Site Review and Update

WHITEHOUSE WASTE OIL PITS

WHITEHOUSE, DUVAL COUNTY, FLORIDA

CERCLIS NO. FLD980602767

SEPTEMBER 4, 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

Site Review and Update: A Note of Explanation

The purpose of the Site Review and Update is to discuss the current status of a hazardous waste site and to identify future ATSDR activities planned for the site. The SRU is generally reserved to update activities for those sites for which public health assessments have been previously prepared (it is not intended to be an addendum to a public health assessment). The SRU, in conjunction with the ATSDR Site Ranking Scheme, will be used to determine relative priorities for future ATSDR public health actions.

SITE REVIEW AND UPDATE

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WHITEHOUSE, DUVAL COUNTY, FLORIDA

CERCLIS NO. FLD980602767

Prepared by:

Bureau of Environmental Toxicology
Florida Department of Public Health
Under the Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry

Background and History

The purpose of this Site Review and Update is to determine whether the public health recommendations from the 1992 public health assessment have been addressed and to address additional public health concerns that may currently exist.

The Whitehouse Waste Oil Pits Site is located off Machelle Drive about 0.5 mile west of Whitehouse, Florida (Fig. 1-3). The Whitehouse community is 10 miles west of Jacksonville, Florida, near the intersection of U.S. Hwy. 90 West (Beaver Street) and Chaffee Road. The Whitehouse community comprises approximately 600 residents. An elementary school and a sewage treatment plant on the south side of the Whitehouse community. Drainage ditches border the south and the east side of the site. The northeast tributary of McGirts Creek borders the northwest side of the site. Land use within 1 mile of the site is mostly residential and hardwood swamps. There are a few small-scale residential gardens near the site. Groundwater flow in the Rock aquifer under the site is toward the east-southeast. The Rock aquifer is the source of potable water for residents on Machelle Drive (Environmental Protection Agency 1991).

Allied Petroleum Products Company (Allied) used the site to recycle used motor oil. From 1958 to 1968, Allied disposed of waste acid sludge and clay into 7 unlined pits covering 7 acres. In 1968, a dike surrounding one of the pits ruptured, spilling used oil into the northeast tributary of McGirts Creek. In 1976, a 200,000 gallon oil spill occurred while the City of Jacksonville's Mosquito Control Branch (the City) was attempting to repair the dike. From 1977 to 1978, the City bottom-drained the water from the pits, treated it, and discharged it to the northeast tributary of McGirts Creek. The remaining oil and sludge was removed and mixed with a clay material and then returned it to the pits. Next, the oil and clay mixture was covered with various scraps and wood pieces. Finally, the City covered the site with sand and grass. In 1983, the Florida Department of Environmental Regulation (DER) took samples of ground water, surface water, and sediment (Agency for Toxic Substances and Disease Registry 1992). Also in 1983, the Environmental Protection Agency (EPA) listed the site on the Superfund National Priorities List (NPL). In 1985, EPA signed a record of decision (ROD) following the remedial investigation/ feasibility study (RI/FS). This ROD proposed containment of the waste oil/clay mixture using a slurry wall and cap system (GA 1995).

In 1990, EPA contractors analyzed groundwater, surface water, and sediment samples. Polychlorinated Biphenyls (PCB's) and heavy metals such as lead, chromium, and nickel were the chemicals of concern. Contamination was mainly in the waste oil/clay mixture underlying most of the site (ATSDR 1992).

In 1991, staff from the Department of Health (formerly the Department of Health and Rehabilitative Services) and the Duval County Health Department visited the site. They did not observe any fences or other security measures. They did observe evidence of eating, drinking, smoking, target practice, and riding of all-terrain vehicles

on the site. They did observe a large waste oil "boil" consisting of 36 square feet of black, viscous, semi-solid oil with a distinct petroleum odor as well as five other small waste oil "boils", and 20-30 unmarked 55 gallon drums. They saw no aquatic life in the creek, but they did see evidence of children playing upstream from the site in the northeast tributary of McGirts Creek. On June 27,1991, staff from the Department of Health and Duval County Health Department again visited the site and made similar observations. During this visit, blackberry plants were abundant on the site. The Department of Health staff spoke with nearby residents regarding possible ground water and soil contamination.

EPA and the Florida DER sponsored several public meetings: May 9, 1984; March 28, 1985; April 18, 1985; and January 30, 1992. The community members were concerned about the risk of cancer from exposure to toxic chemicals. The community was also concerned about contaminated vegetables and contaminants in McGirts Creek. One former remediation worker expressed concern about skin irritation following contact with the waste oil.

The September 1992 public health assessment categorized the site as a potential public health concern. It contained the following recommendations:

1. Cap the areas of the site where the waste oil is exposed at the surface ("boils") as soon as possible to prevent human exposure,

2. Restrict site access to prevent nearby residents (especially children) from trespassing on this site.

3. Continue to sample private wells south and southwest of the site along Machelle Drive on a routine basis (every 3 months) to minimize any future human exposure to site-related contaminants in the groundwater. If contamination is discovered, install filters or other devices to remove the contamination or provide an alternative source of water,

4. Collect and analyze a few off-site surface soil samples (3 to 5) to confirm the extent of off-site surface soil contamination. These surface soil samples should be taken along the southwest boundary of the site near Machelle Drive,

5. During any future site remediation, ensure effective protection measures are used to prevent exposure of remedial workers and nearby residents to the contaminated oil,

6. Additional health education about the potential for exposure to on-site contaminants was needed for the community.

Direct dermal absorption of contaminants from exposed waste oil by former remediation workers, children, and trespassers was the completed exposure pathway identified in the 1992 public health assessment. Potential exposure pathways were the ingestion or inhalation of contaminated ground water. Shallow groundwater was not of concern because nearby residential wells are in the deeper Rock aquifer. Surface water (McGirts Creek) was not a source of drinking water, and PCBs were not found in surface water samples. Contaminant metals were not likely to accumulate in the fish in the creek. EPA contractors did not find any heavy metals or PCBs in any of the nearby private wells supplying potable water (ATSDR 1992).

In 1992, EPA determined that treatment consisting of soil washing, bio-treatment, and solidification/stabilization would be more effective than previously decided in the 1985 record of decision (ROD). On June 16, 1992, EPA issued an amended record of decision (AROD) for this treatment (EPA 1994). EPA identified nine companies known as the Whitehouse Oil Pits Cooperating Group (the group) as potentially responsible parties (PRPs). The group determined that the treatment technologies in the AROD were not appropriate for the site (because of the high lead levels); consequently the original treatment from the 1992 ROD was re-instituted (Golder 1994).

In July and August 1995, consultants for the group sampled eight existing and six new monitoring wells. They found contamination in three of the wells sampled from the Rock aquifer, in two of the wells sampled from the surficial aquifer, and in both of the deeper wells. Based on these samples, the group concluded that contaminated ground water is not migrating toward residences on Machelle Drive. The group also concluded that the contaminants in the monitoring wells from the Rock aquifer are a result of cross contamination during previous well installation, well seal leakage, and/or corrosion of well casing (Golder 1996a). The group suggested building a slurry wall, capping the site, and inserting a lime interior to provide passive treatment of groundwater. They also suggested providing municipal water to nearby residents, continuing groundwater monitoring, and surrounding the site with a fence with warning signs. In June 1996, the group suggested additional solidification and stabilization of the waste oil/clay mixture in some areas (Golder 1996a and b).

Current Site Conditions

On July 1, 1997, Michele Mitchell and Randy Merchant with the Department of Health, Bureau of Environmental Toxicology, and Grazyna Pawlowicz of the Duval County Health Department visited the site. They observed a new 6-foot high metal fence surrounding the site. There was no vehicle access to the site off Machelle Drive. Tall grass and weeds leading up to the fence on the Machelle Road side made it difficult to enter the site.

Ms. Mitchell, Mr. Merchant, and Mrs. Pawlowicz observed several small (1 to 2 ft. diameter), black boils on site. They did not see any evidence of trespassing. They found a new subdivision, Whitehouse Manor, east of Machelle Drive and south of the site. The entrance to Whitehouse Manor is on Kittrell Pines Terrace, off Chaffee Road.

Current Issues

The Duval County Health Department and the group have acted on two of the six recommendations in the 1992 public health assessment. There are plans to follow up on the other recommendations. A summary of the recommendations and responses follows:

> **1. Cap the areas of the site where the waste oil is exposed at the surface ("boils") as soon as possible to prevent human exposure.**

This recommendation has not been followed. At the most recent site visit there was evidence of waste oil boils. The group has proposed to construct a permanent cover.

> **2. Restrict site access to prevent nearby residents (especially children) from trespassing on this site. Post signs warning of the existence of hazardous wastes on this site as required by Florida Statutes 403.704 and 403.7255, and Rule 17-736, Florida Administrative Code.**

This recommendation has been followed. Currently, there is a 6-foot wire fence restricting access to the site. There are also hazardous waste warning signs as required by Florida law.

> **3. Continue to sample private wells south and southwest of the site along Machelle Drive on a routine basis (every 3 months) to minimize any future human exposure to site related contaminants in the ground water. If contamination is discovered, install filters or other devices to remove the contamination or provide an alternative source of water.**

The Duval County Health Department has followed this recommendation. In 1992, 1993, 1994, and 1997, staff monitored residential wells on Machelle Drive. They detected no organic chemicals and detected only two naturally occurring inorganics, all below ATSDR comparison screening levels.

> **4. Collect and analyze a few off-site surface soil samples (3 to 5) to confirm the extent of off-site surface soil contamination. These surface soil samples should be taken along the southwest boundary of the site near Machelle Drive.**

This recommendation has not been followed. None of the documents reviewed mention plans to collect additional off-site surface soil samples.

5. **During any future site remediation, ensure effective protection measures are used to prevent exposure of remedial workers and nearby residents to the contaminated oil.**

The remediation activities at the site have not occurred at this time. This recommendation is pending future remediation.

6. **Since restriction of access to the site is inadequate, a specific program targeting parents of local children and potential trespassers was indicated in addition to release of the Public Health Assessment.**

Site access has been restricted, and adequate warning signs have been posted.

Conclusions

1. The 1992 public health assessment categorized the site as a potential public health concern.

2. Some of the recommendations in the 1992 public health assessment have not been followed. Significant questions about the public health threat at this site remain.

3. No new community concerns exist.

Recommendations

1. Recommendations in the 1992 public health assessment should be followed and completed in efforts to fully assess the public health implications of this site.

Documents Reviewed

ATSDR 1992. Agency for Toxic Substances and Disease Registry, Preliminary Health Assessment for Whitehouse Waste Oil Pits, Whitehouse, Florida. Prepared by the Florida Department of Health. September 1992.

EPA 1991. Environmental Protection Agency. Whitehouse Waste Oil Pits Fact Sheet. December 1991.

EPA 1994. Environmental Protection Agency. Whitehouse Waste Oil Pits Fact Sheet. April 1994.

GA 1994. Golder Associates Inc.. Results of Additional Investigatory Work. Whitehouse Oil Pits. November 1994.

GA 1995. Golder Associates Inc.. Supplemental Treatment and Feasibility Study Work Plans. Whitehouse Oil Pits. February 1995.

GA 1996a. Golder Associates Inc.. Supplemental Treatment and Feasibility Study. Whitehouse Oil Pits. January 1996.

GA 1996b. Golder Associates Inc.. Addendum to Supplemental Treatment and Feasibility Study. Whitehouse Oil Pits. June 1996.

Preparer of Report

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Florida Department of Health

CERTIFICATION

This Public Health Assessment was prepared by the Department of 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 assessment was begun.

Technical Project Officer
Superfund Site Assessment Branch (SSAB)
Division of Health Assessment and Consultation (DHAC)
ATSDR

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

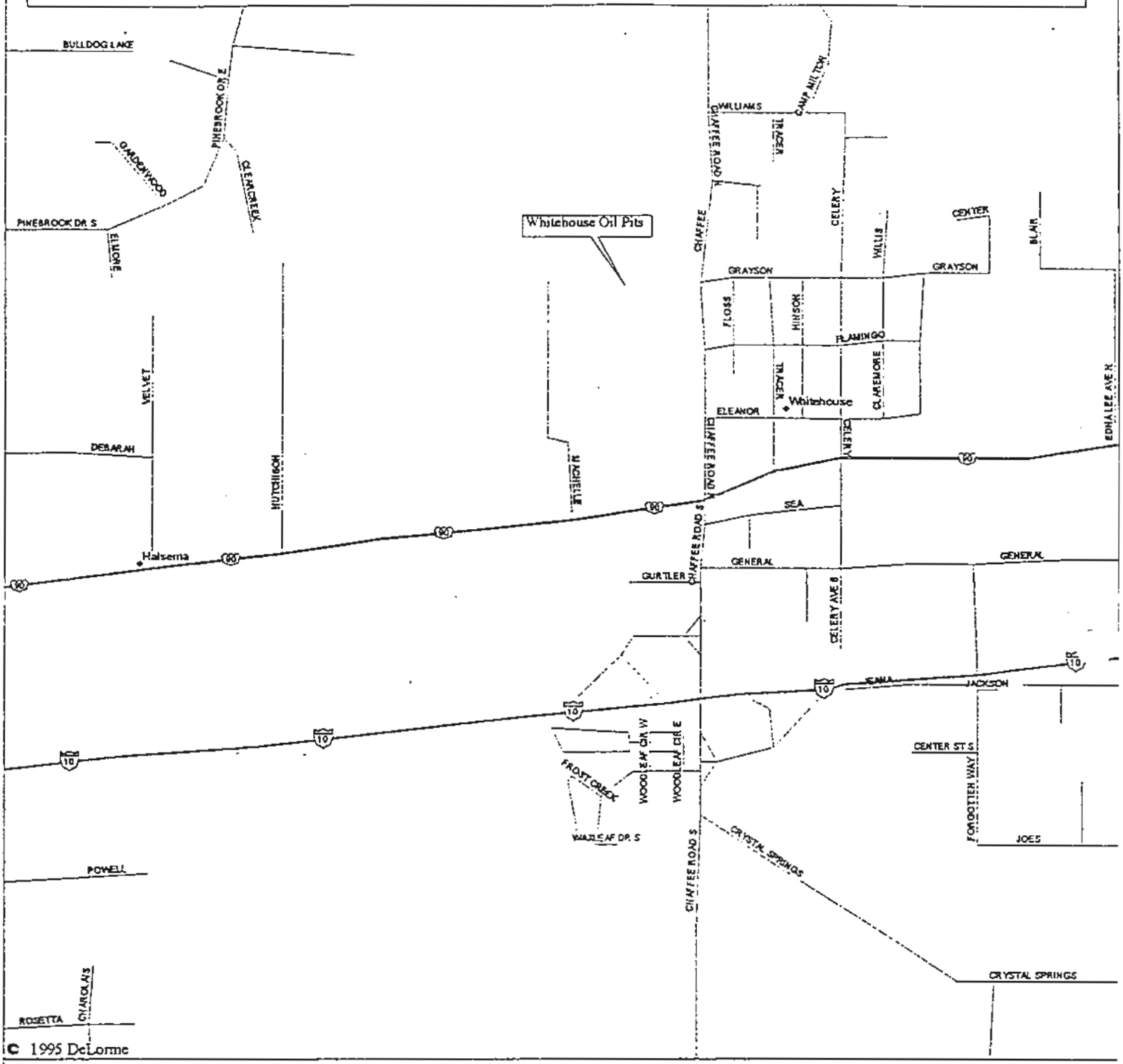
Chief, SPS, SSAB, DHAC, ATSDR

Figure 1. Regional Area Map

Mag 10.00
Tue Jul 15 13:12 1997
Scale 1:500,000 (at center)
10 Miles
10 KM

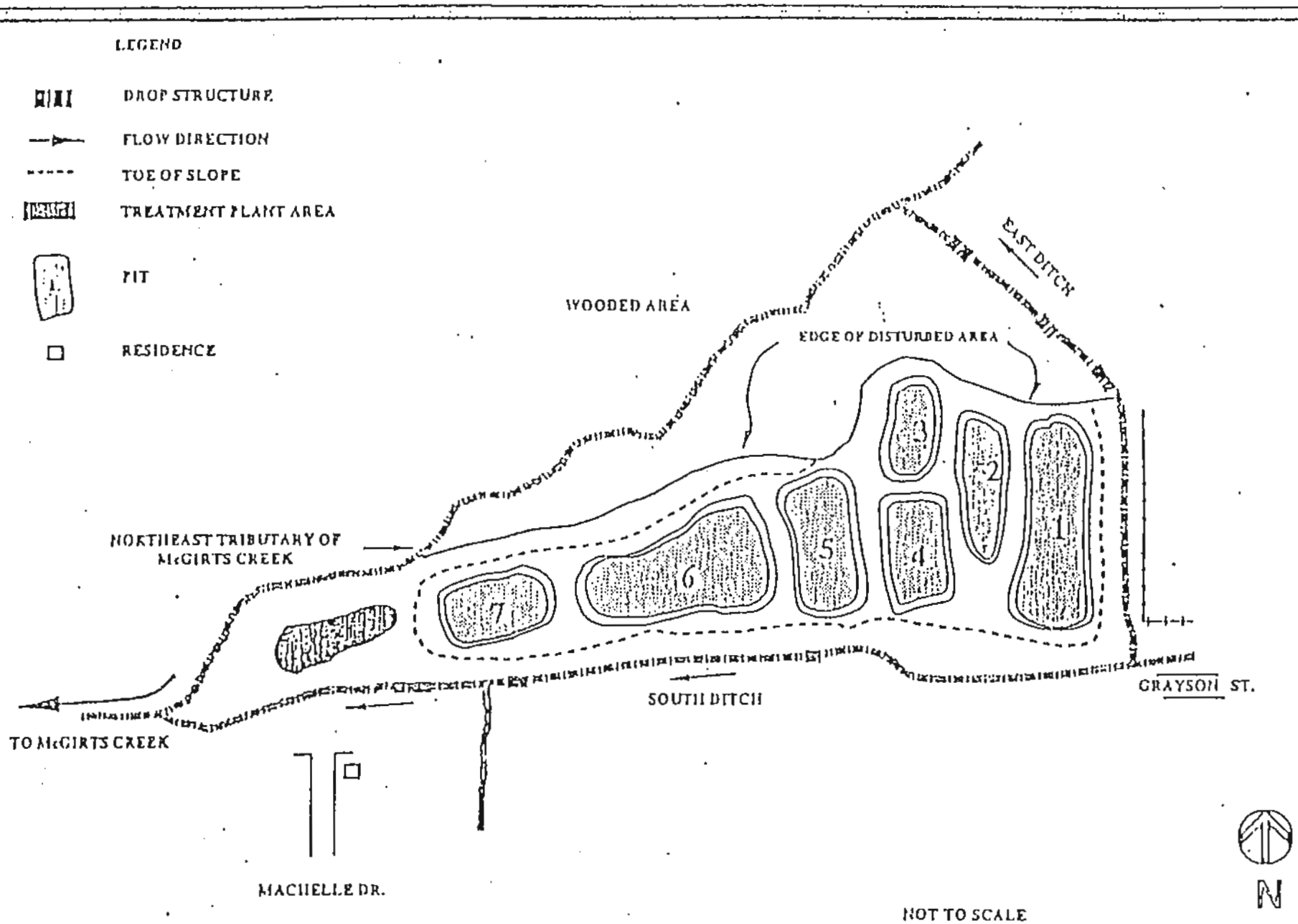
- Major Connector
- State Route
- Interstate/Limited Access
- US Highway
- Primary State Route
- County Seat
- Town, Small City
- Large City
- Park or Reservation
- Sched Service Airport
- City
- Land
- Lake, Ocean

Figure 2. Site Area Map



Mag 15.00
Tue Jul 15 13:16 1997
Scale 1:15,625 (at center)
1000 Feet
500 Meters

Secondary SR, Road, Hwy Ramp
Interstate/Limited Access
US Highway
Locale



ADOPTED FROM: FINAL REPORT,
THE WHITEHOUSE OIL PITS, DUVAL Co. FLA.,
SITE ASSESSMENT
BUREAU OF OPERATIONS, FDER, DEC. 1973

EBASCO
EBASCO SERVICES INCORPORATED

SITE CHARACTERISTICS MAP
WHITEHOUSE WASTE OIL PITS SITE
DUVAL COUNTY, FLORIDA

Figure 3