N65928.AR.002739
NTC ORLANDO
5090.3a

LETTER REGARDING SITE ASSESSMENT PLAN FOR BUILDING 7174 MCCOY ANNEX NTC ORLANDO FL
10/6/1997
ABB ENVIRONMENTAL

ABB

FILE COPY

October 6, 1997

Doc. No. 02530.033

Mr. John W. Mitchell
Remedial Project Manger
State of Florida
Department of Environment Protection
Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Site Assessment Plan for
Building 7174, McCoy Annex,
Naval Training Center, Orlando
Contract No: N62467-89-D-0317/107

Building 7174 has a long history of investigation and now, most recently, an initial remedial action (IRA). All site historical activities are described in previous reports, the reader should review the site history from the reports references in Attachment A of this letter. This letter report briefly describes site history and proposed actions that ABB-ES intends to execute to complete the site assessment report (SAR). Building 7174 is located within McCoy Annex on the northeast corner of Binnacle Way and Daetwyler Drive (Figure 1). Building 7174 previously served as the McCoy Annex Service Station. The site had five 5,000 gallon and one 3,000 gallon steel underground storage tanks (UST's) containing gasoline and two 1,000 gallon steel UST's containing waste oil. The UST's were installed in 1942. The UST's were removed in 1997. During removal of the UST's a total of 2,100 cubic yards (cy) of petroleum contaminated soil was excavated, transported and thermally treated at on off-site thermal facility. The site was brought to surface grade using clean, fine sand.

On September 27 and 29 1995, a potable well survey of the surrounding area was conducted by ABB-ES. The U.S. Geological Survey (USGS) Pine Castle, Florida, 7 & 1/2 -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 the existence of 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.

Sponsor Special Olympics World Games Connecticut 1995

ABB Environmental Services Inc.

1080 Woodcock Road, Suite 100
St. Paul Building
Orlando, Florida 32803

Telephone (407) 895-8845
Fax (407) 896-6150

On June 1997, an Initial Remedial Action (IRA) was conducted at the site. The IRA consisted of excavating 2,100 cy of petroleum contaminated soil with OVA readings (total hydrocarbons response) of greater than 500 ppm and backfilling the excavation with clean fill. ABB-ES was responsible for collecting soil samples from the contaminated area and screening the soil samples with OVA/FID. Soil samples were collected along the perimeter of the excavated area at 20-foot to 10 foot intervals.

Proposed Soil Investigation

Approximately 40 soil borings will be advanced to the water table using the terra probe. 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) and 5% of the total samples or a minimum of three samples will be collected for laboratory analyses (EPA Method 8020, 8100 and Fl-Pro) in accordance with the new Chapter 62-770, Florida Administrative Code (FAC) requirements. OVA readings and laboratory analytical result will be utilized to identify petroleum contamination at the site. Figure 2 shows the proposed soil boring locations.

Proposed Monitoring Well Installation

On January 16, 1997, before the IRA activities began, eleven shallow monitoring wells (Old-7174-5, Old-7174-7, Old-7174-8, Old-7174-9, Old-7174-11, Old-7174-12, Old-7174-13, Old-7174-15, Old-7174-20, Old-7174-21 and Old-7174-22) and one deep well (Old-7174-17) were abounded by Groundwater Protection Services, Inc. ABB-ES intends to utilize existing monitoring wells and to install nine shallow monitoring wells (15 feet in depth) and one deep monitoring well (35 feet in depth) in the area of site excavation. Figure 4 shows the proposed monitoring well locations. Table 1 summarizes the well construction details. The new wells and the remaining old wells will be used to assess the horizontal and vertical extent of the 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 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 30/65 fine sand 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 20 feet below land surface (bls). The screen will be placed between 30 and 35 feet bls and 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.

Locking, watertight caps will be installed on all wells. All monitoring wells will be finished below grade in a subsurface traffic-bearing vault and protected with a bolted 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.

Detailed information of monitoring well construction, lithologic descriptions, and other pertinent data will be graphically displayed in boring logs included in the Site Assessment Report (SAR). Soil will be classified in accordance with the Unified Soil Classification System.

Proposed Groundwater Sampling

Groundwater samples will be collected from all new and old monitoring wells at the site. Groundwater samples will be collected and analyzed for the 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 Agency (USEPA) Method 601 (volatile halocarbons), for volatile organic aromatic and methyl tert-butyl ether by USEPA Method 602, for polynuclear aromatic hydrocarbons by USEPA Method 610, for ethylene dibromide by USEPA Method 504, for lead by USEPA Method 239.7 and Florida Petroleum Residual Organic (FL-PRO) for TRPH's.

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 an FDEP-and USEPA-approved analytical laboratory. The analytical sampling program will comply with the ABB-ES's FDEP-approved Comprehensive Quality Assurance Plan.

Aquifer Tests

Finally, 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.

Site Assessment Report

Subsequent to completion of the site assessment and receipt of the laboratory analytical results of the soil and groundwater samples, a SAR will be prepared and submitted to FDEP, SOUTHNAVFACENGCOM and naval activity for review and approval. The report will include a discussion of the 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.

Follow-up Report

The SAR will recommend further action to be conducted at the site. This action may include a Remedial Action Plan (RAP), assuming significant groundwater contamination detected at the site; a Natural Attenuation with Monitoring Only Plan (MOP) if a small amount of contamination is detected at the site, but the levels are in excess of State's target levels; or a No Further Action Proposal (NFAP) if no further contamination exists or if contamination exists in an amount that is not significant.

The above listed actions have been previously discussed and are planned to begin in mid October. Should you have any questions or comments concerning this letter please contact the undersigned.

Very Truly Yours,
ABB ENVIRONMENTAL SERVICES, INC.

Manuel Alonso, P.G.
Senior Geologist

Mirna Barq
Project Engineer

CC: Nick Ugolini
LT Gary Whipple
Mark Zill
Wayne Hansel
John Kaiser

Table 1
Groundwater Monitoring Well Construction
Data Summary

Site Assessment Plan
Building 7174, McCoy Annex
Naval Training Center
Orlando, Florida

Well Number	Date Installed	Total Depth (feet bls)	Well Diameter (inches)	Screened Interval (feet bls)	Slot Size (inches)	Comments
7174-1	N/A	N/A	N/A	N/A	N/A	Destroyed during tank removal
7174-2	N/A	N/A	N/A	N/A	N/A	Destroyed during tank removal
7174-3	N/A	N/A	N/A	N/A	N/A	Destroyed during tank removal
7174-4	N/A	N/A	N/A	N/A	N/A	Destroyed during tank removal
7174-5	8/22/88	13.5	2	3.5-13.5	0.01	Abounded by Groundwater Protection, Inc.
7174-6	8/22/88	15	2	5-15	0.01	Installed by Groundwater Protection, Inc.
7174-7	8/23/88	13	2	3-13	0.01	Abounded by Groundwater Protection, Inc.
7174-8	8/23/88	13	2	3-13	0.01	Abounded by Groundwater Protection, Inc.
7174-9	8/23/88	13	2	3-13	0.01	Abounded by Groundwater Protection, Inc.
7174-10	8/23/88	14	2	4-14	0.01	Abounded by Groundwater Protection, Inc.
7174-11	8/18/91	13	2	3-13	0.01	Abounded by Groundwater Protection, Inc.
7174-12	8/18/91	13	2	3-13	0.01	Abounded by Groundwater Protection, Inc.
7174-13	8/18/91	13	2	3-13	0.01	Abounded by Groundwater Protection, Inc.
7174-14	8/18/91	13	2	3-13	0.01	Installed by Groundwater Protection, Inc.
7174-15	8/18/91	15	2	5-15	0.01	Abounded by Groundwater Protection, Inc.
7174-16	8/18/91	15	2	5-15	0.01	Installed by Groundwater Protection, Inc.
7174-17	8/19/91	37	4	31-36	0.01	Abounded by Groundwater Protection, Inc.
7174-18	8/18/91	13	2	3-13	0.01	Installed by Groundwater Protection, Inc.
7174-19	8/19/91	14	2	4-14	0.01	Installed by Groundwater Protection, Inc.
7174-20	7/12/96	14	2	4-14	0.01	Abounded by Groundwater Protection, Inc.
7174-21	7/12/96	14	2	4-14	0.01	Abounded by Groundwater Protection, Inc.
7174-22	7/12/96	14	2	4-14	0.01	Abounded by Groundwater Protection, Inc.
7174-23	7/12/96	14	2	4-14	0.01	Installed by Groundwater Protection, Inc.

Note: bls = below land surface.

Attachment A
References

REFERENCES

ABB-Environmental Services, Inc. (ABB-ES), 1996, Contamination Assessment Report, McCoy Annex, Naval Training Center, Orlando, Florida: prepared for Souther Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM), North Charlston, South Carolina, October.

ABB-ES, 1993, Remedial Action Plan, McCoy Annex, Naval Training Center, Orlando, Florida: prepared for SOUTHNAVFAVFACENGCOM, North Charleston, South Carolina, April.

ABB-ES, 1995a, Remedial Action Plan Addendum 2, McCoy Annex, Naval Training Center, Orlando, Florida: prepared for SOUTHNAVFAVFACENGCOM, North Charleston, South Carolina, March

ABB-ES, 1995b, Technical Memorandum, McCoy Annex, Naval Training Center, Orlando, Florida: prepared for SOUTHNAVFAVFACENGCOM, North Charleston, South Carolina, October.

ABB-ES, 1995c, Contamination Assessment Report, McCoy Annex: prepared for SOUTHNAVFAVFACENGCOM, North Charleston, South Carolina, August.

Driscoll, F.G., 1986, Groundwater and Wells, 2nd edition, St. Paul, Minnesota: Johnson Filtration Systems, Inc.

Florida Department of Environmental Protection (FDEP), 1989, Guidelines for the Preparation of Contamination Assessment Reports for Petroleum Contaminated Sites, October.

FDEP, 1994a, Guidelines for Assessment and Remediation of Petroleum Contaminated Soil, May.

FDEP, 1994b, Ground Water Guidance Concentrations, June.

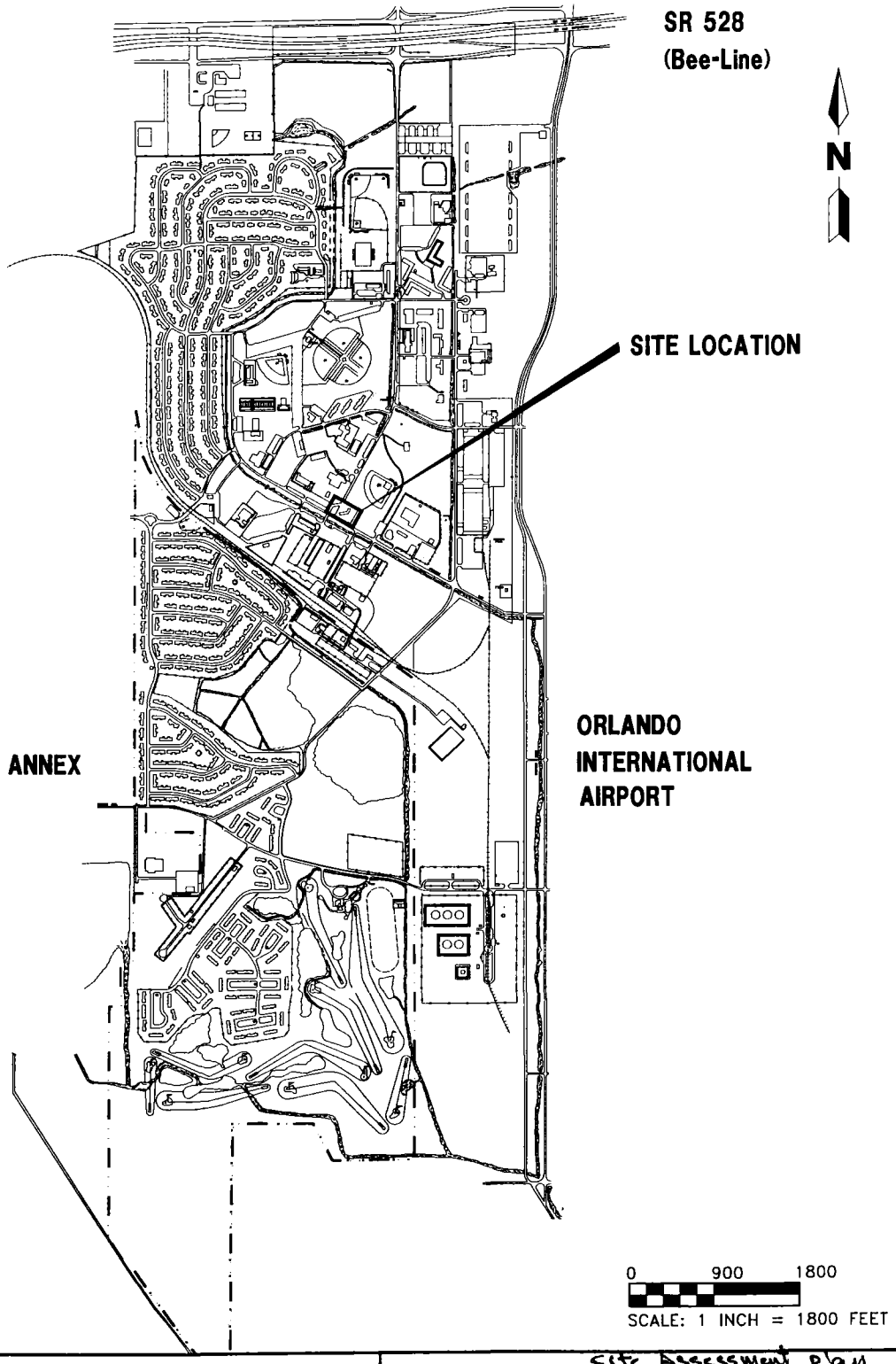


FIGURE 1.1
SITE VICINITY MAP

Site Assessment Plan

BUILDING 7174
MCCOY ANNEX
NAVAL TRAINING CENTER
ORLANDO, FLORIDA

H:\OLD\MCCOY.DWG, NAB 09/04/97 17:06:29, AutoCAD R12

DRAFT

Building
7240

DAETWYLER DRIVE

Grass

Grass

Grass

Former fiberglass
underground storage
tank location

Former used oil
aboveground
storage tank

Used oil
underground
storage tank

Building
7174

Oil-water
separator

Canopy

Pump
island

Grass

BINNACLE WAY

Grass

Underground
storage tanks
abandoned in place

Drainage ditch

N

Legend
SB proposed boring locations

0 20 40
SCALE: 1 INCH = 40 FEET

FIGURE 1
proposed soil boring locations

Site Assessment plan

BUILDING 7174
MCCOY ANNEX
NAVAL TRAINING CENTER
ORLANDO, FLORIDA

H:\OLD\CAR\7174\BLDG7174\JMK-NAB\10-10-96

DRAFT

Building
7240

DAETWYLER
DRIVE

N

Grass

OLD-7174-19

OLD-7174-6

Grass

Former fiberglass
underground storage
tank location

Former used oil
aboveground
storage tank

Used oil
underground
storage tank

Grass

OLD-7174-16

Building
7174

Oil-water
separator

Canopy

Pump
island

Grass

BINNACLE WAY

Former
Underground
storage tanks

Grass

Drainage ditch

OLD-7174-14

OLD-7174-18

OLD-7174-23

0 20 40
SCALE: 1 INCH = 40 FEET

LEGEND

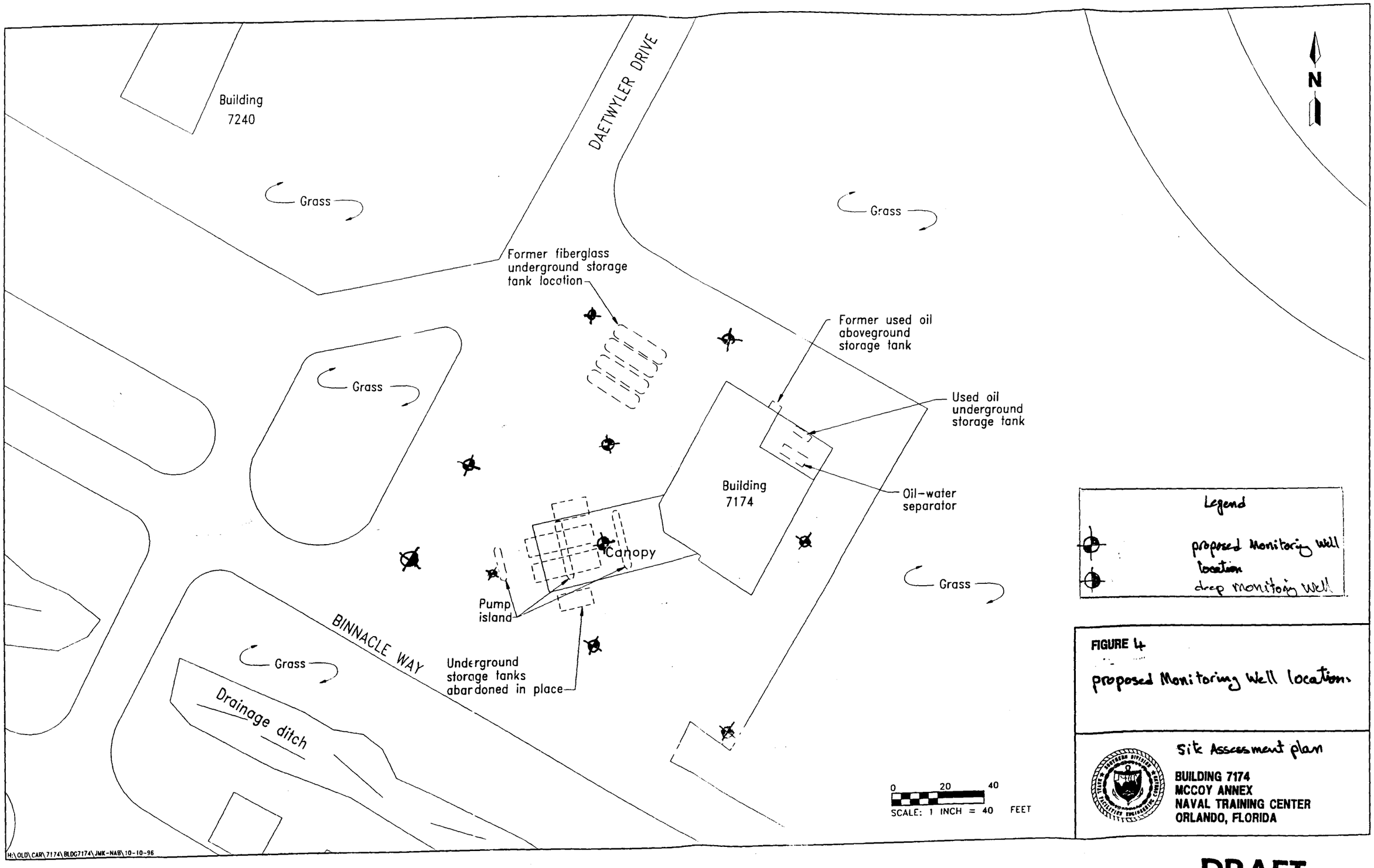
OLD-7174-20 Existing monitoring well location and designation

FIGURE 3 Existing
MONITORING WELL LOCATION PLAN

BUILDING 7174
MCCOY ANNEX
NAVAL TRAINING CENTER
ORLANDO, FLORIDA

H:\OLD\CAR\7174\BLDG7174\JMK-NAB\10-10-96

DRAFT



H:\OLD\CAR\7174\BLDG7174\JMK-NAB\10-10-96

FIGURE 4

proposed Monitoring Well location.

Site Assessment plan

BUILDING 7174
MCCOY ANNEX
NAVAL TRAINING CENTER
ORLANDO, FLORIDA

DRAFT