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CONTAMINATION ASSESSMENT PLAN FOR MCCOY ANNEX SITE 7175 AND HERNDON ANNEX SITES 607 AND 610 NTC ORLANDO FL

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ABB ENVIRONMENTAL

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CONTAMINATION ASSESSMENT PLAN

MCCOY ANNEX SITE 7175
AND
HERNDON ANNEX SITES 607 AND 610

NAVAL TRAINING CENTER
ORLANDO, FLORIDA

Contract Task Order (CTO) No. 107

Contract No. N62467-89-D-0317

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FOREWORD

Subtitle I of the Hazardous and Solid Waste Amendments (HSWA) of 1984 to the Solid Waste Disposal Act (SWDA) of 1965 established a national regulatory program for managing underground storage tanks (USTs) containing hazardous materials, especially petroleum products. Hazardous wastes stored in USTs were already regulated under the Resource Conservation and Recovery Act (RCRA) of 1976. Subtitle I requires that the U.S. Environmental Protection Agency (USEPA) promulgate UST regulations. The program was designed to be administered by the individual States, who were allowed to develop more stringent standards, but not less stringent standards. Local governments were permitted to establish regulatory programs and standards that are more stringent, but not less stringent than either State or Federal regulations. The USEPA UST regulations are found in the Code of Federal Regulations, Title 40, Part 280 (40 CFR 280) (*Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks*) and Title 40 CFR 281 (*Approval of State Underground Storage Tank Programs*). Title 40 CFR 280 was revised and published on September 23, 1988, and became effective December 22, 1988.

The Navy's UST program policy is to comply with all Federal, State, and local regulations pertaining to USTs. This report was prepared to satisfy the requirements of Chapter 62-770, Florida Administrative Code, regulations on petroleum contamination in Florida's environment as a result of spills or leaking tanks or piping.

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Naval Training Center
Orlando, Florida

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GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
bls	below land surface
CAP	Contamination Assessment Plan
CAR	Contamination Assessment Report
CFR	Code of Federal Regulations
CompQAP	Comprehensive Quality Assurance Plan
CTO	Contract Task Order
EDB	ethylene dibromide
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FID	flame ionization detector
gpd/ft	gallons per day per foot
HSWA	Hazardous and Solid Waste Amendments of 1984
ID	inside diameter
IRA	initial remedial action
MOP	Monitoring Only Plan
msl	mean sea level
MTBE	methyl tert-butyl ether
NFAP	No Further Action Proposal
NTC	Naval Training Center
OVA	organic vapor analyzer
PAH	petroleum aromatic hydrocarbons
ppm	parts per million
PVC	polyvinyl chloride
QA/QC	quality assurance and quality control
RAC	Remedial Action Contract
RAM	Responsibility Assignment Matrix
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
SJRWMD	St. Johns River Water Management District
SOUTHNAVFACENGCOM	Southern Division, Naval Facilities Engineering Command
SWDA	Solid Waste Disposal Act of 1965
TRPH	total recoverable petroleum hydrocarbons

GLOSSARY (Continued)

USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
USTs	underground storage tanks
VOA	volatile organic aromatics

1.0 INTRODUCTION

ABB Environmental Services, Inc. (ABB-ES), has been contracted by Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) to prepare a Contamination Assessment Plan (CAP) for the contamination assessment at McCoy Annex Site 7175 and tank removal at Herndon Annex Sites 607 and 610. Both McCoy Annex and Herndon Annex are part of the Naval Training Center (NTC) in Orlando, Florida. The CAP outlines the overall technical approach for the contamination assessment at McCoy Annex Site 7175 and ABB-ES' responsibilities to support the Remedial Action Contract (RAC) contractor during tank removal activities at Herndon Annex.

2.0 BACKGROUND

2.1 SITE NAME, LOCATION, AND SIZE. NTC, Orlando (Figure 2-1) encompasses 2,072 acres in Orange County, Florida, and consists of four discrete facilities: the Main Base, McCoy Annex, Herndon Annex, and Area "C."

Main Base. The Main Base occupies approximately 1,095 acres within the city limits of Orlando and is located approximately 3 miles east of Interstate 4 and less than 1 mile north of State Road 50. Operations at the Main Base include the Recruit Training Command, Service School Command, Naval Administrative Command, Nuclear Power School, and the Naval Hospital (C.C. Johnson, 1985).

McCoy Annex. The facilities that comprise the McCoy Annex occupy 877 acres outside of the Orlando city limits and are located 12 miles south of the Main Base and just west of the Orlando International Airport. The Annex serves as a housing and community support activity for NTC, Orlando (C.C. Johnson, 1985).

Area "C". Area "C" occupies an area of 46 acres and is located 1 mile west of the Main Base off Maguire Boulevard and serves as a supply center for NTC, Orlando (C.C. Johnson, 1985).

Herndon Annex. Herndon Annex occupies 54 acres and is situated 1.5 miles south of the Main Base, within the confines of the general aviation Herndon Public Airport. Herndon Annex provides research, design, development, testing, evaluation, procurement, fabrication, maintenance, and logistical support for naval training equipment and devices. Herndon Annex is comprised of a computer center, flight-training building, uniform-supply warehouse, and several office buildings (C.C. Johnson, 1985).

2.2 SITE HISTORY.

Site 7175. Site 7175 is located within McCoy Annex on the north side of Binnacle Way between Daetwyler Drive and Avenue "C" (Figure 2-2). Site 7175 previously served as the McCoy Annex motor pool. The site is the former location of two 7,800-gallon steel underground storage tanks (USTs) containing gasoline and one 1,000-gallon steel UST containing diesel fuel. The USTs were installed in 1952. The USTs were removed in 1993. During removal of one of the 7,800-gallon USTs, free-floating petroleum product was observed on the groundwater in the excavation.

Herndon Annex. One 10,000-gallon steel UST and one 360-gallon steel UST are located within Herndon Annex, next to Buildings 607 and 610, respectively (Figure 2-3). Both tanks contain heating fuel. The 10,000-gallon UST next to Building 607 was installed in 1973. The installation date of the 360-gallon UST next to Building 610 is not known. Because the Navy plans to transfer the Herndon Annex property to civilian control in early 1995, these tanks must be removed.

2.3 PHYSIOGRAPHY. The State of Florida is divided into three geomorphic zones: the northern or proximal zone, the central or mid-peninsular zone, and the southern or distal zone (Scott, 1978). The Orlando area lies entirely within the

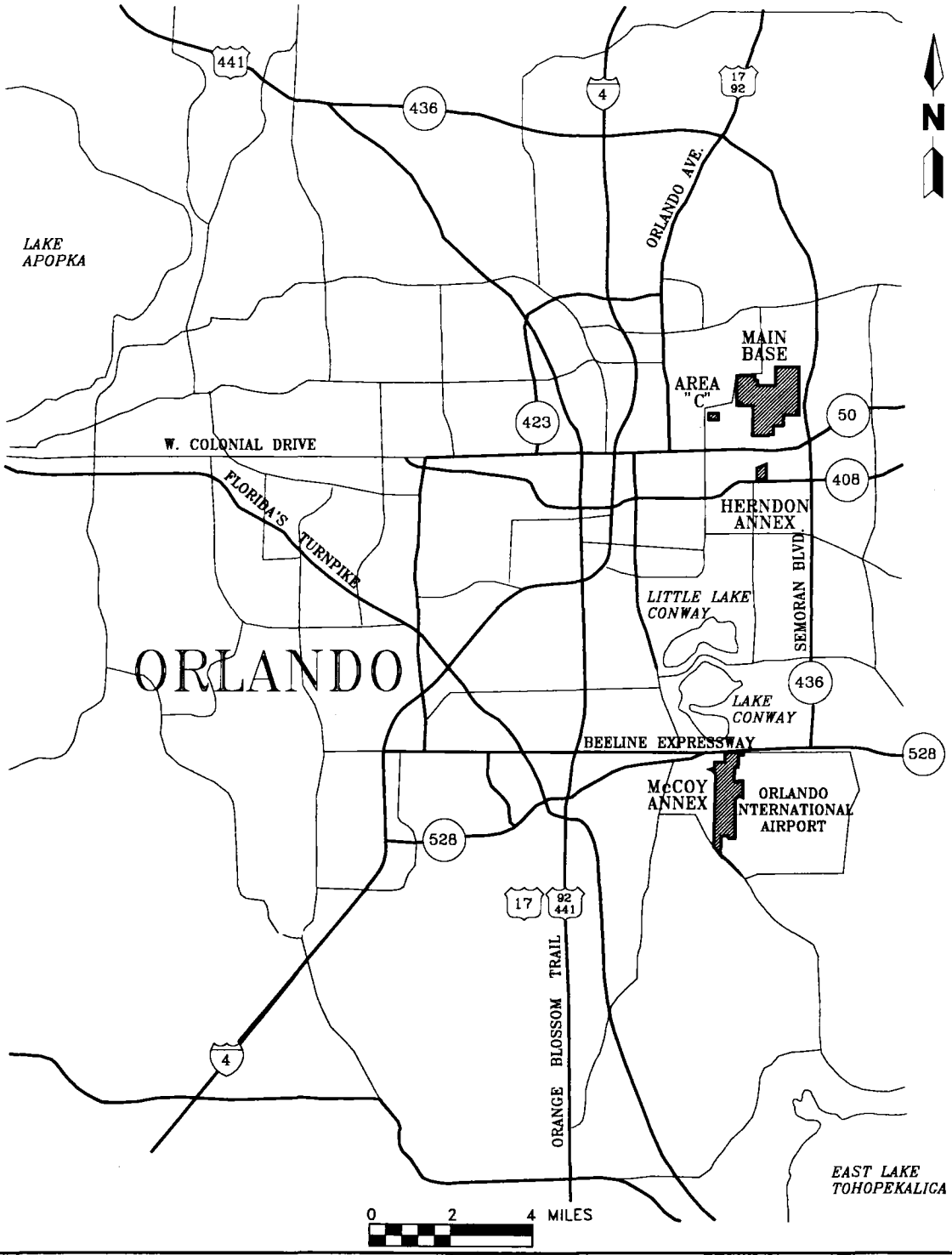

FIGURE 2-1
VICINITY MAP

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CONTAMINATION ASSESSMENT PLAN McCOY ANNEX SITE 7175 AND HERNDON ANNEX SITES 607 AND 610 NAVAL TRAINING CENTER ORLANDO, FLORIDA

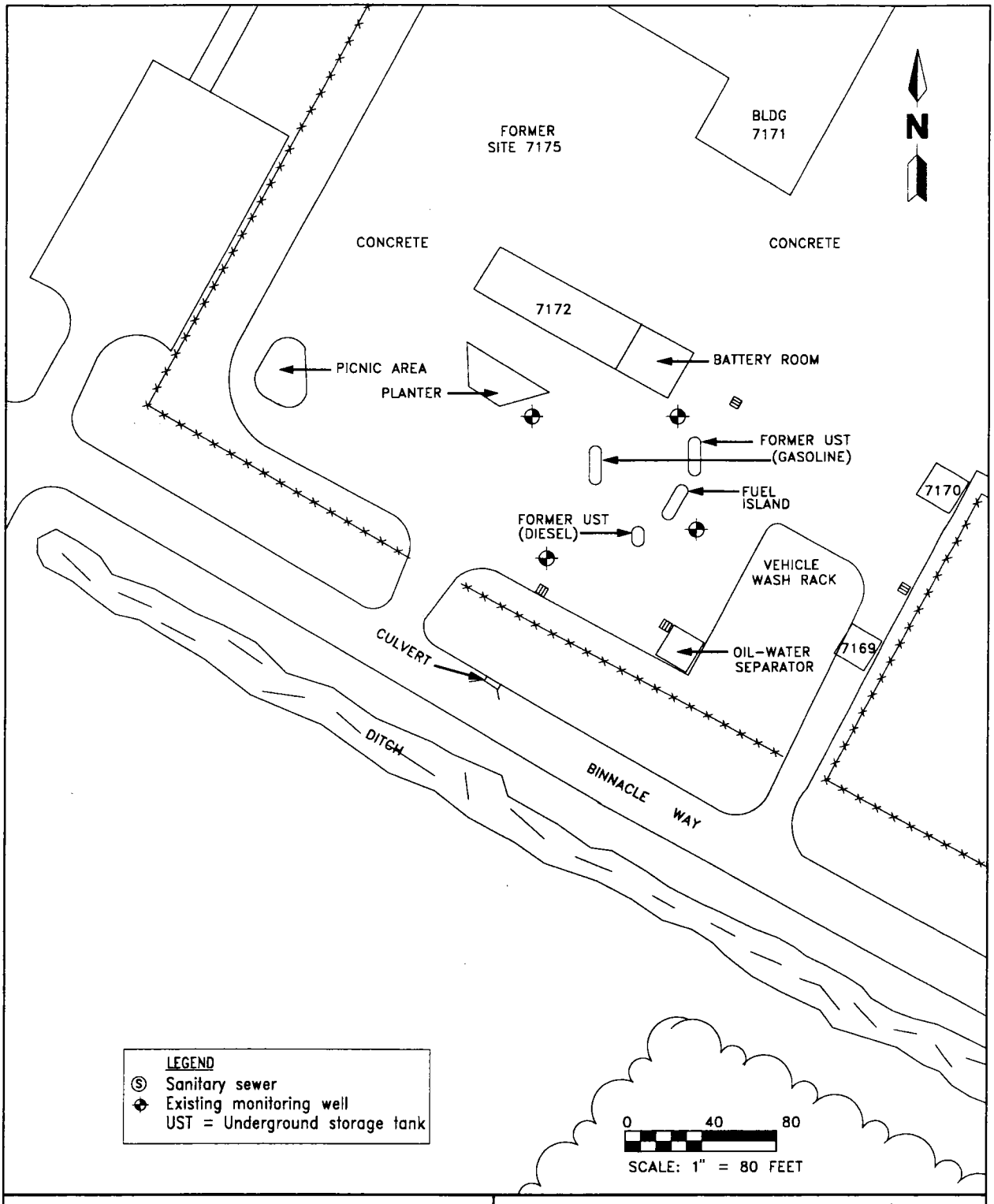

FIGURE 2-2
SITE PLAN,
MCCOY ANNEX SITE 7175

CONTAMINATION ASSESSMENT PLAN, McCOY ANNEX SITE 7175 AND HERNDON ANNEX SITES 607 AND 610
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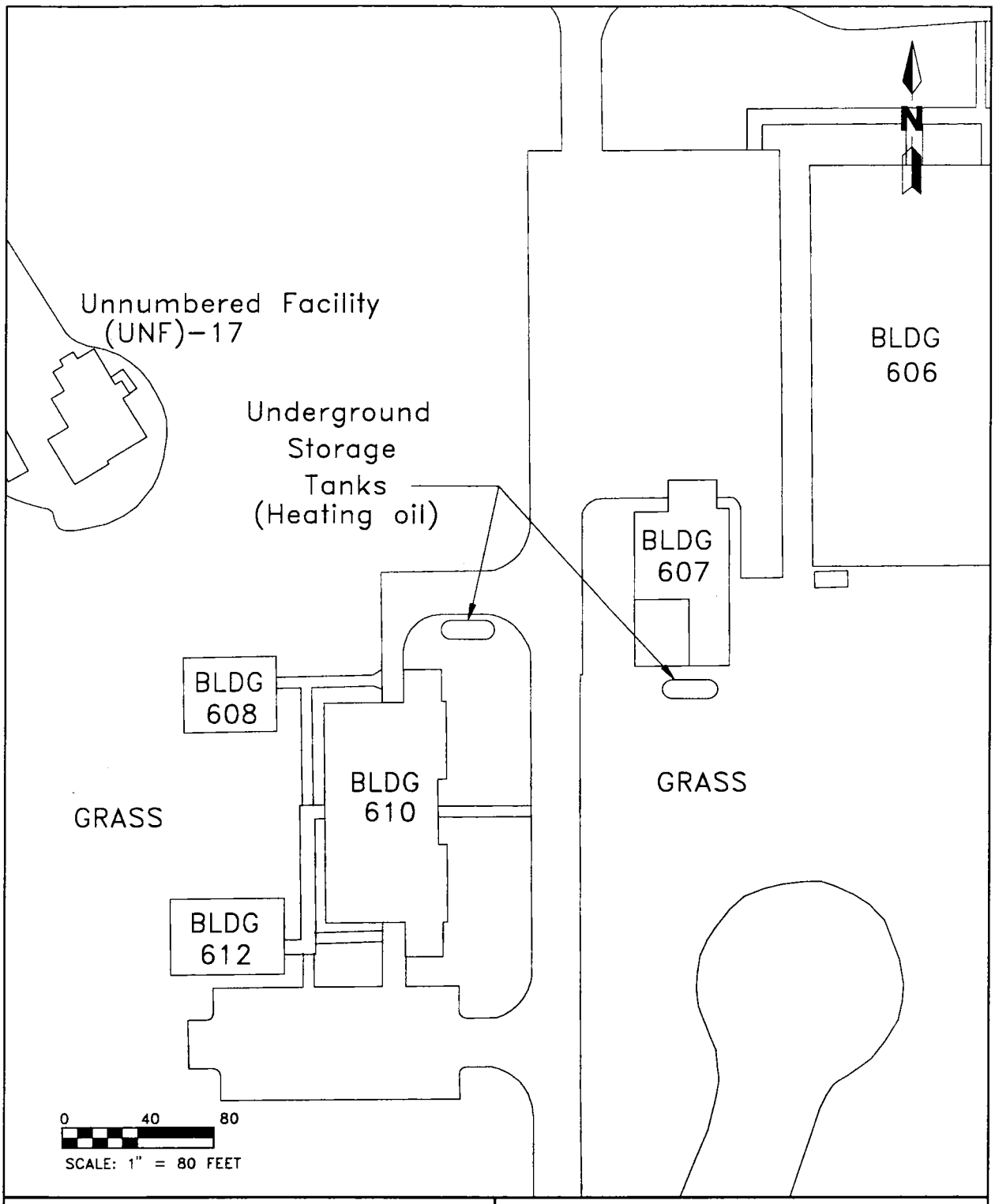

FIGURE 2-3
SITE PLAN,
HERNDON ANNEX

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CONTAMINATION ASSESSMENT PLAN McCOY ANNEX SITE 7175 AND HERNDON ANNEX SITES 607 AND 610
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central or mid-peninsular zone and is characterized by discontinuous highlands forming subparallel ridges separated by broad valleys, all roughly paralleling the present coastline.

Within the central zone are three physiographic subdivisions: the Atlantic Coastal Ridge, characterized by a series of ridges with elevations of 50 feet above mean sea level (msl); the Atlantic Coastal lagoon, characterized by a series of lagoons; and the Atlantic Barrier Chain, characterized by barrier islands with undulating land surfaces with elevations no higher than 30 feet msl.

The NTC, Orlando sites lie within the Atlantic Coastal Ridge subdivision of the central zone geomorphic province. Site elevations range between 85 and 90 feet above msl. Overall site surface drainage is controlled locally by several closed depressions and wetland areas.

2.4 HYDROGEOLOGY.

2.4.1 Regional Orange County is underlain by three water-bearing zones: the surficial aquifer, the secondary artesian aquifer, and the Floridan aquifer system.

Surficial Aquifer. The Holocene to Pliocene undifferentiated deposits that contain the surficial aquifer extend to a depth of approximately 70 feet below land surface (bls) in the vicinity of the McCoy Annex (Scott, 1978). The undifferentiated deposits, which may include the Caloosahatchee Marl, are comprised predominantly of quartz sand and varying amounts of clay, hardpan, and shell. The surficial aquifer exists under unconfined or water table conditions in the study area. Recharge to the aquifer comes predominantly from rainfall in the area and seepage from streams, lakes, and septic systems. Water use in the surficial aquifer in the county is generally for low pumping activities such as lawn irrigation and livestock watering. Water quality varies considerably because of contamination in some areas from fertilizers, pesticides, septic tanks, and surface contamination.

Secondary Artesian Aquifer. The Miocene marine deposits of the Hawthorn Formation that contain the secondary artesian aquifer generally occur at depths ranging from 60 to more than 150 feet bls in the site area. The Hawthorn Formation is comprised of gray-green, clayey, quartz sand and silt with some phosphatic sand, limestone, and shell beds. The secondary artesian aquifer is contained within the discontinuous shell beds, thin limestone lenses, and permeable sand and gravel zones found in the formation. These zones can produce enough water for domestic use and have produced as much as 1,000 gallons per minute, but are not the major water source in the area (Lichtler and others, 1968). The clays within the Hawthorn Formation form confining units between the surficial aquifer, the secondary artesian aquifer, and the deeper Floridan aquifer system. Recharge from the secondary artesian aquifer is by leakage from the overlying surficial and underlying Floridan aquifers. Discharge from the aquifer is from leakage and well pumpage. The water quality of the aquifer varies but is generally potable. Information on the direction of flow in the secondary artesian aquifer is not available.

Florida Aquifer System. The Floridan aquifer system, underlying the lower confining units of the Hawthorn Formation, consists of limestones from the upper

Eocene Ocala Group Limestone and Avon Park Limestone to the middle Eocene Lake City Limestone. The aquifer is estimated to be approximately 2,000 feet thick in the Orlando area (Lichtler and others, 1968).

The Floridan aquifer system is the major source of potable water in the area and has two primary water producing zones. The lithology of the upper zone is cream to tan, fine, soft to medium hard, granular, porous, sometimes dolomitic limestone of the Ocala and Avon Park Limestones. The upper zone ranges from 150 to 600 feet bls and has estimated transmissivity values ranging between 270,000 and 596,000 gallons per day per foot (gpd/ft). The lower producing zone consists of dark brown, dense, hard, crystallized dolomite of the Lake City Limestone. This zone ranges from 1,000 to 1,500 feet bls and has estimated transmissivity values ranging between 4,300,000 and 5,000,000 gpd/ft (Boyle Engineering Corporation, 1982). Separating the two zones is a 300 to 400 foot series of relatively impermeable layers composed of soft limestone and dolomitic limestones.

Groundwater flow in the Floridan aquifer is to the east toward the Atlantic Ocean (Healy, 1982). Recharge to the aquifer is derived from rainfall in the northwest part of Orange County and underground flow from other counties, sinkholes, and drainage wells in the area. There are numerous solution caverns and channels within the producing zones of the Floridan aquifer system. Most of the water movement within the aquifer is through these interconnected caverns and channels (Lichtler, 1972).

2.4.2 **Site Specific** The site-specific hydrogeology is as follows.

Site 7175. Depth to water at the site is expected to vary from 4 to 8 feet bls. Groundwater flow direction, based on water level measurements obtained during the investigation at adjoining Site 7174, is expected to be to the south. Groundwater in the area of Site 7175 and Herndon Annex is classified as G-II.

Floridan Aquifer System. The top of the Floridan aquifer system occurs at about 25 to 50 feet below msl beneath the site (Scott and Hajishafie, 1980). Potentiometric trends within the Floridan aquifer system in the vicinity of the site indicate groundwater flow to be easterly (Healy, 1982).

Secondary Artesian Aquifer. The depth to the top of the Miocene marine deposits of the Hawthorn Formation ranges from 60 to more than 150 feet bls in the area of the McCoy Annex, Orlando (Lichtler and others, 1968).

Herndon Annex. No site-specific hydrogeologic information exists for Herndon Annex.

3.0 POTABLE WELL SURVEY

McCoy Annex. A potable well survey of the four geographic sections surrounding Site 7174, located adjacent to Site 7175, was conducted for ABB-ES by the St. Johns River Water Management District (SJRWMD). The U.S. Geological Survey (USGS) Pine Castle, Florida, 7½-minute topographic map was used to locate the site and the SJRWMD was asked to review files on Sections 31 and 32, Township 23 South, Range 30 East, and Sections 5 and 6, Township 24 South, Range 30 East, for drinking water wells. The SJRWMD reported to ABB-ES that no information on drinking water wells was available for these locations. The survey encompassed approximately the area within a 1-mile radius around the site.

Herndon Annex. A potable well survey has not been conducted at Herndon Annex.

4.0 PROPOSED ASSESSMENT PLAN

4.1 MCCOY ANNEX SITE 7175.

4.1.1 **Soil Investigation** Approximately 50 soil borings will be advanced to the water table using the TerraProbe™. Soil samples will be collected at 2-foot intervals until the water table is reached. The samples will be screened using an organic vapor analyzer (OVA) equipped with a flame ionization detector (FID) in accordance with Chapter 62-770, Florida Administrative Code (FAC), requirements. For the investigation at Site 7175, soil having OVA measurements in excess of 50 parts per million (ppm) will be considered "excessively" contaminated.

4.1.2 **Initial Remedial Actions** After the soil investigation has been completed, a report will be prepared outlining the horizontal and vertical extent of soil contamination. The report will be used by the RAC contractor to conduct an Initial Remedial Action (IRA). The IRA will consist of the removal of petroleum-contaminated soil with FID measurements greater than 50 ppm and replacing it with clean fill. ABB-ES will assist the RAC contractor by collecting samples of soil removed from the contaminated area and screening the samples with an FID to verify that the contaminated soil has been removed. Soil samples will be collected along the perimeter of the excavated area at 20-foot to 30-foot intervals. Upon completion of the soil removal operations, the excavated area will be backfilled with clean fill material. ABB-ES will screen the soil with an FID in the backfilled area to verify that it is clean.

During the IRA, ABB-ES personnel and their subcontractors will stockpile contaminated drilling cuttings (sustained FID readings of greater than 50 ppm) on plastic sheeting for aeration. The drilling cuttings will be screened with an FID at the completion of the field investigation. If FID readings are less than 50 ppm, the cuttings will be spread in an area designated by the NTC, Orlando Environmental Coordinator. If FID readings from the drilling cuttings remain in excess of 50 ppm, ABB-ES' subcontractor will drum the cuttings. Disposal of the drummed cuttings will be the responsibility of the Navy.

4.1.3 **Monitoring Well Installation** Approximately 15 permanent shallow monitoring wells (15 feet in depth) and two deep wells (35 feet in depth) will be installed at the site. Approximately 5 of the proposed 15 shallow wells will be installed in the backfilled area. The remaining monitoring wells will be installed in selected locations to assess the horizontal and vertical extent of groundwater contamination.

The shallow monitoring wells will be constructed of 2-inch inside diameter (ID), Schedule 40, flush-threaded, polyvinyl chloride (PVC) screen and casing. Screen length will be 10 feet with a slotted screen opening of 0.010 inch. At least 2 feet of screen will be placed above the water table to accommodate seasonal and tidal fluctuations of the water table. The screen will be surrounded with a 20/30 grade quartz sand filter pack to 1 foot above the top of the screen as determined by the depth to water in each well. A 1-foot bentonite seal will be placed above the filter pack. The remaining annulus will be grouted to land surface with neat cement.

The deep monitoring wells will be constructed of 2-inch ID, Schedule 40, flush-threaded, PVC screen and casing. Screen length will be 5 feet with a slotted screen opening of 0.010 inch. The monitoring well will be placed within a 6-inch PVC surface casing, installed to prevent vertical migration of contaminants. The depth of the surface casing will be determined by the vertical extent of contaminants being measured on the FID. The screen will be surrounded with a 20/30 quartz sand filter pack to at least 2 feet above the top of the screen. A 2-foot fine-grained sand (30/65 grade) seal will be placed immediately above the filter pack. The remaining annulus will be grouted to land surface with neat cement. The annular space surrounding the surface casing will also be grouted to land surface with neat cement.

A locking, watertight cap will be installed on each well. All monitoring wells will be finished below grade in a subsurface traffic-bearing vault and protected with a metal manhole assembly. Upon completion, all newly installed monitoring wells will be developed by pumping until the purged water is clear and relatively free of sediment to provide a good hydraulic connection with the surrounding aquifer.

Diagrams of typical shallow and deep monitoring well construction are illustrated in Figures 4-1 and 4-2, respectively. Detailed information on monitoring well construction, lithologic descriptions, split-spoon samples, and other pertinent data will be graphically displayed in boring logs in the Contamination Assessment Report (CAR). Soil will be classified in accordance with the Unified Soil Classification System.

4.1.4 **Groundwater Sampling** Groundwater samples will be collected from all proposed monitoring wells at the site. Four of the proposed monitoring wells closest to the removed diesel tank will be sampled for constituents of the kerosene analytical group as defined in Chapter 62-770, FAC. Analyses will be performed for volatile organic halocarbons by U.S. Environmental Protection Agency (USEPA) Method 601, for volatile organic aromatics (VOA) and methyl tert-butyl ether (MTBE) by USEPA Method 602, for polynuclear aromatic hydrocarbons (PAH) by USEPA Method 610, for total recoverable petroleum hydrocarbons (TRPH) by USEPA Method 418.1, for ethylene dibromide (EDB) by USEPA Method 504, and for lead by USEPA Method 239.2.

The remaining monitoring wells will be sampled for the gasoline analytical group as defined in Chapter 62-770, FAC. Analyses will be performed for volatile organic halocarbons by USEPA Method 601, for VOA and MTBE by USEPA Method 602, for EDB by USEPA Method 504, and for lead by USEPA Method 239.2.

Appropriate quality assurance and quality control (QA/QC) samples will also be collected and analyzed. Groundwater samples will be collected with Teflon™ bailers and shipped via overnight carrier to a Florida Department of Environmental Protection (FDEP)- and USEPA-approved analytical laboratory. The analytical sampling program will comply with the ABB-ES FDEP-approved Comprehensive Quality Assurance Plan (CompQAP).

4.1.5 **Aquifer Tests** Aquifer tests will be conducted to estimate the hydraulic properties of the water-table aquifer. Rising-head slug tests will be performed on a minimum of three monitoring wells to collect data for calculating hydraulic conductivity. Hydraulic conductivity will be calculated using the computer program AQTESOLV™ (Geraghty & Miller, Inc. 1989). The AQTESOLV™ program

calculates hydraulic conductivity from slug test data following the methods of Bouwer and Rice (1976) for partially penetrating wells screened in unconfined aquifers.

4.2 HERNDON ANNEX SITES 607 AND 610.

4.2.1 TANK CLOSURE SUPPORT

4.2.1.1 Tank and Soil Removal ABB-ES will provide oversight of the RAC contractor during tank and petroleum-contaminated soil removal operations at both sites. ABB-ES will assist the RAC contractor by collecting soil samples during the excavation. The soil samples will be obtained directly from the middle of the backhoe bucket used during the excavation. The samples will be transferred to a 16-ounce jar and analyzed for organic vapors with an OVA equipped with an FID following procedures outlined by FDEP. The purpose of the RAC oversight is to verify that all petroleum-contaminated soil has been removed.

4.2.1.2 Monitoring Well Installation One temporary groundwater monitoring well will be installed in the tank excavation area at each of the two sites to assess the extent and nature of any groundwater contamination that may still exist. The temporary well will be installed in the area of highest encountered soil contamination or, if no soil contamination is encountered, in the center of the backfilled area. The well will be constructed of 2-inch ID, Schedule 40, flush-threaded, PVC screen and casing. Screen length will be 5 feet with a slotted screen opening of 0.010 inch. Approximately 2 feet of screen will be placed above the water table to accommodate seasonal and tidal fluctuations of the water table. The screen will be surrounded with a 20/30 quartz sand filter pack extending to the surface.

A locking, watertight cap will be installed on each well. Upon completion, each well will be developed by pumping until the purged water is clear and relatively free of sediment to provide a good hydraulic connection with the surrounding aquifer.

4.2.1.3 Groundwater Sampling A groundwater sample will be collected from each temporary well and analyzed for constituents of the kerosene analytical group as defined in Chapter 62-770, FAC. Analyses will be performed for volatile organic halocarbons by USEPA Method 601, for VOA and MTBE by USEPA Method 602, for PAH by USEPA Method 610, for TRPH by USEPA Method 418.1, for EDB by USEPA Method 504, and for lead by USEPA Method 239.2.

Appropriate QA/QC samples will also be collected and analyzed. Groundwater samples will be collected with Teflon™ bailers and shipped via overnight carrier to an FDEP- and USEPA-approved analytical laboratory. The analytical sampling program will comply with the ABB-ES FDEP-approved CompQAP.

4.2.2 Contamination Assessment Field Investigation In the event that contaminated groundwater is discovered at either of the two sites, a petroleum contamination assessment will be performed in accordance with Chapter 62-770, FAC. ABB-ES will install groundwater monitoring wells to assess the horizontal and vertical extent of groundwater contamination at each site.

4.2.2.1 **Monitoring Well Installation** As many as 10 permanent shallow monitoring wells (20 feet in depth) and 1 deep well (40 feet in depth) will be installed at each site.

The shallow monitoring wells will be constructed of 2-inch ID, Schedule 40, flush-threaded, PVC screen and casing. Screen length will be 10 feet with a slotted screen opening of 0.010 inch. At least 2 feet of screen will be placed above the water table to accommodate seasonal and tidal fluctuations of the water table. The screen will be surrounded with a 20/30 quartz sand filter pack to 1 foot above the top of the screen as determined by the depth to water in each well. A 1-foot bentonite seal will be placed above the filter pack. The remaining annulus will be grouted to land surface with neat cement.

The deep monitoring well will be constructed of 2-inch ID, Schedule 40, flush-threaded, PVC screen and casing. Screen length will be 5 feet with a slotted screen opening of 0.010 inch. The monitoring well will be placed within a 6-inch PVC surface casing, installed to prevent vertical migration of contaminants. The depth of the surface casing will be determined by the vertical extent of contaminants being measured on the FID. The screen will be surrounded with a 20/30 quartz sand filter pack to at least 2 feet above the top of the screen. A 2-foot fine-grained sand (30/65 grade) seal will be placed immediately above the filter pack. The remaining annulus will be grouted to land surface with neat cement. The annular space surrounding the surface casing will also be grouted to land surface with neat cement.

A locking, watertight cap will be installed on each well. All monitoring wells will be finished below grade in a subsurface traffic-bearing vault and protected with a metal manhole assembly. Upon completion, all newly installed monitoring wells will be developed by pumping until the purged water is clear and relatively free of sediment to provide a good hydraulic connection with the surround aquifer.

Diagrams of typical shallow and deep monitoring well construction are illustrated in Figures 4-1 and 4-2, respectively. Detailed information on monitoring well construction, lithologic descriptions, split-spoon samples, and other pertinent data will be graphically displayed in boring logs in the CAR. Soil will be classified in accordance with the Unified Soil Classification System.

4.2.2.2 **Groundwater Sampling** Once the monitoring wells have been installed and properly developed, groundwater samples will be collected and analyzed for constituents of the kerosene analytical group as defined in Chapter 62-770, FAC. Analyses will be performed for volatile organic halocarbons by USEPA Method 601, for VOA and MTBE by USEPA Method 602, for PAH by USEPA Method 610, for TRPH by USEPA Method 418.1, for EDB by USEPA Method 504, and for lead by USEPA Method 239.2.

Appropriate QA/QC samples will also be collected and analyzed. Groundwater samples will be collected with Teflon™ bailers and shipped via overnight carrier to an FDEP- and USEPA-approved analytical laboratory. The analytical sampling program will comply with the ABB-ES FDEP-approved CompQAP.

5.0 PREPARATION OF REPORTS

5.1 MCCOY ANNEX SITE 7175.

5.1.1 Initial Site Screening Report Upon completion of the soil boring program, a letter report will be prepared presenting the findings, conclusions, and recommendations of the initial site screening. The site screening report will include soil OVA data and maps outlining the approximate vertical and horizontal extent of soil contamination. The site screening report will be used by the RAC contractor to conduct the IRA.

5.1.2 Contamination Assessment Report Subsequent to completion of the contamination assessment and receipt of the laboratory analytical results of the groundwater samples, a CAR will be prepared and submitted to SOUTHNAVFACENGCOM and the naval activity for review and approval. The report will include a discussion of site background information, methodologies used during the investigation, the field and laboratory data in tabular and figure format, an evaluation and discussion of the extent and nature of the soil and groundwater contamination at the site, a summary, a conclusion, and recommendations for further action at the site.

5.1.3 Follow-up Report The CAR will recommend further action to be conducted at the site. This action will likely include a Remedial Action Plan (RAP), assuming significant groundwater contamination is detected at the site; a Monitoring Only Plan (MOP) if a small amount of contamination is detected at the site, but the levels are in excess of State target levels; or a No Further Action Proposal (NFAP) if no further contamination exists or it exists in an amount that is not significant.

5.2 HERNDON ANNEX SITES 607 AND 610.

5.2.1 Closure Report Upon completion of the removal of the USTs at the Herndon Annex sites and any encountered petroleum-contaminated soil and upon receipt of the laboratory analyses of the groundwater samples collected from the temporary wells installed in the tank excavation areas, a closure report will be prepared for each site in accordance with Chapter 62-761, FAC. The report will be submitted to SOUTHNAVFACENGCOM for review and FDEP for approval and closure of the tank sites.

The report will include the FDEP UST closure form, a site map of the location of the removed UST, and supporting laboratory and field data.

5.2.2 Contamination Assessment Report In the event that contaminated groundwater is discovered at either of the two sites, a petroleum contamination assessment will be performed. Upon completion of the field investigation, ABB-ES will analyze the data collected in the field and prepare a CAR for each site. The report will include a discussion of site background information, methodologies used during the investigation, the field and laboratory data in tabular and figure format, an evaluation and discussion of the extent and nature of the soil and groundwater contamination at the site, a summary, a conclusion, and recommendations for further action at the site.

5.2.3 **Follow-up Report** The CAR will recommend further action to be conducted at the site. This action will likely include a RAP, assuming significant groundwater contamination is detected at the site; a MOP, if a small amount of contamination is detected at the site, but the levels are in excess of State target levels; or a NFAP, if no further contamination exists or it exists in an amount that is not significant.

6.0 SCHEDULE

Figure 6-1 depicts a Gantt Schedule, indicating the duration and completion dates of individual tasks for the assessment and remedial support at McCoy Annex Site 7175 and Herndon Annex Sites 607 and 610. As noted on the Gantt Schedule, the duration of contamination assessment and Responsibility Assignment Matrix (RAM) support will be an estimated 23 months.

Figure 6-1 Gantt Schedule

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