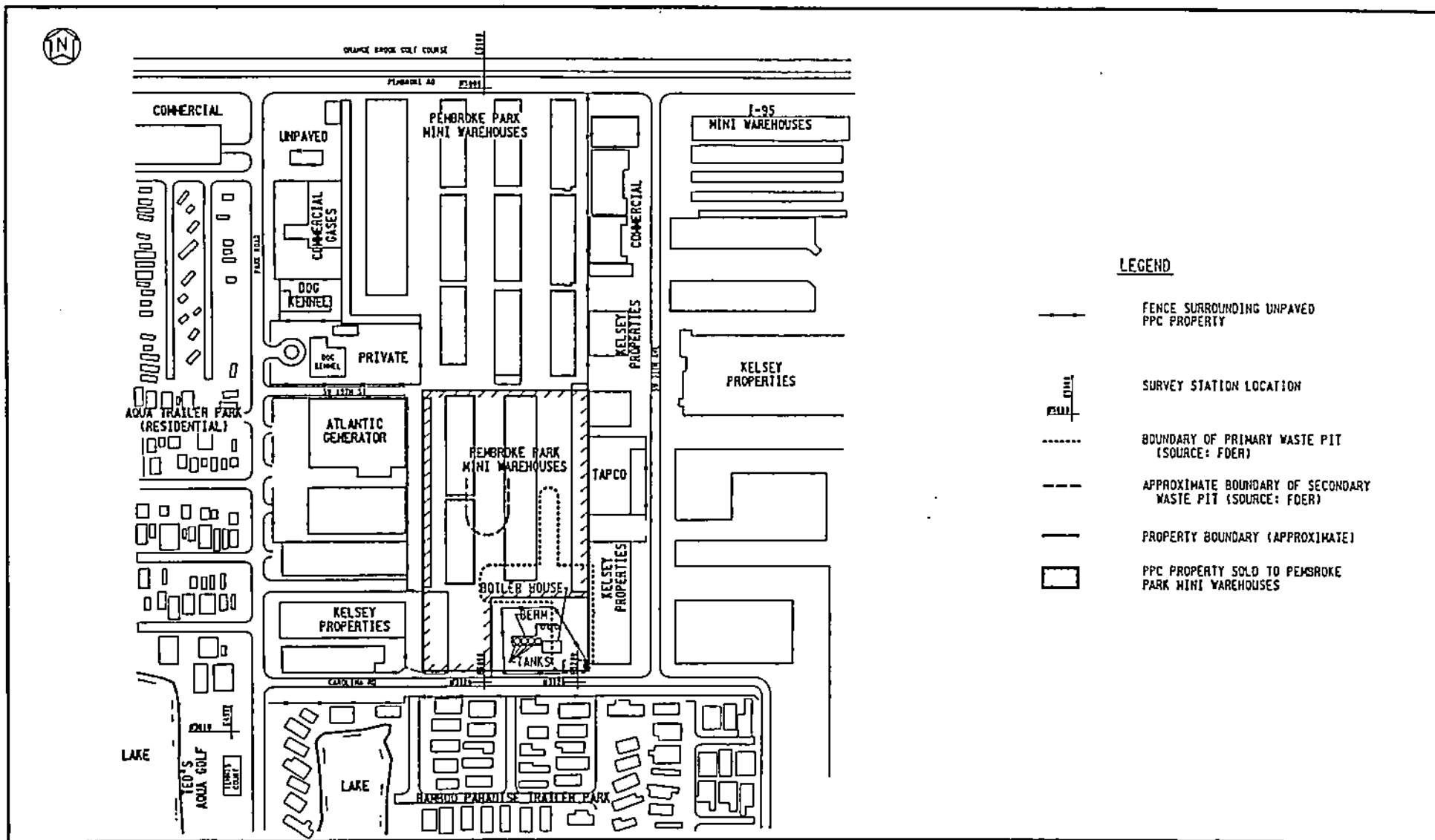
**Appendix A**  
**Figures**



**FIGURE 1**  
**LOCATION OF PETROLEUM PRODUCTS CORPORATION (PPC) SITE**  
**PEMBROKE PARK, FL.**

ADAPTED FROM BETCHEL INC, 1992





**FIGURE 2**  
**PETROLEUM PRODUCTS CORPORATION SITE**  
**PEMBROKE PARK, FL**  
 ADAPTED FROM BETCHEL INC, 1992