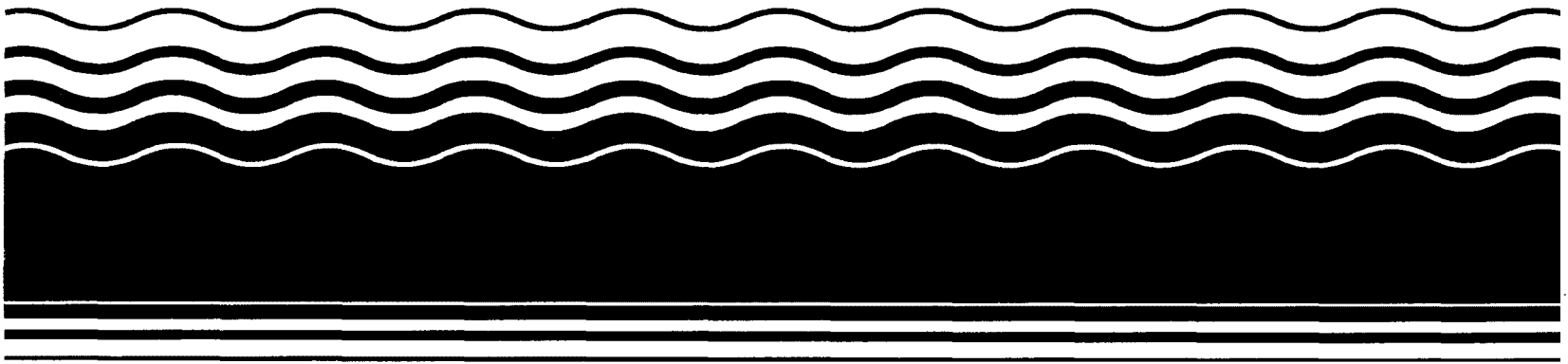
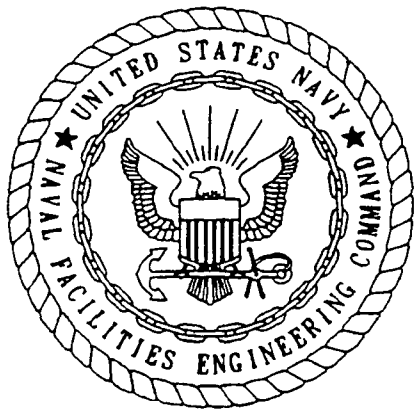


**PB96-964015  
EPA/ROD/R04-96/272  
April 1997**

**EPA Superfund  
Record of Decision:**

**Marine Corps Logistics Base,  
Operable Unit 2, Albany, GA  
9/27/1996**



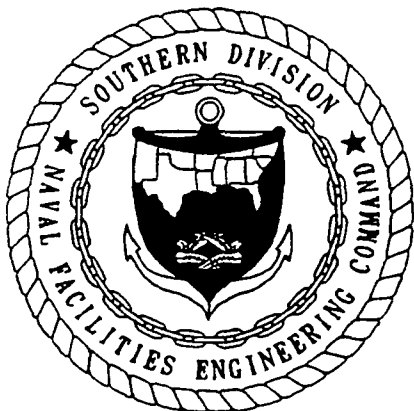


**NO ACTION  
RECORD OF DECISION  
OPERABLE UNIT 2**

**MARINE CORPS LOGISTICS BASE ALBANY  
ALBANY, GEORGIA**

**UNIT IDENTIFICATION CODE: M67004  
CONTRACT NO. N62467-89-D-0317/048**

**SEPTEMBER 1996**



**SOUTHERN DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND  
NORTH CHARLESTON, SOUTH CAROLINA  
29419-9010**

**NO ACTION  
RECORD OF DECISION  
OPERABLE UNIT 2**

**MARINE CORPS LOGISTICS BASE ALBANY  
ALBANY, GEORGIA**

**Unit Identification Code: M67004**

**Contract No. N62467-89-D-0317/048**

**Prepared by:**

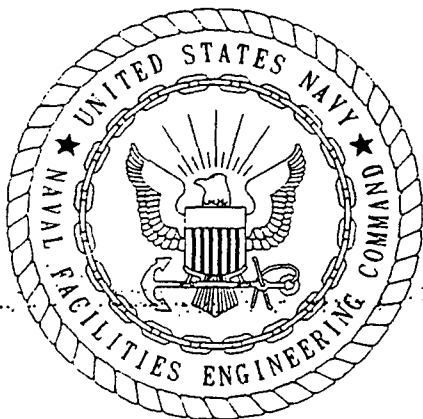
**ABB Environmental Services, Inc.  
2590 Executive Center Circle, East  
Tallahassee, Florida 32301**

**Prepared for:**

**Department of the Navy, Southern Division  
Naval Facilities Engineering Command  
2155 Eagle Drive  
North Charleston, South Carolina 29418**

**Joel Sanders, Code 1868, Remedial Project Manager**

**September 1996**



CERTIFICATION OF TECHNICAL  
DATA CONFORMITY (MAY 1987)

The Contractor, ABB Environmental Services, Inc., hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-89-D-0317/048 are complete and accurate and comply with all requirements of this contract.

DATE: September 13, 1996

NAME AND TITLE OF CERTIFYING OFFICIAL: Joseph H. Daniel, P.G.  
Task Order Manager

NAME AND TITLE OF CERTIFYING OFFICIAL: David E. Heislein  
Project Technical Lead

(DFAR 252.227-7036)

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 4

ATLANTA FEDERAL CENTER  
100 ALABAMA STREET, S.W.  
ATLANTA, GEORGIA 30303-3104

SEP 27 1996

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

4WD-FFB

Commanding General  
Marine Corps Logistics Base-Albany  
Albany, Georgia 31704-1128SUBJ: Record of Decision  
Operable Unit 2, PSC 11  
MCLB-Albany NPL Site  
EPA ID# GA7170023694  
Albany, GA 31704

Dear Sir:

The U.S. Environmental Protection Agency (EPA) Region 4 has reviewed the above subject decision document and concurs with the selected remedy of No Action at Operable Unit 2, Potential Site of Contamination 11. This remedy is supported by the previously completed Remedial Investigation, Feasibility Study and Risk Assessment Reports.

The selected remedy of No Action is protective of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to the remedial action and is cost effective.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard D. Green", is written over a horizontal line.

Richard Green  
Acting Director  
Waste Management Division

cc: Elsie Munsell, Deputy Assistant Secretary of the Navy

Lt. Frantz, MCLB-Albany

Joel Sanders, SOUTHDIV

DECLARATION FOR THE NO ACTION  
RECORD OF DECISION

**SITE NAME AND ADDRESS**

Marine Corps Logistics Base  
Operable Unit 2  
814 Radford Boulevard  
Albany, Georgia 31704-1128

**STATEMENT OF PURPOSE AND BASIS**

This Record of Decision document presents the No Action response for Operable Unit (OU) 2 at the Marine Corps Logistics Base (MCLB) Albany. It was developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act as amended by the Superfund Amendments and Reauthorization Act, and to the extent practicable, the National Contingency Plan. This decision is based on the site's Administrative Record, which is on file in the Dougherty County Public Library, Albany, Georgia, and the Environmental Branch Office, Facilities and Services Division, Building 5501, MCLB Albany, Albany, Georgia 31704.


Both the U.S. Environmental Protection Agency Region IV and the State of Georgia Environmental Protection Division concur with the selection of the No Action response for surface and subsurface soils, sediment, and surface water at OU 2.

**DESCRIPTION OF THE SELECTED REMEDY**

A remedial investigation and risk assessment was conducted at OU 2, consisting of Potential Source of Contamination 11. The risk assessment examined a hypothetical situation for current land use in which an older child trespasses on OU 2 and a hypothetical future land use of OU 2 assuming residential use by adults and children and associated utility construction. These risk assessment results indicate that all potential risks associated with exposure to the surface soil, sediment, and surface water are below the acceptable regulatory risk range. No chemicals of potential concern were identified in subsurface soil. Therefore, No Action is an appropriate response action. Under this alternative, no treatment, containment, or restricted access is deemed necessary. Groundwater at OU 2 will be addressed under a continuing basewide investigation within OU 6.

**DECLARATION STATEMENT**

The No Action response supports the protection of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to the response action, and is cost effective. The No Action response addresses all surface and subsurface soils, sediment, and surface water at OU 2, whereas the groundwater will be addressed by the continuing basewide investigation within OU 6.

  
\_\_\_\_\_  
Signature  
H.K. Barnes  
Brigadier General  
Commanding General, MCLB Albany

SEP 23 1996  
\_\_\_\_\_  
Date

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Operable Unit 2  
Marine Corps Logistics Base Albany  
Albany, Georgia

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### APPENDIX

Appendix A: Community Relations Responsiveness Summary

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## GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
bls	below land surface
CPC	chemicals of potential concern
GEPD	Georgia Environmental Protection Division
HI	hazard index
IAS	initial assessment study
mg/kg	milligrams per kilogram
MCL	maximum contaminant level
MCLB	Marine Corps Logistics Base
μg/kg	micrograms per kilogram
μg/l	micrograms per liter
NCP	National Oil and Hazardous Substances Contingency Plan
NPL	National Priority List
OU	operable unit
PCBs	polychlorinated biphenyls
PSC	potential source of contamination
RCRA	Resource Conservation and Recovery Act
RFI	Resource Conservation and Recovery Act (RCRA) facility investigation.
RI/RA	remedial investigation and risk assessment
SOUTHNAV- FACENGCOM	Southern Division, Naval Facilities Engineering Command
SWMU	solid waste management unit
USEPA	U.S. Environmental Protection Agency
USMC	U.S. Marine Corps
VOA	volatile organic aromatic

## 1.0 SITE NAME, LOCATION, AND DESCRIPTION

Marine Corps Logistics Base (MCLB) Albany is an active facility occupying 3,579 acres east-southeast of the city of Albany, Georgia. Land bordering MCLB Albany to the south, east, and northeast is primarily agricultural or recreational open space. The land bordering northwest and west of the base is largely residential and commercial areas of eastern Albany.

Operable Unit (OU) 2 is located in the east-central portion of the base, just east of the Indian Lake Wildlife Refuge area. Figure 1-1 identifies the location of MCLB Albany and the approximate location of OU 2. OU 2 is composed of Potential Source of Contamination (PSC) 11, the area behind the Small Bore and Pistol Range (Figure 1-2). PSC 11 is a 150,000-square-foot area that reportedly stored hazardous materials in the 1960s. This remedial investigation and risk assessment (RI/RA) did not include the active firing range immediately west of PSC 11. PSC 11 currently has a vegetative cover consisting of grass, low shrubbery, and pine forests.

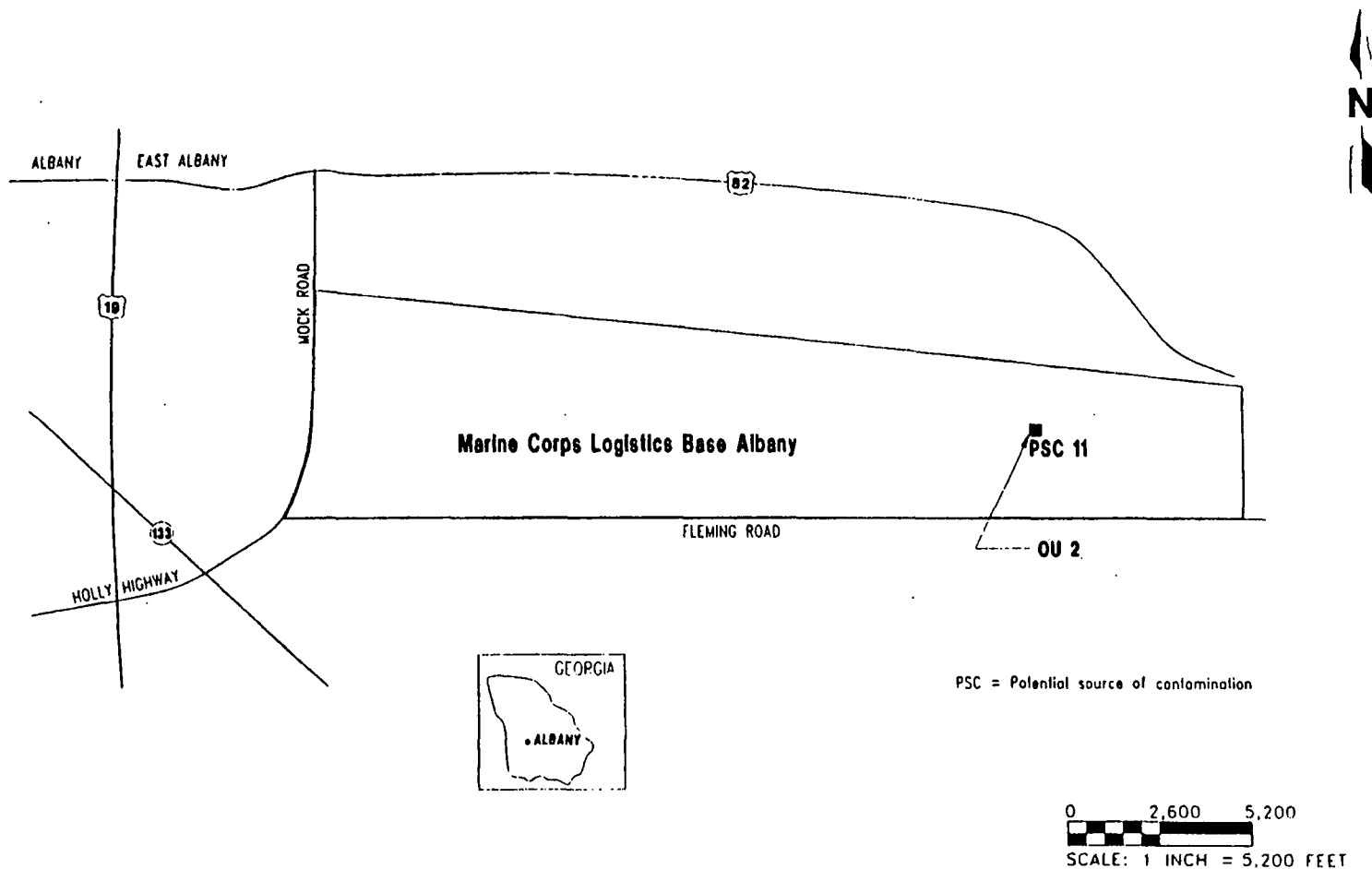
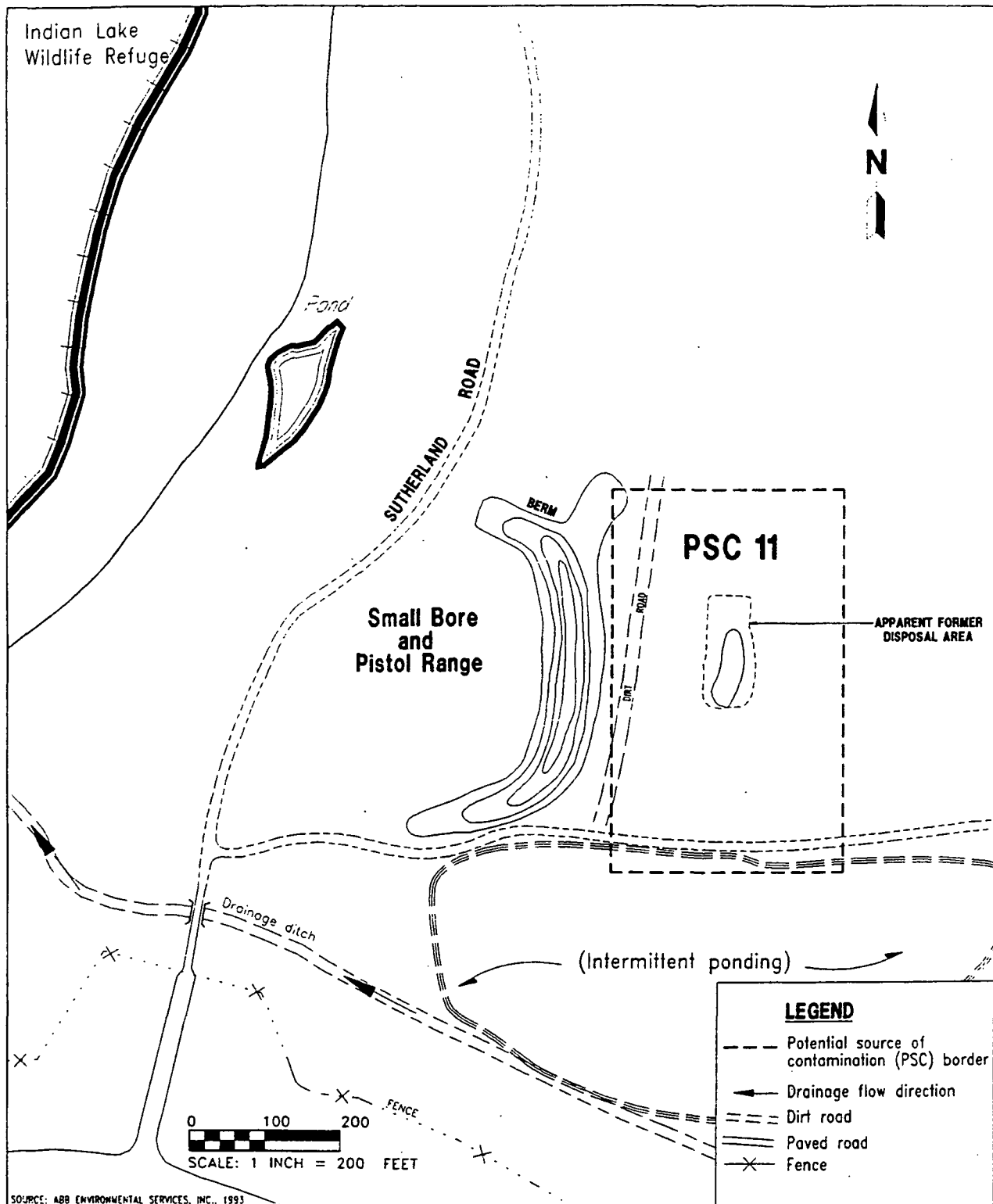


FIGURE 1-1  
VICINITY MAP



NO ACTION RECORD OF DECISION,  
OPERABLE UNIT 2

MARINE CORPS LOGISTICS BASE  
ALBANY, GEORGIA



**FIGURE 1-2**  
**PSC 11, AREA BEHIND SMALL BORE AND**  
**PISTOL RANGE,**  
**SITE PLAN**



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**ALBANY, GEORGIA**

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## 2.0 SITE HISTORY AND ENFORCEMENT ACTIVITIES

MCLB Albany currently serves as a U.S. military logistics center. Its primary duties include controlling the acquisition, storage, maintenance, and distribution of combat and support material for the U.S. Marine Corps (USMC). The base is also used for training military personnel and other tasks and functions as directed by the Commandant of the USMC.

MCLB Albany has generated various types of solid and liquid wastes over the years, including hazardous wastes. The hazardous wastes include electroplating wastes containing heavy metals, organic solvents from stripping and cleaning operations, and waste fuel and oil.

Beginning in 1985, three investigations were performed to assess and characterize PSCs identified at MCLB Albany. These investigations included the 1985 initial assessment study (IAS), the 1987 confirmation study, and the 1989 Resource Conservation Recovery Act (RCRA) facility investigation (RFI). As a result of these investigations, MCLB Albany was placed in Group 7 (Hazard Ranking System score of 45.91 to 43.75) of the National Priority List (NPL) for Uncontrolled Hazardous Waste Sites (December 1989).

2.1 INITIAL ASSESSMENT STUDY. An IAS was conducted by Envirodyne Engineers, Inc., at MCLB Albany in 1985 to identify and assess PSCs posing a potential threat to human health or the environment due to contamination from past hazardous materials disposal practices. Eight PSCs were identified at MCLB Albany based on historical data, aerial photographs, field inspections, and personal interviews. All eight PSCs were evaluated to determine contaminant characteristics, migration pathways, and potential receptors. PSC 11 was not identified at this time or evaluated.

The primary pathways identified for migration of contaminants from the eight IAS PSCs include erosion, surface water runoff, and groundwater transport. Surface water runoff from MCLB Albany ultimately flows into the Flint River, either north or west of the base. The predominant direction of regional groundwater flow is also westward toward the Flint River, which is located approximately 2.7 miles west of the base. Potential receptors identified include aquatic organisms in the receiving waters, predators and other animals relying on these areas for food and water, and humans using the Flint River for recreational purposes.

The IAS concluded that six of the eight PSCs warranted further investigation under the Navy Assessment and Control of Installation Pollutants program to assess long-term impacts. The primary recommendation of the study was to conduct a confirmation study to confirm or disprove the existence of the suspected contamination and to quantify the extent of any existing problems. Specifically, this study would determine (1) whether or not a threat to human health or the environment existed, (2) the extent of contamination, and (3) the potential for contaminant migration.

2.2 CONFIRMATION STUDY. A confirmation study was conducted by McClelland Engineers at the MCLB Albany facility in 1987 to verify the existence of contamination not only at the six sites identified in the IAS but also at three

additional PSCs identified as potential threats to human health or the environment (PSCs 9, 10, and 11).

The field investigation methodology and analytical results completed during the 1987 confirmation study at PSC 11 are summarized below.

Five soil borings were drilled at PSC 11 to total depths ranging from 19 feet to 41 feet below land surface (bls). Three monitoring wells were installed in soil borings. An electromagnetic survey consisting of three east-to-west lines and two north-to-south lines was completed. No surface water or sediment samples were collected.

Three soil samples and three groundwater samples were collected for laboratory analyses. Laboratory analyses included acid and base-neutral extractables, volatile organic aromatics (VOAs), pesticides and polychlorinated biphenyls (PCBs), and extraction procedure toxicity metals.

No compounds were detected above quantitation limits in two soil samples. Low levels of arsenic, chromium, and lead were detected in one soil sample. These levels were well below the USEPA Toxicity Characteristic Leaching Procedure regulatory levels of 5 mg/l. Low concentrations of methylene chloride were also detected in the same soil sample; however, this compound is a common laboratory artifact. The only analyte detected in groundwater samples was mercury. This analyte was also detected in a duplicate sample but was at or below quantitation limits and Federal drinking water standards in both samples. Basewide groundwater is currently being addressed within OU 6.

**2.3 RCRA FACILITY INVESTIGATION.** Subsequent to the 1987 confirmation study, PSC 11 was identified as a solid waste management unit (SWMU) by the Georgia Environmental Protection Division (GEPD) in the Part B RCRA Permit for MCLB Albany. Terms of this permit required that an RFI be conducted at PSC 11 to determine the nature and extent of releases and the potential pathways of contaminant migration to the environment. Applied Engineering and Science, Inc., completed the RFI and submitted a final report in 1989.

During the RFI, three monitoring wells, ranging in depth from 62 feet to 93 feet bls, were installed at PSC 11. Three groundwater samples were collected for laboratory analyses. No geophysical surveys were conducted, and no surface water or sediment samples were collected.

Toluene was detected in each of the three groundwater samples. Laboratory analytical results for all other compounds were below quantitation limits or below MCLs for metal concentrations.

The RFI concluded that based on the presence of toluene in groundwater samples, some release may be occurring from the site. The RFI recommended that the monitoring wells be monitored on a periodic basis for VOAs to determine if significant increases occur.

2.4 REMEDIAL INVESTIGATION. In July 1991, the Department of the Navy, representing MCLB Albany, entered into a Federal Facilities Agreement with the GEPA and the U.S. Environmental Protection Agency (USEPA) Region IV to establish a procedural framework and schedule for developing, implementing, and monitoring appropriate response actions at the facility in accordance with the provisions of the Comprehensive Environmental Response, Compensation, and Liability Act, RCRA, the National Oil and Hazardous Substances Contingency Plan (NCP), Superfund guidance and policy, and the Georgia Hazardous Waste Management Act.

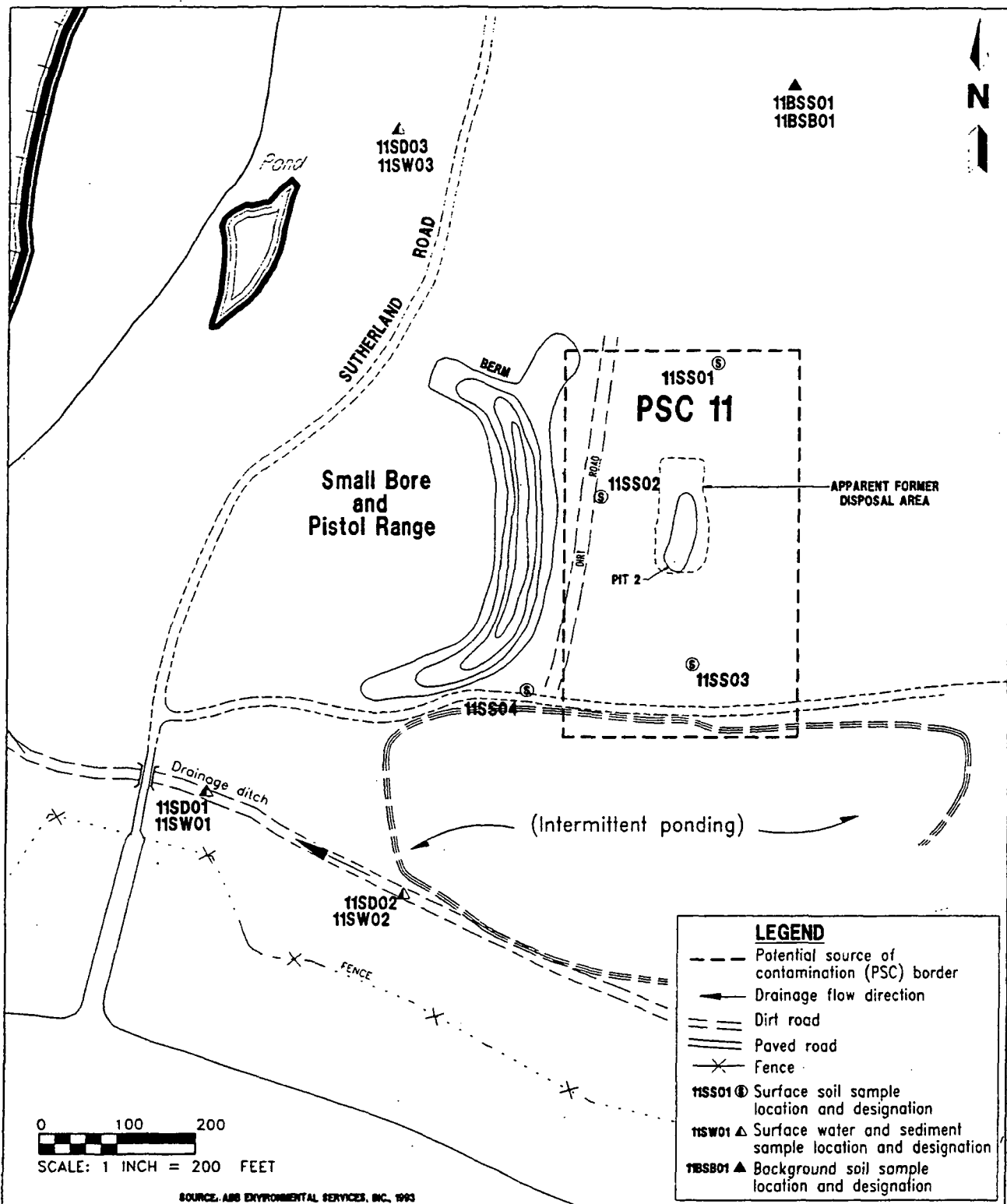
ABB Environmental Services, Inc. (ABB-ES) was contracted under the Comprehensive Long-Term Environmental Action, Navy contract to prepare remedial investigation and feasibility study workplans, site screening workplans, and associated planning documents for OU 1 and OU 2 concurrently. The final RI/RA report for OU 1 and OU 2 was released in May 1995. The results of this investigation for OU 2, composed of PSC 11, are presented below.

The RI defined the nature and extent of contamination of surface soil, sediment, and surface water at OU 2. This investigation was conducted in two phases. The first phase of investigation included a geophysical survey, soil gas survey, cone penetrometer testing, and explosive ordnance screening. The geophysical survey was used to determine the vertical and horizontal extent of disposal trenches, identify buried metallic objects, and identify areas of previously disturbed or previously excavated soil. The soil gas survey was used to identify *in situ* organic vapors of selected volatile compounds that may have settled into the subsurface soils. The cone penetrometer test was to determine the composition and thickness of the overburden soil.

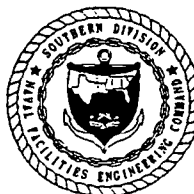
The second phase of remedial investigation consisted of trench excavation and sampling, surface soil sampling (0 to 12 inches bls), and surface water and sediment sampling. Background sampling was also conducted to provide site-specific data on naturally occurring elements in MCLB Albany surface and subsurface soil and organics commonly found along roadsides or in developed areas. These background samples included random concentrations of pesticide residue and polycyclic aromatic hydrocarbons from past use, which do not indicate a potential source of contamination. Sample locations are shown in Figure 2-1.

Two trench excavations and associated soil sampling were conducted at PSC 11 based on the results of the ordnance survey and geophysical survey. Excavation of this area confirmed the disposal of miscellaneous debris (e.g., broken glass bottles and spent casings). Forty metal process vessels approximately 40 gallons in size and of unknown origin and use were identified at PSC 11. Most of these vessels were empty; however, some did contain small volumes of water. The excavated trench soil and vessels, including contents, were removed from PSC 11 in April 1996. Excavation and soil sampling locations are shown on Figure 2-2.

Laboratory tests were conducted on samples from surface soils, surface water, sediment, trench excavation soil, and vessel water from PSC 11. Samples were analyzed in onsite labs and in federally approved offsite labs. Samples were analyzed for volatile organic compounds, semivolatile organic compounds, pesticides and PCBs, inorganics, and cyanide. Results of all previous investigations, along with the recent RI data, were used to support an RA.



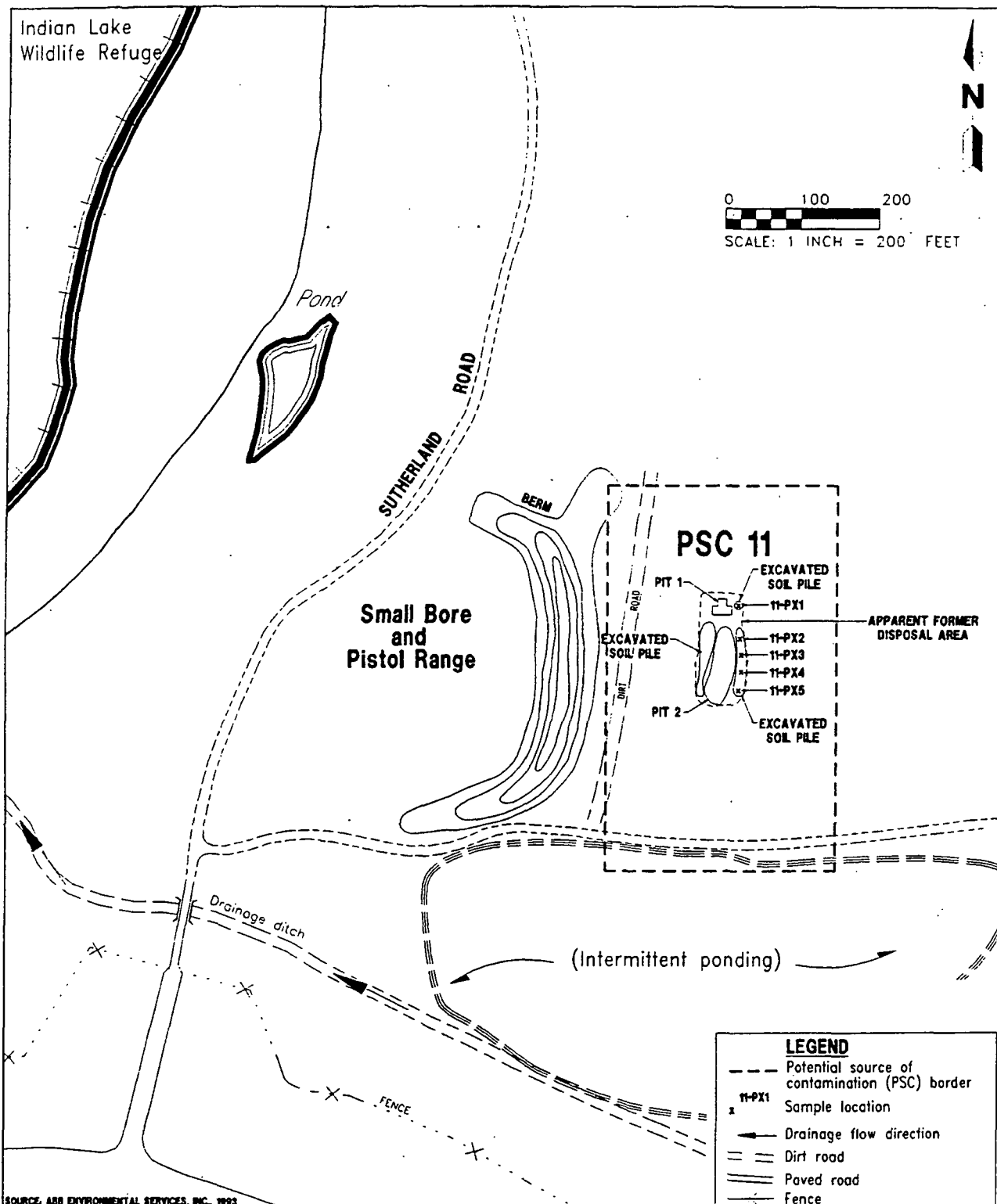
**FIGURE 2-1**  
**PSC 11, AREA BEHIND SMALL BORE AND**  
**PISTOL RANGE,**  
**SAMPLE LOCATION MAP**



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**OPERABLE UNIT 2**

**MARINE CORPS LOGISTICS BASE**  
**ALBANY, GEORGIA**

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**FIGURE 2-2**  
**PSC 11, AREA BEHIND SMALL BORE AND**  
**PISTOL RANGE,**  
**EXCAVATION LOCATION MAP**

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**MARINE CORPS LOGISTICS BASE**  
**ALBANY, GEORGIA**

2.5 OU 2 RELATED DOCUMENTS. The following reports, available for review by the public at the MCLB Albany Environmental Branch Office, describe the detailed methodology and results of investigations at OU 2:

Naval Facilities Engineering Command, Southern Division (SOUTHNAVFACENGCOM), 1974, Multiple Use Natural Resources Management Plan for Marine Corps Supply Center, Albany, Georgia.

Crawford, V.I., 1979, Environmental Engineering Survey, Marine Corps Logistics Base (MCLB), Albany, Ga.: prepared for SOUTHNAVFACENGCOM.

Envirodyne Engineers, Inc., 1985, Initial Assessment Study, Marine Corps Logistics Base, Albany, Georgia.

McClelland Engineers, 1987, Final Report, Confirmation Study Verification Step, Marine Corps Logistics Base, Albany, Georgia: prepared for SOUTHNAVFACENGCOM.

Applied Engineering and Science, Inc., 1989, RCRA Facility Investigation Phase One Confirmation Study, MCLB Albany, Georgia.

ABB Environmental Services, Inc. (ABB-ES), 1992, Remedial Investigation/Feasibility Study Workplan for Operable Units One and Two (OUs 1 and 2), MCLB Albany, Georgia, March.

ABB-ES, 1992, Sampling and Analysis Plan for OUs 1 and 2, MCLB Albany, Georgia, March.

SOUTHNAVFACENGCOM, 1993, Master Plan, MCLB Albany, Albany, Georgia.

ABB-ES, 1995, Remedial Investigation/Risk Assessment (RI/RA) Report for OUs 1 and 2, MCLB Albany, Georgia, May.

ABB-ES, 1996, Proposed Plan for OU 2, MCLB Albany, Georgia, July.

### 3.0 HIGHLIGHTS OF COMMUNITY PARTICIPATION

The No Action Proposed Plan for OU 2 was released to the public July 29, 1996. This document was made available to the public in the Information Repository located at Dougherty County Public Library and in the Administrative Record located at the Environmental Branch Office, Building 5501, MCLB Albany, Albany, Georgia 31704-1128. The public notice of the No Action Proposed Plan was published in the *Albany Herald* on July 30, 1996, and in the *Atlanta Constitution* on August 1, 1996. The public comment period for the No Action Proposed Plan was July 30 to August 28, 1996. A public meeting was held on August 15, 1996, at the Human Resources Office, Building 3010, MCLB Albany. At this meeting, representatives from SOUTHNAVFACENGCOM, MCLB Albany, USEPA Region IV, GEPD, and ABB-ES were available to discuss all aspects of OU 2 and the response action under consideration. The Community Relations Responsiveness Summary is included in Appendix A.

#### 4.0 SCOPE AND ROLE OF THE NO ACTION RESPONSE AT OU 2

The response presented in this document is a final action for surface and subsurface soils, sediment, and surface water at OU 2. Under this response, no treatment, containment, or restricted access will be implemented at PSC 11. Groundwater at OU 2 will be addressed under a continuing basewide investigation within OU 6. This response action was concluded in accordance with the NCP and USEPA regulatory guidance for Superfund sites.

## 5.0 SUMMARY OF SITE CHARACTERISTICS

5.1 GEOLOGY. MCLB Albany is located in the Coastal Plain Physiographic Province, which is made up of layers of sand, clay, sandstone, and limestone. These layers of soil and rock extend to a depth of at least 5,000 feet bls. Each layer has been identified and named by geologists according to its composition and physical properties.

The soil and rock layers at MCLB Albany, in descending order, are the clayey overburden, the Ocala Limestone, and the Lisbon Formation. The overburden layer is made up mostly of clay with some silt and sand. The Ocala Limestone is divided into an upper unit and a lower unit. The upper unit is a lime mud or chalk. The lower unit is hard, dense rock that has been dissolved by the movement of water along fractures to form underground caves and springs. The Lisbon Formation is a hard, clayey limestone. These are the soil and rock layers that control the movement of underground water in the first 350 feet bls at MCLB Albany. Figures 5-1 and 5-2 present a generalized geologic section of the Albany area.

5.2 HYDROGEOLOGY. Soil and rock layers are also grouped and named according to how well water moves through them. Layers that bear water to wells are called aquifers, and layers that do not bear water are called confining layers. The clayey overburden and the upper unit of the Ocala Limestone are considered together to be a confining layer. The lower unit of the Ocala Limestone is the major water-bearing zone of the Floridan aquifer. The Lisbon Formation forms a confining layer beneath the Floridan aquifer.

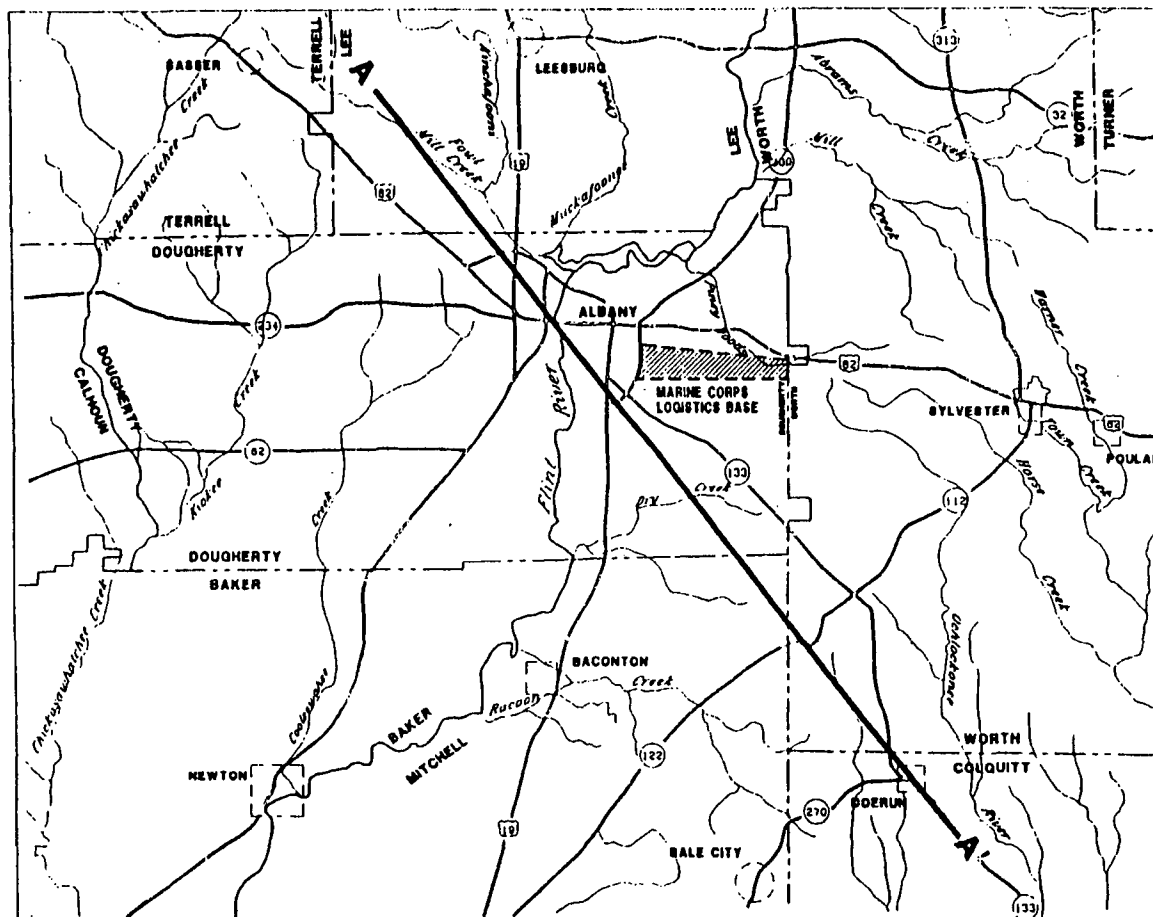
The Floridan aquifer is recharged by rainfall that slowly percolates down through the confining units and through sinkholes. Movement of water in the Floridan aquifer is generally westward toward the Flint River, where it discharges to the river through springs (Figure 5-3).

Most irrigation wells and household water wells near MCLB Albany draw water from the Floridan aquifer. City water wells may also draw water from the Floridan aquifer, although most of the city water is produced from deeper aquifers.

5.3 ECOLOGY. The majority of forested land in the vicinity of the base is vegetated with longleaf pine flatwoods, the most extensive plant community in the southern coastal plain. Pine flatwoods grow in Florida, Georgia, South Carolina, and North Carolina.

The pine flatwoods habitat commonly found at MCLB Albany supports diverse plant and animal life, including invertebrates (e.g., insects and worms), reptiles, and amphibians. A number of mammals inhabit the pine flatwoods community, although no mammal is exclusive to this habitat. Pine flatwoods also provide habitat for a variety of birds, including seed- and insect-eaters, flycatchers, and aerial predators (e.g., owls and hawks).

The presence of two rare and threatened species has been confirmed at the base. The American alligator (*Alligator mississippiensis*), now classified as threatened, has been documented in wetland habitats at the base; this semi-



**LEGEND**  
A — A' Line of geologic section

0 3.25 7.5  
SCALE: 1 INCH = 7.5 MILES

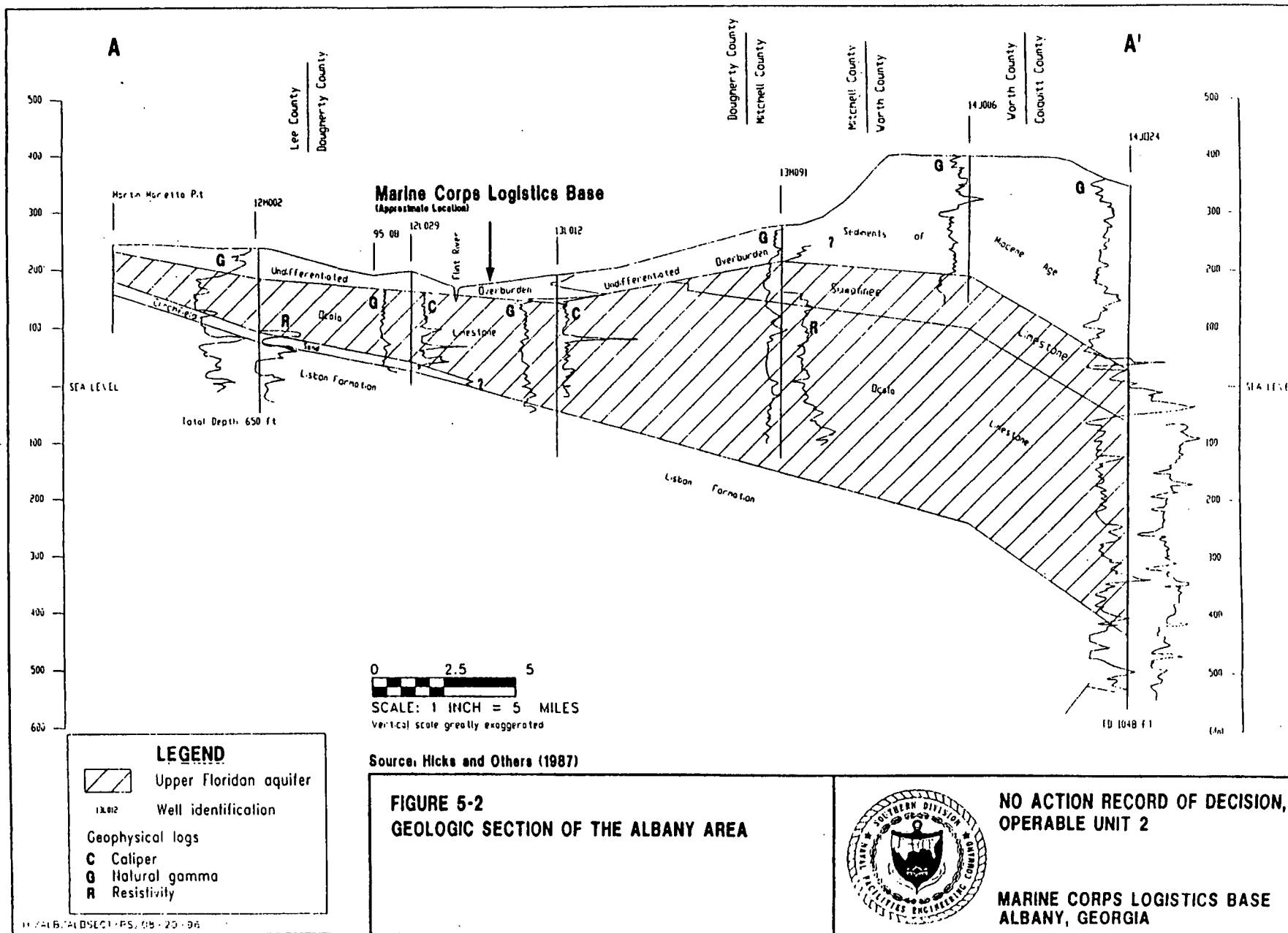
Source: ABB Environmental Services, 1993,  
from Hicks and others, 1987

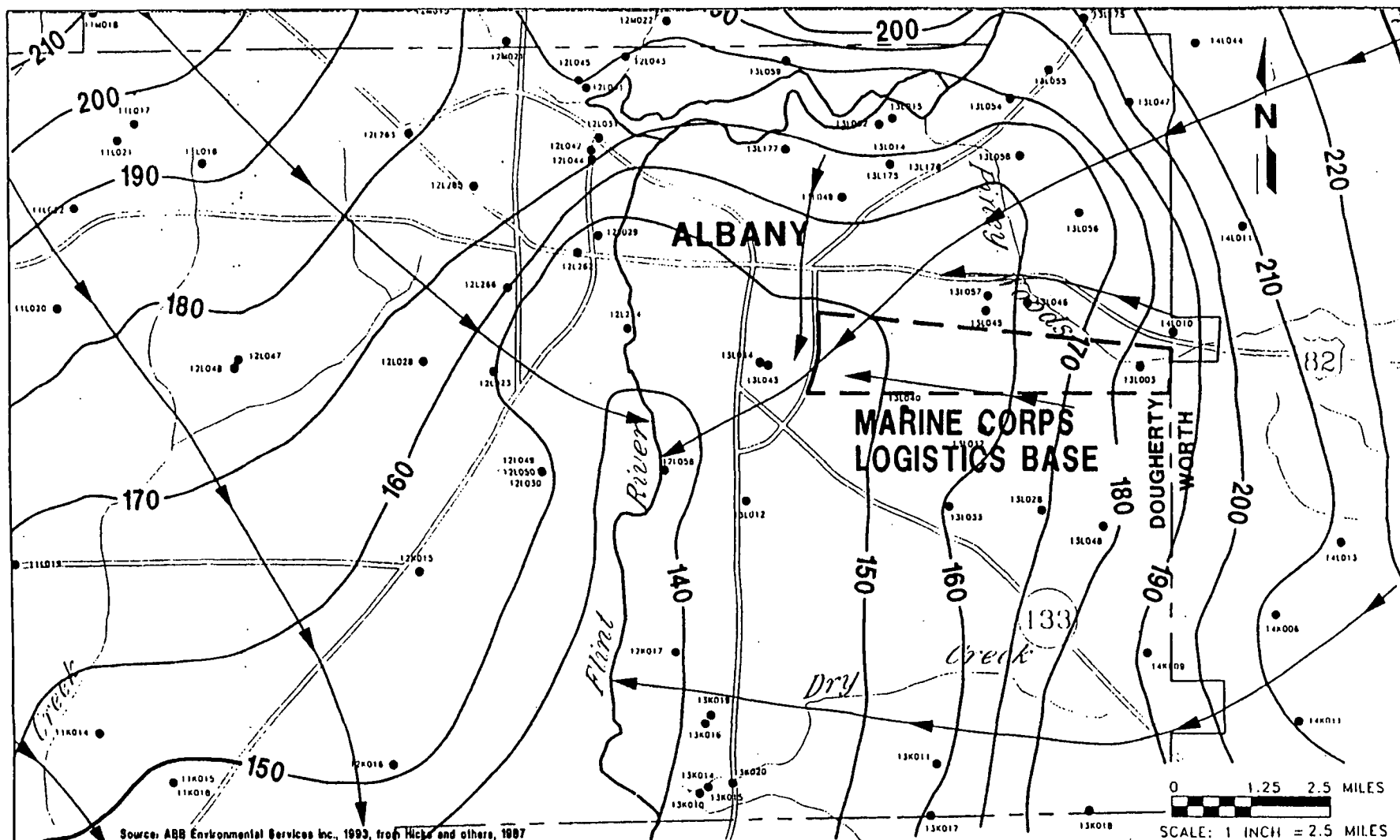
**FIGURE 5-1**  
**LOCATION MAP FOR GEOLOGIC SECTION**  
**(SHOWN IN FIGURE 5-2)**



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**MARINE CORPS LOGISTICS BASE**  
**ALBANY, GEORGIA**





# **LEGEND**

—150 Potentiometric isopleth shows altitude at which water would have stood in tightly cased wells. Dashed where approximately located. Contour interval is 10 feet. Datum is National Geodetic Vertical Datum of 1929.

→ Direction of groundwater flow

**FIGURE 5-3**  
**POTENTIOMETRIC SURFACE OF THE**  
**UPPER FLORIDAN AQUIFER IN THE**  
**ALBANY, GEORGIA AREA, NOVEMBER 1985**



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**ALBANY, GEORGIA**

aquatic species is present throughout the southeast. Bachman's sparrow (*Aimophila aestivalis*), a State and federally listed "rare" species, is also a possible resident of the dry open pine forests at MCLB Albany; this large, secretive sparrow is a year-round resident of southern Georgia. The red-cockaded woodpecker (*Picoides borealis*), a federally listed endangered species, occurs almost exclusively within this pine flatwoods habitat; however, there are no known records for this species at MCLB Albany.

**5.4 NATURE AND EXTENT OF CONTAMINANTS.** The nature, extent, and concentration of potential hazardous constituents at OU 2 were studied during the remedial field investigation.

According to personal interviews conducted during a previous investigation, the PSC 11 area was allegedly used for the disposal of explosive ordnance and other hazardous materials. However, extensive screening by explosives experts revealed no ordnance or other hazardous substances. Geophysical screening identified two large anomalous areas, which were excavated by explosives experts. The smaller of the two anomalies contained broken glass and one spent smoke grenade; the larger anomaly contained 40 small, metal process vessels of unknown origin and use. The excavated trench soil and vessels, including contents, were removed from PSC 11 in April 1996. Sampling results from this excavation and results from previous studies indicated no need for further investigation of subsurface soil. No other sources or potential sources of contamination were identified.

Sampling results for surface soil, surface water, and sediment are presented in Tables 5-1 through 5-3. No other sources or potential sources of contamination were identified.

Concentrations of analytes detected by laboratory analyses are reported in micrograms per kilogram or milligrams per kilogram (mg/kg) for soil samples and micrograms per liter for water samples. For instance, a concentration of 8,700 mg/kg for iron means that 8,700 milligrams of iron are present in each kilogram of soil (1 kilogram equals 1,000,000 milligrams).

A kilogram is a unit measure of weight equal to about 2.2 pounds. One thousand micrograms equal one milligram, one thousand milligrams equal one gram, and one thousand grams equal one kilogram. A liter is a unit measure of volume roughly equal to a quart.

**Table 5-1**  
**Analytes Detected in Surface Soil, PSC 11**

No Action Record of Decision  
Operable Unit 2  
Marine Corps Logistics Base Albany  
Albany, Georgia

Analyte	No. of Samples in Which the Analyte Is Detected/Total No. of Samples	Mean Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Sample with Maximum Concentration
<b><u>Pesticides and PCBs (µg/kg)</u></b>					
4,4-DDE	1/4	13.00	13.00	13.00	11SS04RE
4,4-DDT	1/4	2.80	2.80	2.80	11SS04RE
<b><u>Inorganic Analytes (mg/kg)</u></b>					
Aluminum	4/4	16,955.00	7,120.00	25,300.00	11SS01
Antimony	2/4	4.95	4.60	5.30	11SS03
Arsenic	4/4	1.29	0.57	2.10	11SS01
Barium	4/4	20.98	5.70	35.20	11SS01
Beryllium	3/4	0.25	0.19	0.34	11SS01
Calcium	3/4	208.33	159.00	236.00	11SS04
Chromium	4/4	22.55	8.90	40.80	11SS01
Cobalt	4/4	3.95	2.70	5.60	11SS01
Copper	4/4	6.29	0.86	19.40	11SS02
Iron	4/4	28,600.00	8,700.00	38,500.00	11SS01
Lead	4/4	128.13	21.20	276.00	11SS03
Magnesium	4/4	190.95	90.80	323.00	11SS01
Manganese	4/4	137.95	16.90	371.00	11SS04
Mercury	4/4	0.03	0.03	0.03	11SS01-04
Nickel	3/4	3.97	2.10	5.20	11SS03
Potassium	3/4	183.00	116.00	228.00	11SS01
Selenium	3/4	1.07	0.92	1.30	11SS01
Vanadium	4/4	65.38	21.00	89.90	11SS03
Zinc	4/4	6.23	3.20	9.20	11SS01
Notes: PSC = Potential Source of Contamination. PCBs = polychlorinated biphenyls. µg/kg = micrograms per kilogram. DDE = dichlorodiphenyldichloroethene. DDT = dichlorodiphenyltrichloroethane. mg/kg = milligrams per kilogram.					

**Table 5-2**  
**Analytes Detected in Surface Water, PSC 11**

No Action Record of Decision  
Operable Unit 2  
Marine Corps Logistics Base Albany  
Albany, Georgia

Analyte	No. of Samples in Which the Analyte Is Detected/Total No. of Samples	Mean Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Sample with Maximum Concentration
<b><u>Inorganic Analytes (µg/l)</u></b>					
Aluminum	4/4	2,695.00	1,280.00	3,950.00	11SW01
Arsenic	4/4	1.35	0.90	1.70	11SW02
Barium	4/4	31.33	27.10	34.10	11SW03
Calcium	4/4	3,880.00	3,520.00	4,150.00	11SW02
Chromium	4/4	4.90	4.20	5.30	11SW01
Copper	3/4	6.28	5.90	7.20	11SW01D
Iron	4/4	2,742.50	2,470.00	3,090.00	11SW01
Lead	4/4	8.98	6.50	12.50	11SW01D
Magnesium	4/4	1,151.00	784.00	1,290.00	11SW02
Manganese	4/4	257.00	175.00	300.00	11SW01
Potassium	4/4	4,907.50	1,950.00	6,060.00	11SW02
Sodium	4/4	1,224.50	698.00	1,410.00	11SW02
Vanadium	4/4	11.58	6.10	14.70	11SW01
Zinc	4/4	20.93	13.20	25.00	11SW03
Notes: PSC = Potential Source of Contamination. µg/l = micrograms per liter.					

**Table 5-3  
Analytes Detected in Sediment, PSC 11**

No Action Record of Decision  
Operable Unit 2  
Marine Corps Logistics Base Albany  
Albany, Georgia

Analyte	No. of Samples in Which the Analyte Is Detected/Total No. of Samples	Mean Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Sample with Maximum Concentration
<b><u>Volatile Organic Compounds (µg/kg)</u></b>					
2-Butanone	2/3	14.50	12.00	17.00	11SD02
Acetone	2/3	70.50	52.00	89.00	11SD02
Carbon disulfide	1/3	120.00	120.00	120.00	112D02
Toluene	2/3	3.5	3.00	4.00	12SD02
<b><u>Semivolatile Organic Compounds (µg/kg)</u></b>					
4-Methylphenol	1/3	690.00	690.00	690.00	11SD02
Di-n-butylphthalate	1/3	1,900.00	1,900.00	1,900.00	11SD02
bis(2-Ethylhexyl)phthalate	1/3	400.00	400.00	400.00	11SD02
<b><u>Pesticides and PCBs (µg/kg)</u></b>					
alpha-Chlordane	1/3	8.40	8.40	8.40	11SD02
gamma-Chlordane	1/3	12.00	12.00	12.00	11SD02
4,4-DDD	3/3	21.67	14.00	28.00	11SD01RE
4,4-DDE	3/3	70.33	13.00	140.00	11SD02
4,4-DDT	2/3	8.85	4.70	13.00	11SD02
<b><u>Inorganic Analytes (mg/kg)</u></b>					
Aluminum	3/3	7,040.00	5,250.00	10,500.00	11SD03
Arsenic	3/3	1.36	0.78	2.20	11SD03
Barium	3/3	33.47	14.20	55.10	11SD02
Beryllium	2/3	0.21	0.11	0.30	11SD03
Cadmium	1/3	1.10	1.10	1.10	11SD02
Calcium	3/3	753.67	232.00	1,390.00	11SD02
Chromium	3/3	12.07	7.60	17.70	11SD02
Cobalt	2/3	1.09	0.97	1.20	11SD03
Copper	3/3	8.10	3.10	11.50	11SD02
Iron	3/3	5,300.00	2,730.00	8,420.00	11SD02
Lead	3/3	43.60	20.30	80.60	11SD02
Magnesium	3/3	137.50	76.30	244.00	11SD02
Manganese	3/3	126.40	51.00	246.00	11SD02
Mercury	3/3	0.09	0.04	0.19	11SD02
Potassium	1/3	294.00	294.00	294.00	11SD02
Selenium	3/3	0.99	0.27	1.40	11SD02
Sodium	2/3	233.05	13.10	453.00	11SD02
Thallium	1/3	0.41	0.41	0.41	11SD02
See notes at end of table.					

**Table 5-3 (Continued)**  
**Analytes Detected in Sediment, PSC 11**

No Action Record of Decision  
Operable Unit 2  
Marine Corps Logistics Base Albany  
Albany, Georgia

Analyte	No. of Samples in Which the Analyte Is Detected/Total No. of Samples	Mean Concentration	Minimum Detected Concentration	Maximum Detected Concentration	Sample with Maximum Concentration
Vanadium	3/3	31.43	16.80	43.60	11SD02
Zinc	3/3	29.83	9.20	62.90	11SD02
Notes: $\mu\text{g/kg}$ = micrograms per kilogram. PCBs = polychlorinated biphenyls. DDD = dichlorodiphenyldichloroethane. DDE = dichlorodiphenyldichloroethene. DDT = dichlorodiphenyltrichloroethane. $\text{mg/kg}$ = milligrams per kilogram. PSC = Potential Source of Contamination.					

## 6.0 SUMMARY OF SITE RISKS

The OU 2 RI analytical data were evaluated to determine if the individual compounds were site related (i.e., resulting from historical waste disposal practices) or associated with background data at the base. Based on this evaluation, a list of chemicals of potential concern (CPCs) was developed for each medium investigated at OU 2. No CPCs were identified for subsurface soil, and it was not carried through the RA. Table 6-1 presents the CPCs for surface soil, surface water, and sediment at PSC 11. These CPCs were then evaluated within the RA.

An RA was prepared for OU 2 in accordance with USEPA Risk Assessment Guidance. The RA estimates or characterizes the potential present and future risks to human health and the environment posed by existing conditions at the site. Three factors were considered when evaluating the risks associated with OU 2:

- the nature and extent of contamination present at the site and surrounding areas
- the pathways through which people and the environment are or may potentially be exposed to contaminants at the site
- the potential toxic effects of site contaminants

Exposure pathways considered for the human health RA include ingestion, dermal (or skin) contact, and inhalation of particulates. The RA examined a hypothetical situation for current land use in which an older child trespasses on OU 2. The RA also examined a hypothetical future land use of OU 2, assuming residential housing (adult and child) and associated utility construction. The RA then calculated the potential risks that would result from exposure to surface soil, sediment, and surface water. The ecological risk assessment assumed that animals would have direct exposure to the surface soils, sediment, and surface water, with additional exposure through the food-chain uptake.

Both cancer and noncancer risks were evaluated. Table 6-2 presents the RA results for each hypothetical exposure scenario and medium and identifies the USEPA acceptable risk range for comparison purposes. According to the NCP for Superfund sites, the estimated cancer risk value of 1 in 1 million ( $10^{-6}$ ) is the beginning point to determine the need for implementing a response action. However, the acceptable risk can range from 1 in 10,000 ( $10^{-4}$ ) to 1 in 1 million ( $10^{-6}$ ) due to site-specific conditions (Section 300.430 of the NCP). These OU 2 conditions include limited public access to an active military facility, and the majority of contaminants are inaccessible to the general public (depth bls).

These RA results indicate that all of the risks associated with the exposure to surface soil, surface water, and sediment at OU 2 are below the USEPA acceptable risk range of  $1 \times 10^{-6}$ . The hazard index for each exposure scenario and medium is also below 1.

**Table 6-1**  
**Chemicals of Potential Concern, PSC 11**

No Action Record of Decision  
Operable Unit 2  
Marine Corps Logistics Base, Albany  
Albany, Georgia

Chemicals	Human Health			Ecological		
	Surface Soil	Surface Water	Sediment	Surface Soil	Surface Water	Sediment
<b><u>Volatile/Semivolatile Organic Compounds</u></b>						
2-Butanone			X			X
Acetone			X			X
Carbon disulfide			X			X
Toluene			X			X
4-Methylphenol			X			X
Di-n-butylphthalate			X			X
Bis(2-ethylhexyl)phthalate			X			X
<b><u>Pesticides and PCBs</u></b>						
4,4'-DDD			X			X
4,4'-DDE			X	X		X
4,4'-DDT			X	X		X
alpha-Chlordane			X			X
gamma-Chlordane			X			X
<b><u>Inorganics Analytes</u></b>						
Aluminum	X	X	X	X	X	X
Arsenic		X	X			
Barium		X	X		X	X
Beryllium			X			X
Cadmium			X			
Chromium	X	X	X	X		
Cobalt			X			X
Copper		X	X	X		
Iron					X	
Lead	X		X	X	X	X
Manganese		X	X		X	X
Mercury			X			X
Selenium			X			X
Thallium			X			X
Vanadium	X	X	X	X	X	X
Zinc		X	X			
Notes: PSC = potential source of contamination. DDD = dichlorodiphenyldichloroethane. DDE = dichlorodiphenyldichloroethene. DDT = dichlorodiphenyltrichloroethane.						

**Table 6-2**  
**Summary of Cancer and Noncancer Risk, PSC 11**

No Action Record of Decision  
Operable Unit 2  
Marine Corps Logistics Base, Albany  
Albany, Georgia

Land Use		Cancer Risk <sup>1</sup>	Noncancer HI <sup>2</sup>
<b><u>Current Land Use</u></b>			
Soil:			
	Trespasser	$1 \times 10^{-9}$	0.03
Surface Water:			
	Trespasser	$3 \times 10^{-7}$	0.14
Sediment:			
	Trespasser	$9 \times 10^{-7}$	0.02
<b><u>Future Land Use</u></b>			
Soil:			
	Resident	$3 \times 10^{-8}$	0.36
	Utility Worker	$1 \times 10^{-9}$	0.04
<sup>1</sup> The beginning point to determine the need for implementing a response action is $1 \times 10^{-6}$ for cancer risk. <sup>2</sup> The beginning point to determine the need for implementing a response action is 1.0 for noncancer risk.  Notes: PSC = potential source of contamination. HI = hazard index.			

## 7.0 EXPLANATION OF SIGNIFICANT CHANGES

As lead agency, SOUTHNAVFACENGCOM prepared and issued the Proposed Plan for OU 2 on July 29, 1996. This Proposed Plan described the rationale for a final No Action response at PSC 11. The USEPA, GEPA, and public concur with the No Action response. Therefore, no significant changes were made to the Proposed Plan. This response action may be reevaluated in the future if conditions at OU 2 indicate that an unacceptable risk to the public health or environment would result from exposure to the various media.

## **APPENDIX A**

### **COMMUNITY RELATIONS RESPONSIVENESS SUMMARY**

## COMMUNITY RELATIONS RESPONSIVENESS SUMMARY

### 1.0 OVERVIEW

SOUTHNAVFACENGCOM held a public meeting on August 15, 1996, at MCLB Albany to discuss the Proposed Plan for the No Action response at OU 2 and solicit comments and questions from the public. However, no citizens attended and no questions or comments were received during the public meeting. In addition, no written comments or questions were received during the 30-day public comment period.

### 2.0 BACKGROUND OF COMMUNITY INVOLVEMENT

An active community relations program providing information and soliciting input has been conducted by MCLB Albany for the entire NPL site. Interviews of citizens onbase and in the city of Albany were conducted in the winter of 1990 to identify community concerns. No significant concerns that required a focused response were identified. Most comments received were concerning the potential for contamination of water resources. However, those interviewed indicated that they place great trust in MCLB Albany and their efforts to rectify past waste disposal practices. In addition, the base formed a Technical Review Committee (TRC) that included members representing the city of Albany, Dougherty County, and the local academic community. These TRC community members were contacted in July 1996 to determine their continued interest in serving on the committee. Each member confirmed their interest in serving on the TRC. In addition, parties on the MCLB Environmental Branch mailing list were contacted to solicit new community members for the TRC. Many of these individuals responded enthusiastically, and an information packet including a TRC application form was prepared and distributed on September 4, 1996. The local media have also been kept informed since MCLB Albany was placed on the NPL. Installation Restoration program fact sheets have been prepared and made available at the MCLB Environmental Office at MCLB Albany. Documents concerning OU 2 are located in the Information Repository at Dougherty County Public Library and the Administrative Record at the Base Environmental Branch Office.

### 3.0 SUMMARY OF PUBLIC COMMENT AND AGENCY RESPONSE

3.1 PUBLIC MEETING. No comments or questions were received during the public meeting held on August 15, 1996.

3.2 PUBLIC COMMENT PERIOD. The 30-day public comment period was held for the OU 2 No Action Proposed Plan from July 30 to August 28, 1996, at MCLB Albany. No comments or questions were received during the public comment period.