

Site Review And Update

HARRIS CORPORATION (PALM BAY FACILITY)

PALM BAY, BREVARD COUNTY, FLORIDA

CERCLIS NO. FLD000602334

NOVEMBER 19, 1996

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

HARRIS CORPORATION (PALM BAY FACILITY)

PALM BAY, BREVARD COUNTY, FLORIDA

CERCLIS NO. FLD000602334

Prepared by:

Office of Environmental Toxicology
Florida Department of Health and Rehabilitative Services
Under a Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry

Background and History

The Harris Corporation Superfund site (Harris) occupies about 315 acres in Palm Bay, Brevard County, Florida (Figures 1-3). Before 1967, the Radiation Corporation manufactured electronics at this site for the space industry. Harris Corporation purchased the site in 1967. Harris currently uses volatile organic chemicals (VOCs) to manufacture a variety of electronic devices.

In June 1981, the Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (formerly the Florida Department of Environmental Regulation) found traces of VOCs in the Palm Bay Utilities (PBU) well field (formerly General Development Utilities or GDU). The PBU well field is immediately next to, and hydrologically down gradient from, Harris. PBU supplies water to more than 35,000 residents of Palm Bay. Although the levels of VOCs were low and posed no immediate hazard to the public, PBU stopped using the most contaminated wells. PBU also constructed an air stripper to remove VOCs in the water from the other wells (Figure 4).

In 1983, Harris agreed to conduct additional ground water monitoring and clean up the contaminated ground water on their property. Harris installed a ground water extraction and air stripper treatment system in 1985 on the southern portion of the site (Operable Unit #1) (Figures 4 and 5). Also in 1985, the EPA proposed Harris for addition to the Superfund National Priorities List (NPL). EPA added Harris to the NPL in 1987.

In an October 1988 Preliminary Health Assessment (issued April 19, 1990), we concluded the site was a potential public health concern (ATSDR 1990). We recommended that Harris and/or EPA:

1. Install and sample wells at the PBU well field,
2. Collect and analyze additional surface water and sediment samples,
3. Collect and analyze air samples from around the air stripper, and
4. Continue to monitor the quality of the water going in and coming out of the air stripper.

In 1989, Harris estimated the concentrations of VOCs in the air from their ground water cleanup (air stripper). They based their estimate on the highest concentrations of VOCs found in the ground water. Harris found the estimated air concentrations were much less than Florida DEP guidelines (Geraghty & Miller 1989).

In November 1989 the National Institute for Occupational Safety and Health (NIOSH) evaluated the indoor air quality in Building 8 on the site (Figure 5). The Defense Contract Audit Agency, housed in Building 8, requested the testing. NIOSH found the air was not contaminated with VOCs (NIOSH 1989).

At a March 27, 1990 EPA-sponsored public meeting, one nearby resident expressed concern about drinking contaminated water from a private well. Three others voiced concerns about breathing contaminated air from the air strippers. Three employees of

the Defense Contract Audit Agency voiced concerns about breathing VOCs seeping up from the contaminated ground water (EPA 1990a).

Flowers Chemical Laboratories evaluated the indoor air quality in Building 8 in May 1990. The Defense Contract Audit Agency requested the testing. Flowers found the air was not contaminated with VOCs (Flowers 1990).

In a June 1990 Record of Decision, EPA directed Harris to continue to extract contaminated ground water from under the southern portion of the site (Operable Unit #1) (Figure 5) and treat it with an air stripper (EPA 1990b).

On July 25, 1990, Randy Merchant, of the Florida Department of Health and Rehabilitative Services (HRS) Office of Environmental Toxicology, visited the site. The EPA Region IV Remedial Project Manager and the Florida DEP Project Manager accompanied Mr. Merchant. They met with plant officials and toured the ground water extraction/treatment system. Mr. Merchant did not notice any odors from the air stripper. Mr. Merchant did not collect any environmental samples.

In late 1991, the Florida HRS Office of Epidemiology evaluated reports of high numbers of children with leukemia in the Palm Bay area. They concluded the apparent cluster was due to chance and a further epidemiological investigation was unwarranted (HRS 1992).

On January 12, 1993, EPA held a public meeting to discuss the cleanup of ground water under the northern portion of the site (Operable Unit #2) (Figure 5). In 1993, Harris installed a ground water extraction and air stripper treatment system on the northern portion of the site (Operable Unit #2). In September 1993, Harris collected surface and sediment samples from nearby ditches and the northwest tributary of Turkey Creek (Figure 3). They found that although the concentrations of some metals were elevated, they were not a public health threat and other area facilities could have been the source (Geraghty & Miller 1993a).

In October 1993, Harris estimated the air concentrations of VOCs from the ground water treatment systems (air strippers) at both Harris and at the PBU well field. They based their estimate on the highest concentrations of VOCs found in the ground water at both locations. Harris found the combined estimated air concentrations from both locations were much less than Florida DEP guidelines (Geraghty & Miller 1993b).

In December 1994, Florida HRS recommended EPA sample one private drinking-water well 700 feet east of the site. EPA and the Brevard County Health Department sampled this well in January 1995 and analyzed the water for VOCs. Water from this well did not contain any VOCs (EPA 1995a). In a February 1995 Record of Decision, EPA directed Harris to continue to extract contaminated ground water from under the northern portion of the site (Operable Unit #2) and treat it with an air stripper (EPA 1995b).

Current Site Conditions

On August 21, 1996, Randy Merchant, Florida HRS Office of Environmental Toxicology, visited the site. He drove through the neighborhoods east and south of the site (Figure 4). These neighborhoods are middle-income. Mr. Merchant observed the nearest residents were about 300 feet east of the Harris air strippers. Prevailing winds are from the southeast (Geraghty & Miller 1993b).

Mr. Merchant met with Harris officials and observed the ground water treatment air strippers on the southern part of the site (Operable Unit #1) and on the northern part of the site (Operable Unit #2). He did not notice any odors from either air stripper.

Mr. Merchant also visited the air stripper at the PBU well field (Figure 4). He did not notice any odors from the PBU air stripper. The nearest residents were about 300 feet south of the PBU air stripper.

Current Issues

PBU regularly tests the water they distribute to the City of Palm Bay. PBU has not reported any violations of the drinking water standards for VOCs since 1981 (DEP 1996). We are unaware of any other public health issues at this site.

EPA and Harris have followed the recommendations in our 1990 Preliminary Health Assessment.

1. Install and sample wells at the PBU well field.

Since 1988, Harris has installed additional monitoring wells on their property to delineate the extent of the ground water contamination. Besides testing the water distributed to their customers, PBU tests the "raw" water from its wells before it is treated.

2. Collect and analyze additional surface water and sediment samples.

In 1993, Harris collected surface and sediment samples from nearby ditches and the northwest tributary of Turkey Creek. They found that although the concentrations of some metals were elevated, they were not a public health threat and other area facilities could have been the source. Therefore, we do not recommend that EPA and/or Harris collect and analyze additional surface water and sediment samples.

3. Collect and analyze air samples from around the air stripper.

In 1989 and in 1993, Harris estimated the air concentrations of VOCs resulting from their ground water cleanup. They found the estimated VOC air concentrations were much less than Florida DEP guidelines. Therefore, we do not recommend EPA and/or Harris collect and analyze air samples.

4. Continue to monitor the quality of the water going in and coming out of the air stripper.

Harris, with EPA and Florida DEP oversight, monitors the quality of the water going in and coming out of their air strippers monthly.

Conclusions

Currently, no identifiable public health hazard exists at this site. EPA and Harris have followed the recommendations of our 1990 Preliminary Health Assessment report. Palm Bay Utilities regularly tests the water they distribute to the City of Palm Bay. Palm Bay Utilities has not reported any violations of the standards for VOCs in the Palm Bay drinking water since 1981. Therefore, no further public health assessment is necessary at this time.

The conclusions of this report are based on our analysis of the information listed in the Documents Reviewed section. We will evaluate new information as it becomes available to decide if further assessment is necessary.

Recommendations

1. No further public health assessment is necessary at this time.
2. Florida HRS should evaluate new information as it becomes available to decide if an additional public health assessment is necessary.

Documents Reviewed

ATSDR 1990. Agency for Toxic Substances and Disease Registry, Preliminary Health Assessment for Harris Corporation, Palm Bay, Florida. Prepared by the Florida Department of Health and Rehabilitative Services. April 1990.

DEP 1996. Florida Department of Environmental Protection. Central Florida District Office, Drinking Water Chemical Selection Report 1979-1996, Palm Bay Utilities (PWS-ID# 3050442).

EPA 1990a. Environmental Protection Agency. Harris Corporation/Palm Bay Facility Public Information Meeting. March 27, 1990.

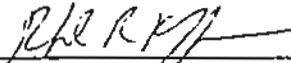
- EPA 1990b. Environmental Protection Agency. Record of Decision - Harris Corporation/Palm Bay Facility. June 28, 1990.
- EPA 1995a. Environmental Protection Agency. February 23, 1995 letter from Barbara Dick, EPA Project Manager, to Larry Miller.
- EPA 1995b. Environmental Protection Agency. Record of Decision, Harris Corporation, Palm Bay, Florida. February 15, 1995.
- Flowers 1990. Flowers Chemical Laboratories, Inc. May 24, 1990 letter from Jefferson S. Flowers, Ph.D. President, to Tom Piedmont, Defense Contract Audit Agency.
- Geraghty & Miller 1989. Geraghty & Miller, Inc. Design Document, Semiconductor Campus: Ground-water Recovery, Treatment, and Discharge System. June 1989.
- Geraghty & Miller 1993a. Geraghty & Miller, Inc. An Evaluation of Past and Present Sediment and Surface-Water Quality in Drainage Ditches in the Vicinity of Harris and the Northwest Tributary of Turkey Creek. September 1993.
- Geraghty & Miller 1993b. Geraghty & Miller, Inc. Remedial Design Review Report, Harris Corporation, Palm Bay, Florida. Operable Unit One. October 1993.
- HRS 1992. Florida Department of Health and Rehabilitative Services. January 17, 1992 letter from Secretary Robert B. Williams to Florida Representative Harry C. Goode.
- NIOSH 1989. National Institute for Occupational Safety and Health. Letter from Stanley A. Salisbury, NIOSH to Dana Klingenberg, March 21, 1990.

Preparer of Report

Randy Merchant
Biological Administrator
Environmental Toxicology
Florida Department of Health and Rehabilitative Services

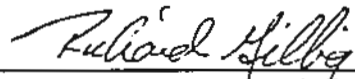
CERTIFICATION

This Harris Corporation Site Site Review And Update was prepared by the Florida Department of Health and Rehabilitative Services 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 site review & update was begun.



Richard R. Kauffman, M.S.
Technical Project Officer
State Programs Section (SPS)
Superfund Site Assessment Branch (SSAB)
Division of Health Assessment and Consultation (DHAC)
ATSDR

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

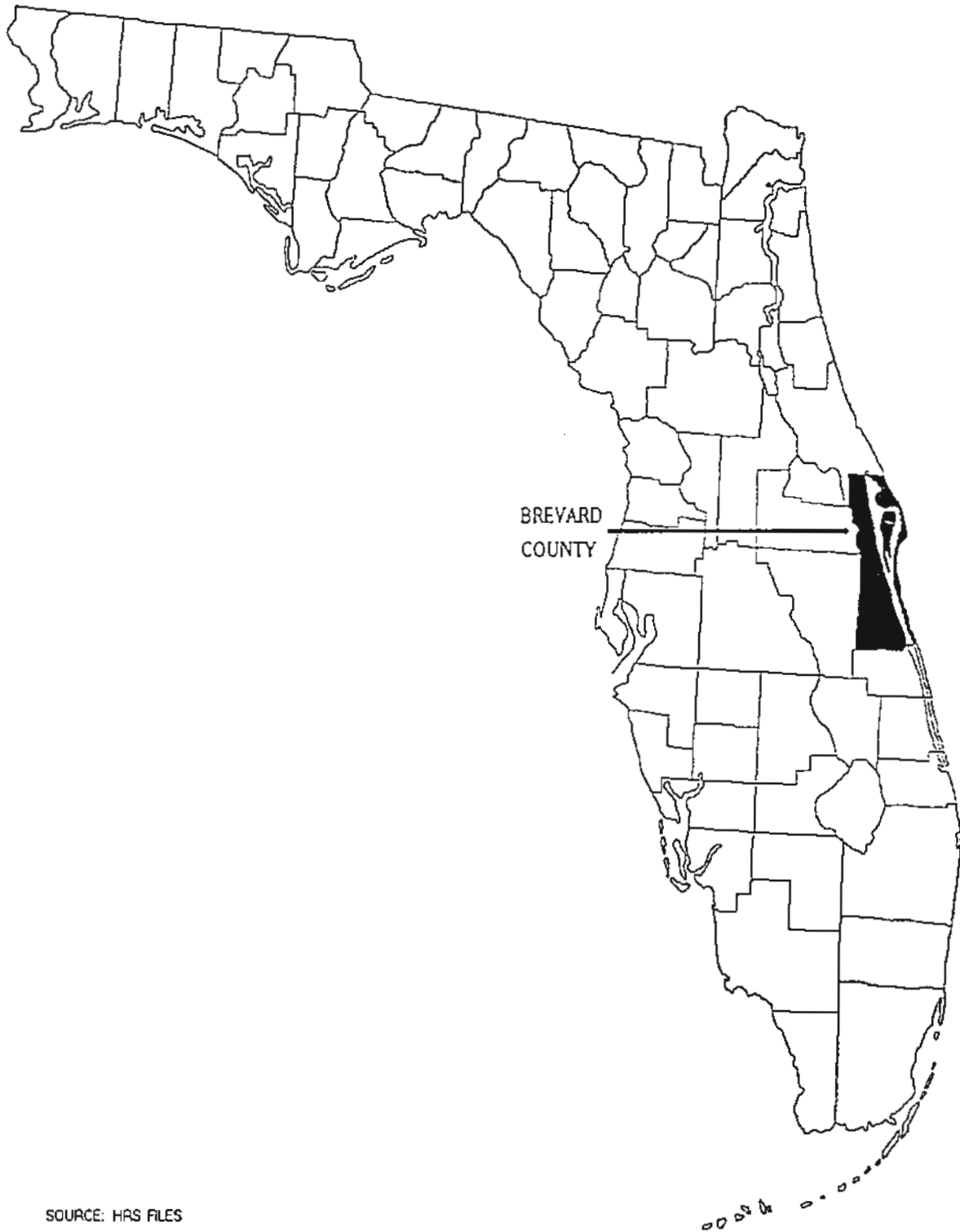


Richard E. Gillig, M.C.P.
Chief, SPS, SSAB, DHAC, ATSDR

Figure 1. State Map

MAP OF FLORIDA

SHOWING COUNTY OF INTEREST



SOURCE: HAS FILES

Palm Bay, Florida Area

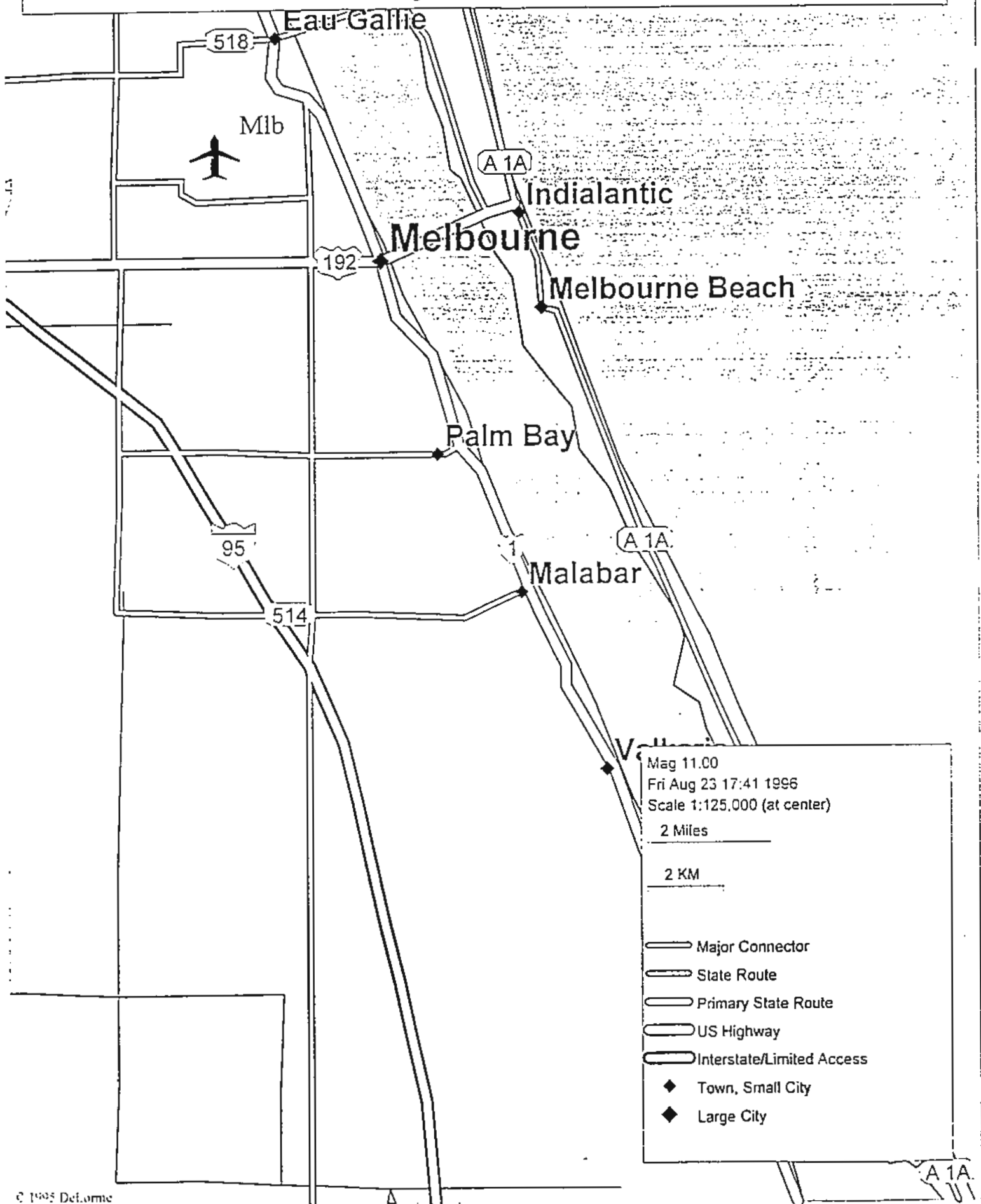
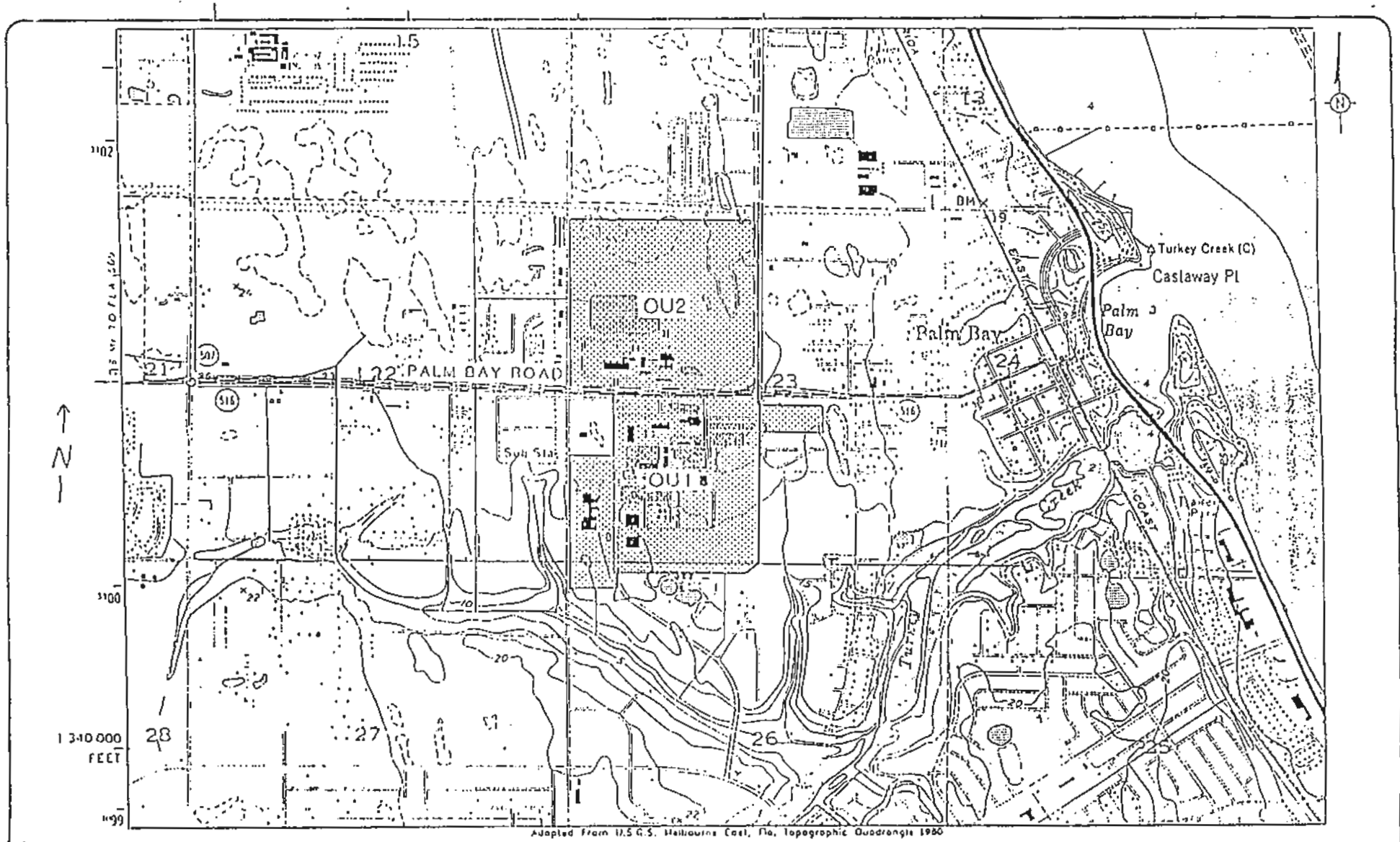


Figure 2. Palm Bay Area



GERAGHTY & MILLER, INC.
Environmental Services

0 2000 FEET

SITE LOCATION MAP

HARRIS CORPORATION
 PALM BAY, FLORIDA

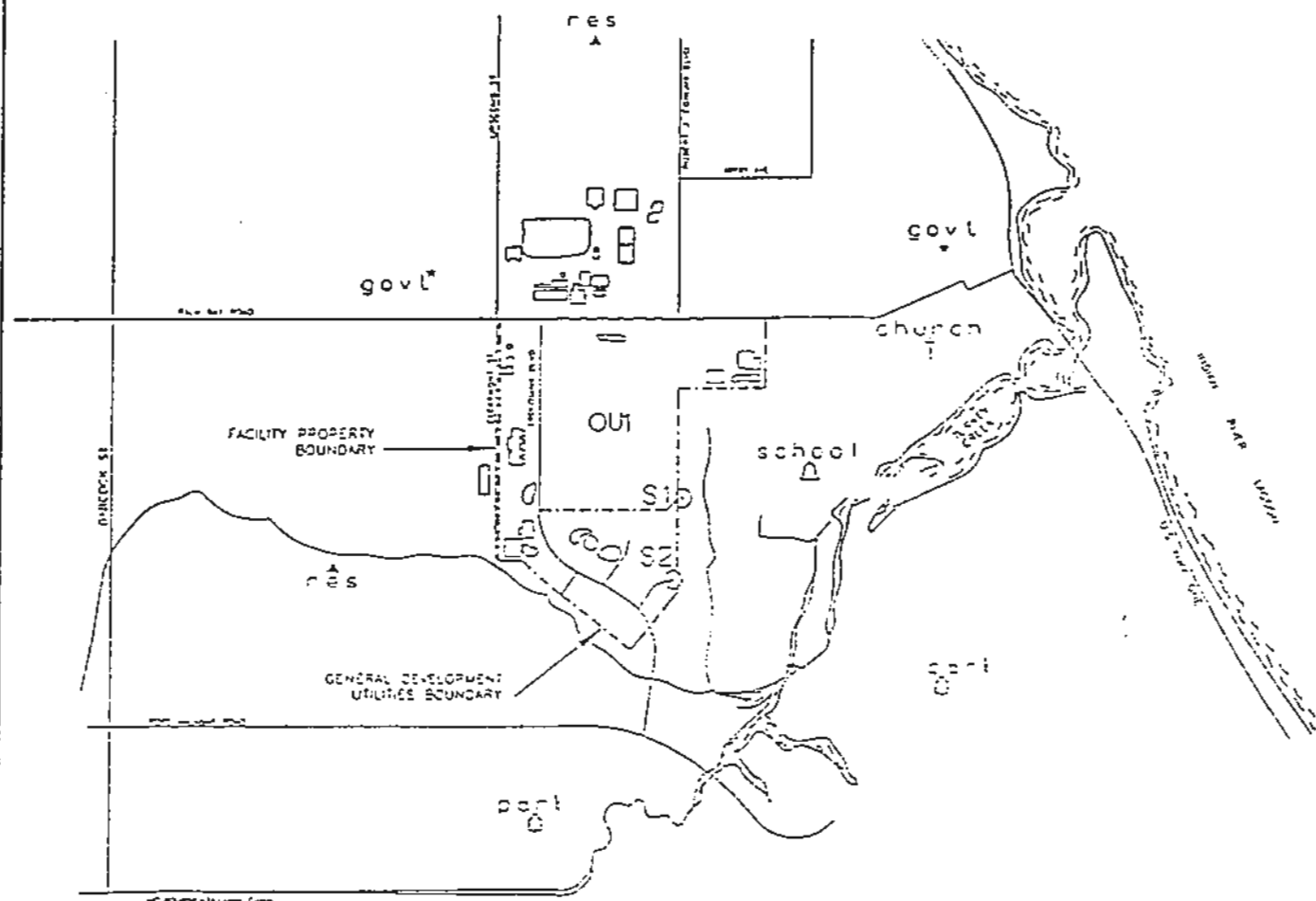
FIGURE

3

Figure 3. Site Location Map



Figure 4. Air Stripper Locations



SCALE: 1 INCH = 800 METERS

S1 SOURCE 1 - HARRIS CORPORATION ELECTRONIC SYSTEM SECTOR AIR STRIPPER

S2 SOURCE 2 - GENERAL DEVELOPMENT UTILITIES AIR STRIPPER

Res RESIDENTIAL AREAS

Gov't GOVERNMENT BUILDINGS

BASE MAP ADAPTED FROM U.S.G.S. MELBOURNE EAST, FLA. TOPOGRAF-2 QUADRANGLE



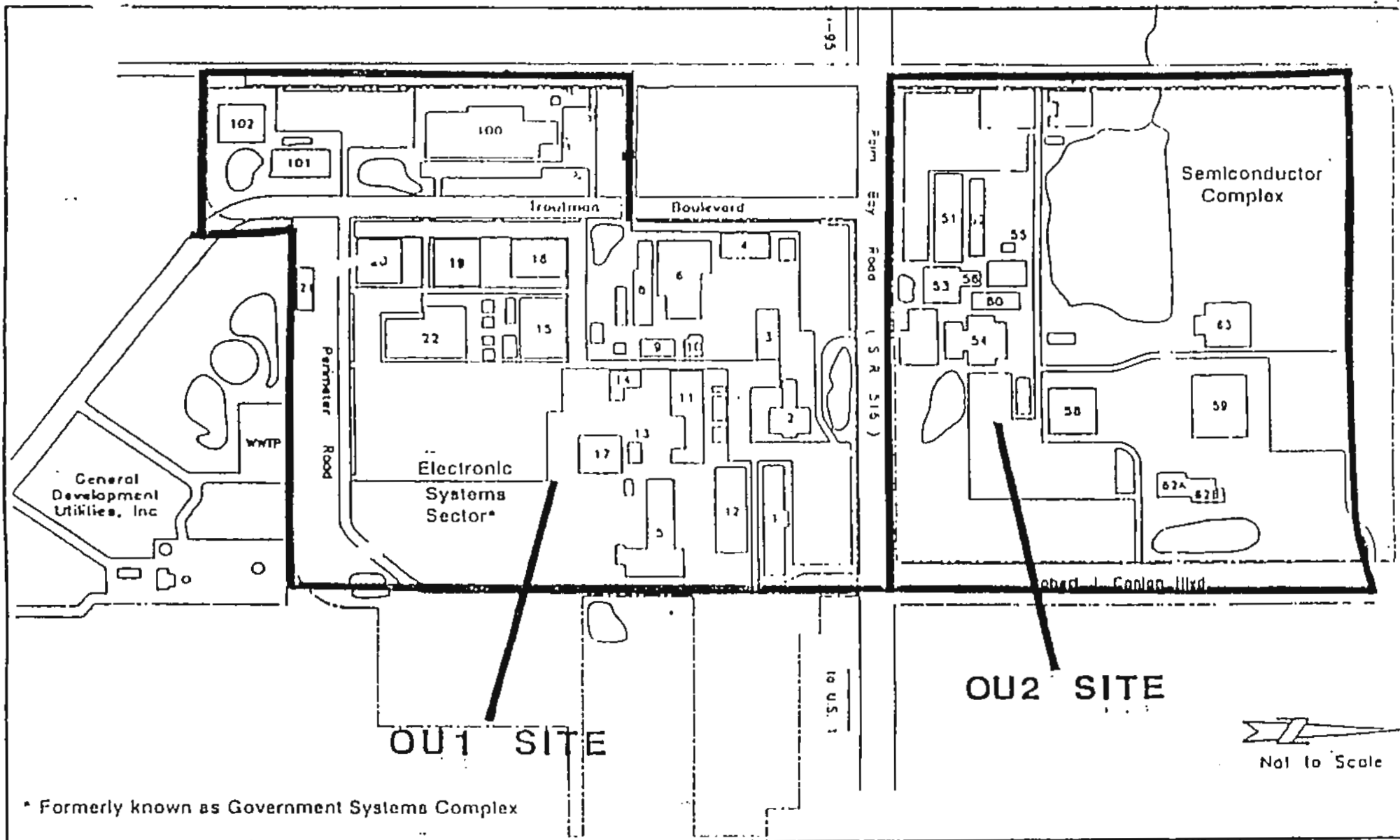
GERAGHTY & MILLER, INC.
Environmental Services

OUI SITE BOUNDARY AND RECEPTORS
USED IN AIR MODEL

HARRIS CORPORATION
PALM BEACH, FLORIDA

FIGURE
4

0 500 METERS



Site Facility Map, Harris Corporation Superfund Site,
Palm Bay, Brevard County, Florida

FIGURE



PROJECT # 4400-18 92-0006 DATE January 1993

Figure 5. Site Map