SITE ASSESSMENT REPORT FOR METALS AT RADIUM DIAL SHOP SEWER NAS PENSACOLA FL

9/1/1992

ABB ENVIRONMENTAL SERVICES, INC

RADIUM DIAL SHOP SEWER
SITE ASSESSMENT REPORT
FOR METALS

NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

Contract No. N62467-89-D-0317
Contract Task Order No. 0034

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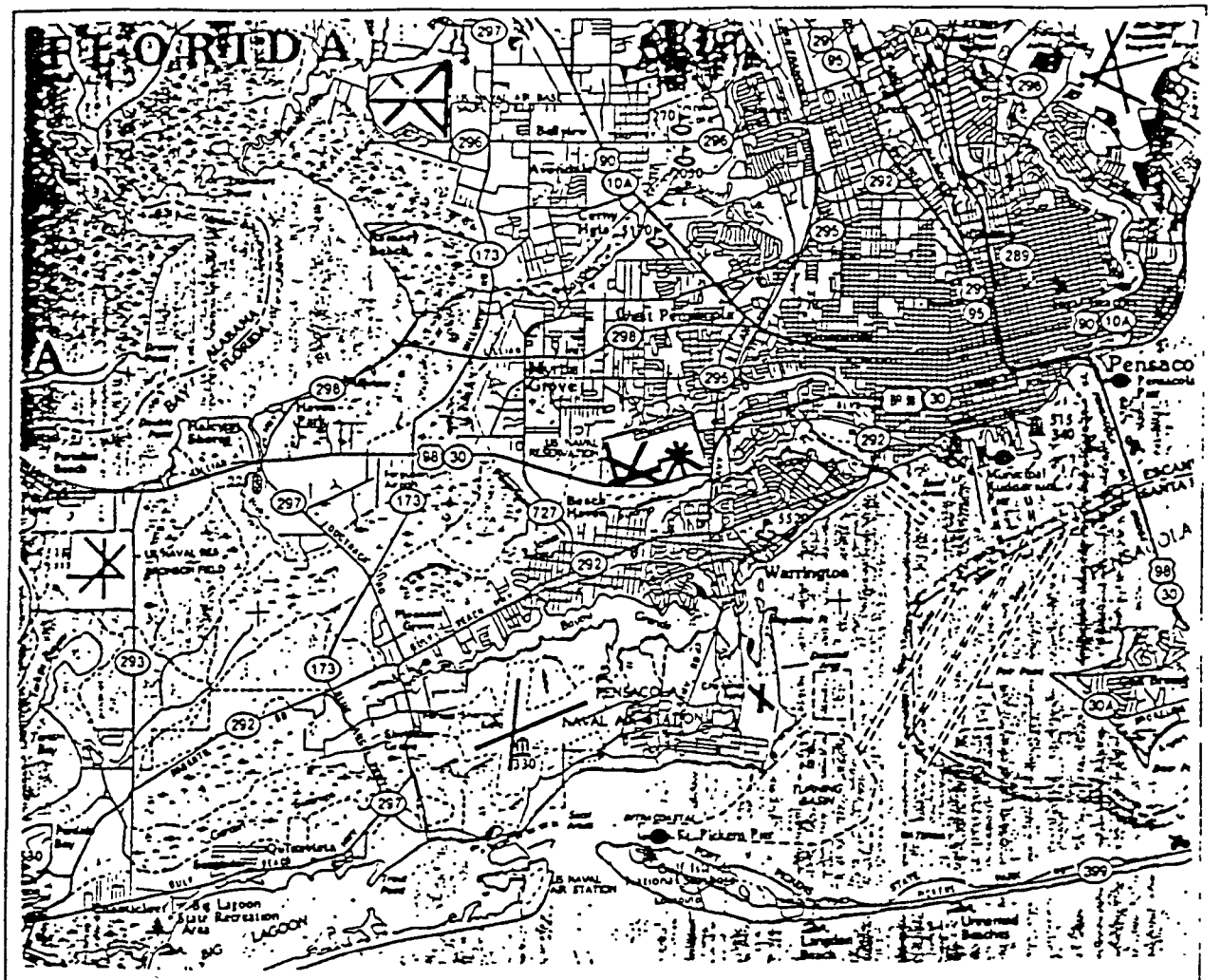
Radium Dial Shop Sewer Site Assessment

1.0 INTRODUCTION

Two sites at the Naval Air Station (NAS) in Pensacola, Florida, were the subject of a soil sampling investigation conducted to determine whether shallow subsurface soils had been impacted by runoff from the former Radium Dial Shop or the adjacent sewer. Previous investigations at these sites evaluated volatile organic compounds (VOC), semivolatile organic compounds (SVOC) and radioactive contamination. Purpose of the present study is to evaluate inorganic compounds since they were not analyzed during earlier investigations.

1.1 LAND USE. Figure 1-1 is a map of Pensacola showing the NAS location. Figure 1-2 is an installation map of the NAS facility. Figure 1-3 shows the location of site 25 and site 27 in relation to the location of the former Radium Dial shop sewer. Site 25 is a storage yard used to store wrecked helicopters and other damaged aviation equipment. Site 25 is approximately 0.25 acre, and the ground surface is covered with a metal grid. Two buildings exist on site 27, which is approximately 0.75 acre and is generally covered with grass.

1.2 TOPOGRAPHY AND LITHOLOGY. The local topography of NAS Pensacola has little relief. The area lies within the coastal plain, and the eastern boundary of the base is Pensacola Bay which feeds into the Gulf of Mexico. The soils found in the area generally consist of well sorted, fine to medium grained sands ranging in color from yellow and tan to orange and brown. Boring logs were not required for the investigation. Soil descriptions of each soil sample were recorded in the field logbook. Groundwater was not encountered in any of the soil borings.



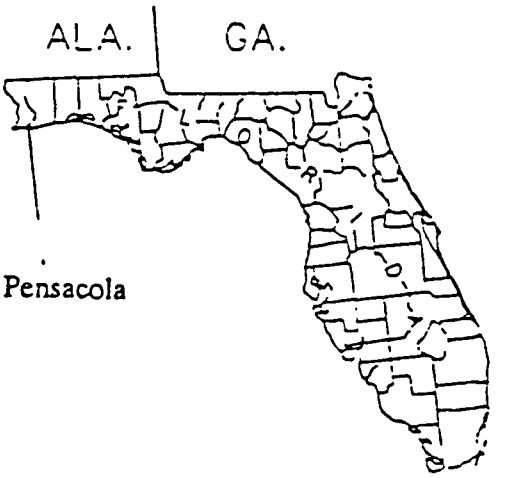
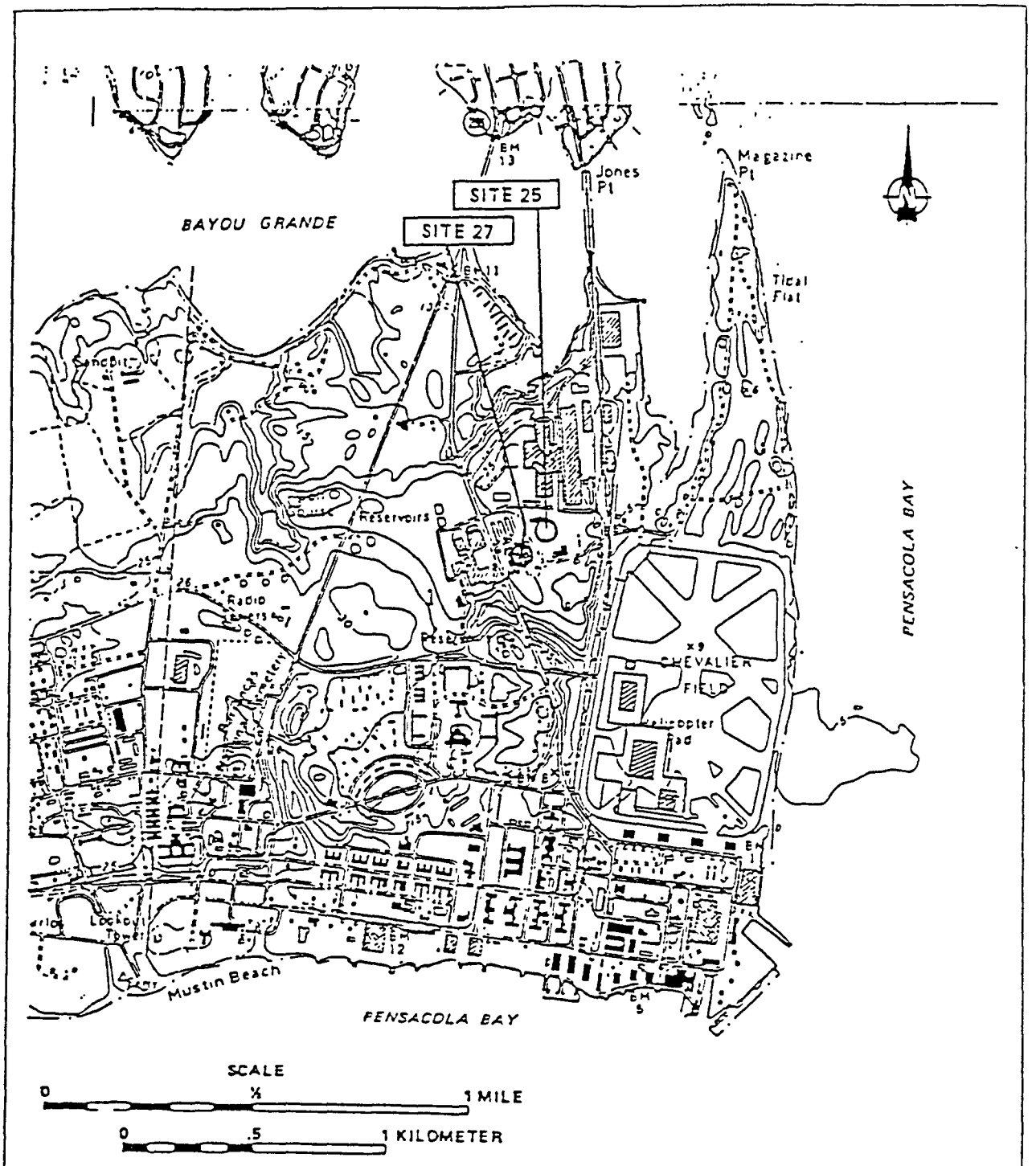


FIGURE 1-1

Map of Pensacola with NAS location.

Radium Dial Shop Sewer
Site Assessment Report
Naval Air Station Pensacola
Pensacola, Florida



SOURCE: U.S.G.S. 7.5 Minute Series (Topographic) Quadrangles: Fort Barrancas, Fla. 1970 and West Pensacola, Fla. 1970, Photorevised 1987

FIGURE 1-2

Installation map of NAS facility.

Radium Dial Shop Sewer
Site Assessment Report
Naval Air Station Pensacola
Pensacola, Florida

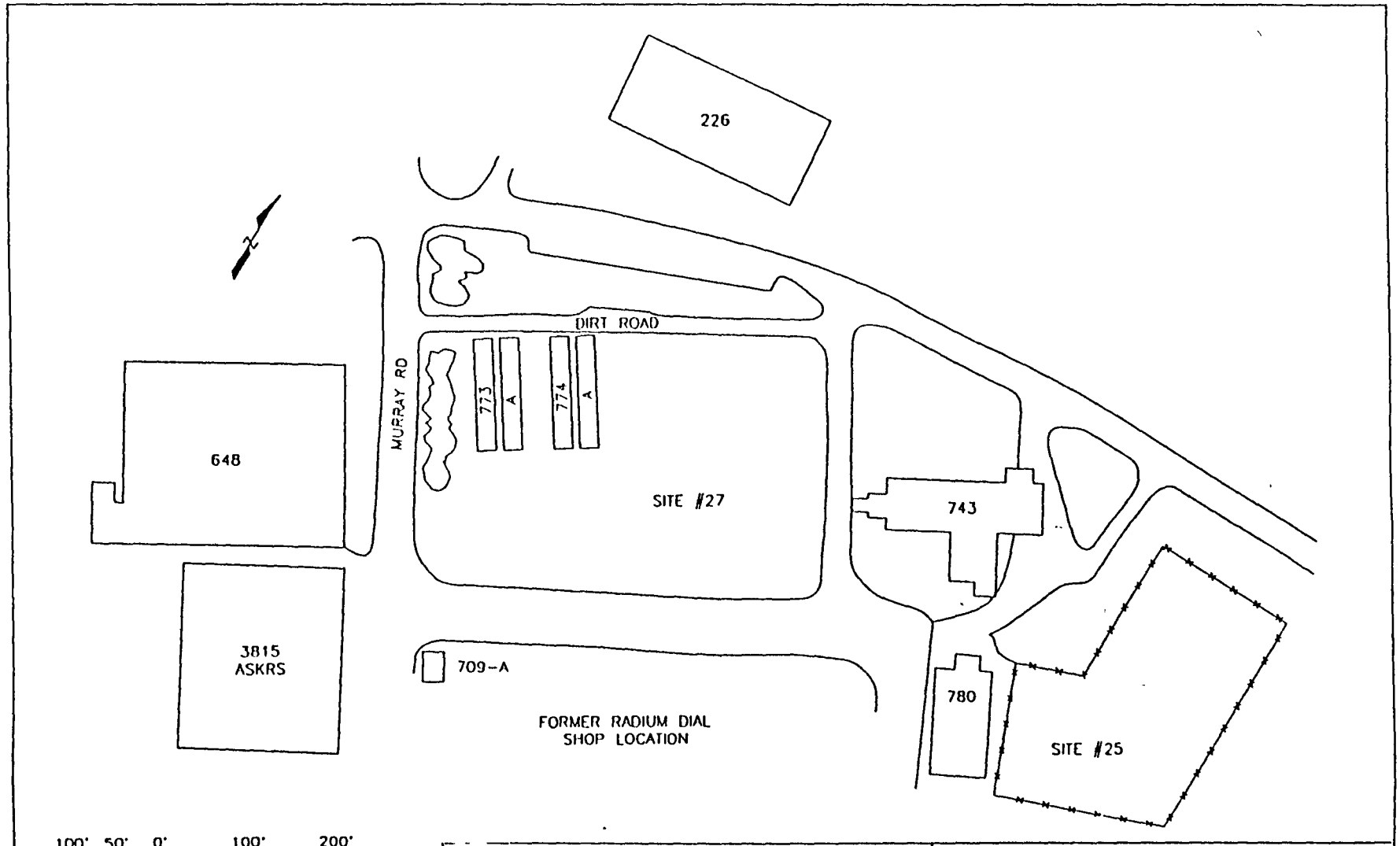


FIGURE 1-3

Location of Site 27 and Site 25.

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Pensacola, Florida

2.0 SITE INVESTIGATION

The site investigation was coordinated through Navy representatives and ABB Environmental Services, Inc. ABB ES was responsible for oversight of soil sample collection. A dosimeter located on site was used to screen ambient air for radiation. A portable flame ionization detector (Porta FID) was used to monitor breathing zone for volatile gases.

The site investigation was conducted in accordance with the Plan of Action prepared for this contract task order. All activities were conducted in a manner consistent with the guidelines outlined in the U.S. Environmental Protection Agency (USEPA) Region IV Standard Operating Procedures and Quality Assurance manual (USEPA 1986a) and the Naval Energy and Environmental Support Activity (NEESA) Quality Assurance Plan (NEESA 1988). Sampling and analysis techniques used for the investigation were chosen so that NEESA Quality Assurance (QA) Plan (NEESA 1988).

2.1 SOIL SAMPLING. Soil sampling locations were determined prior to the investigation by random distribution. A total of sixteen sampling points were chosen for this investigation:

Five sampling points at site 25,
Ten sampling points at site 27, and
One sampling point at an area near north entrance gate of NAS as a representative of NAS background.

Sampling points at each site were randomly distributed to cover the entire area under investigation. Figure 2-1 shows the approximate locations of each sampling point at site 25. Figure 2-2 shows the approximate locations of each sampling point at site 27. Figure 2-3 shows approximate location of the NAS background sample. The sampling locations shown in these three figures are termed approximate because they were not surveyed by a registered surveyor. Due to the limited size of each site and the nature of investigation, the Navy did not require a registered surveyor. Sample identifications were assigned to each sampling point as shown on Figures 2-1, 2-2, and 2-3.

Two soil samples were collected from each sampling point for a total of 32 samples. A 2-inch diameter and 24-inch length stainless steel hand auger bucket was used to collect samples from two different intervals: 0.5-1.5 ft below land surface (bls) and 4.0-5.0 ft bls.

Rationale for sampling location and the depth of sampling is driven by the following factors:

To aid with the design criteria used for the proposed construction of Cold Storage Facility at the area covered by sites 25 and 27

To classify the soil (if it were removed during construction) as non-hazardous or hazardous with respect to land band screening criteria.

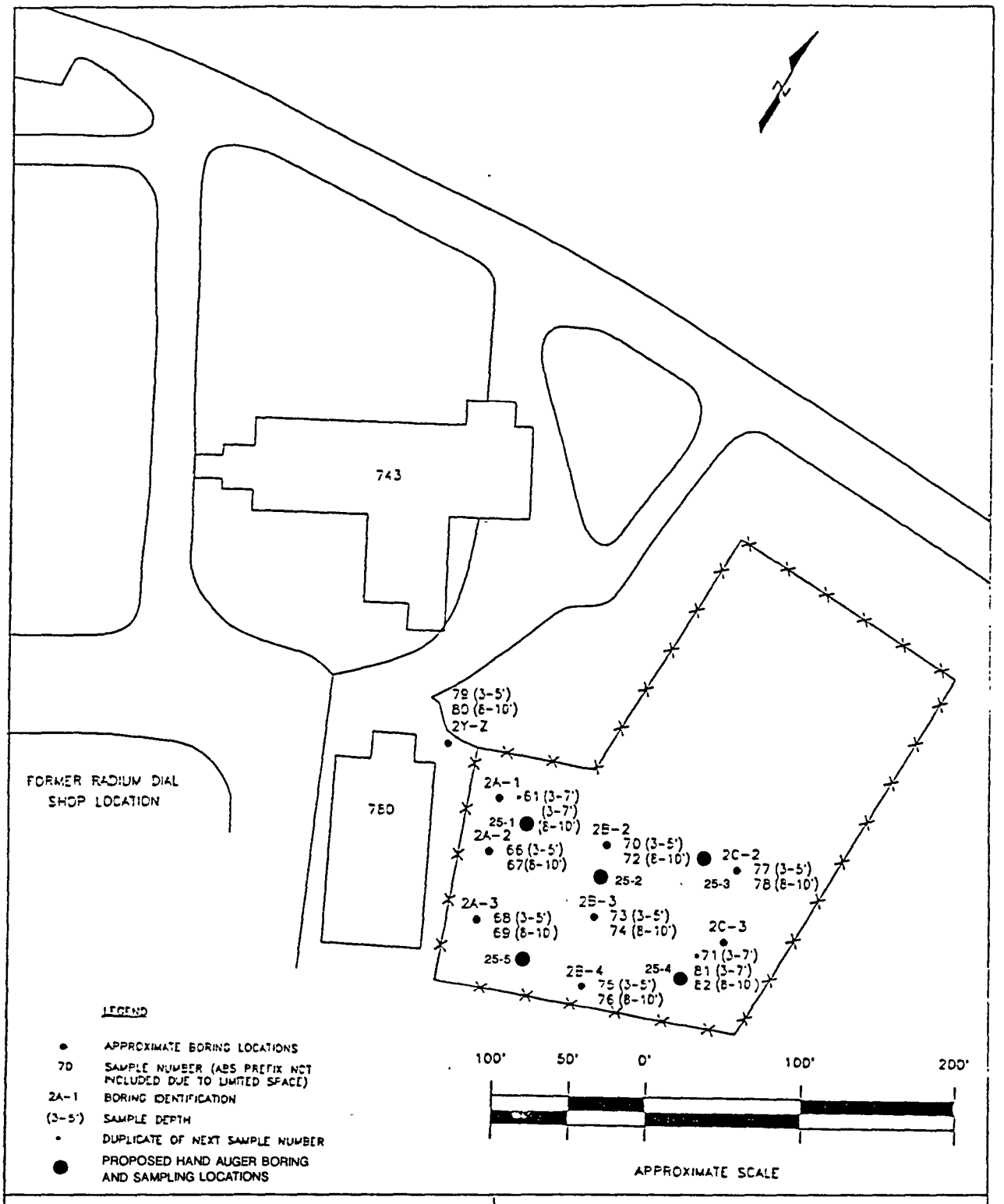


FIGURE 2-1

Approximate boring locations at Site 25.

Radium Dial Shop Sewer

Naval Air Station Pensacola
Pensacola, Florida

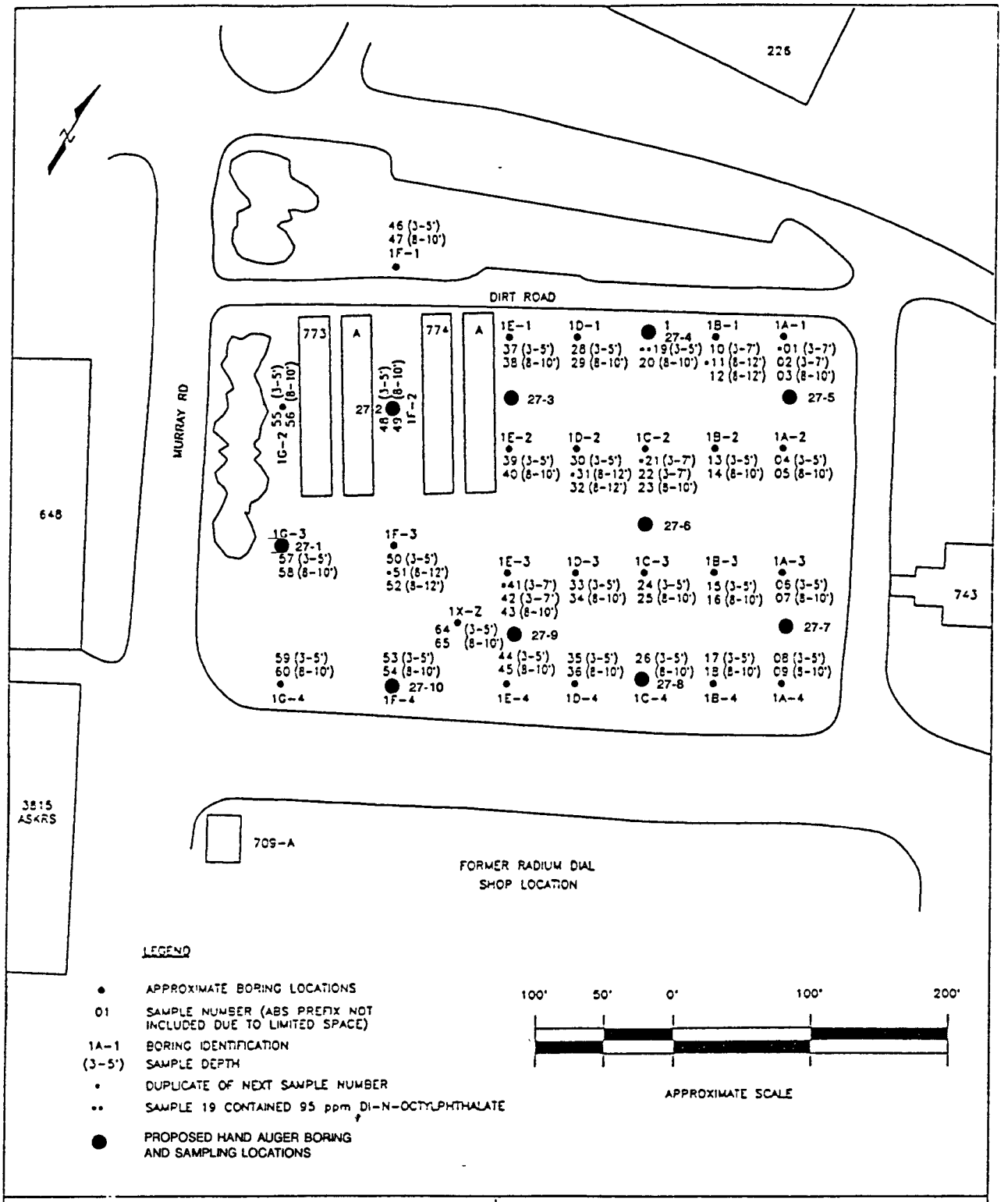


FIGURE 2-2

Approximate boring locations at Site 27.

Radium Dial Shop Sewer

Naval Air Station Pensacola
Pensacola, Florida

Figure 2-3. Location of NAS background soil sample.

2.2 SAMPLE IDENTIFICATION. All samples were identified with the prefix PEN (PEN for Pensacola), followed by SS for surface soil, followed by the sample number and finally followed by the sample depth interval in feet bls in parenthesis. In case of quality assurance/quality control (QA/QC) sample a suffix A for duplicate sample, MS for matrix spike and MSD for matrix spike duplicate is also used with the sample identification.

2.3 SOIL SAMPLE COLLECTION FOR CHEMICAL ANALYSIS. The objective of the sample collection was to obtain samples representative of the chosen soil intervals and to have those samples analyzed in a manner reflecting composition of the soil as accurately as possible. To achieve this objective, all factors affecting physical and chemical integrity of the samples were controlled before, during, and after sample collection.

Soil samples for Metals and SVOCs were collected by thoroughly mixing the sample obtained from the entire interval of soil column. Soil from the auger bucket is transferred to a decontaminated glass bowl and is homogenized by using a decontaminated stainless steel spoon. Three 8-ounce glass jars were filled for TAL CIP Metals, TCLP Metals, and TCL COP SVOC analysis.

2.4 CHAIN OF CUSTODY (COC). To establish the documentation necessary to trace sample possession from time of collection to time of analysis, COC records have been maintained throughout the investigative process. Completed COCs accompanied every sample shipping container. Each COC form was filled out in black waterproof ink.

The COC process was initiated upon sample collection. The field sampler that signed the COC was responsible for the samples until they were transferred to the custody of the subcontracted laboratory. As sample custody was transferred, the persons relinquishing and receiving the samples signed, dated, and noted the time on the form. Each COC form includes the identification of the samples in the shipping container, the signature of the sample collector, the date and time of the sample media, the number and type of containers included for each sample, requested analytical methods, signatures of persons in custody, and dates and times of possession.

Appropriate COC forms were sealed in plastic bags and placed inside the shipping containers, which were sealed to prevent tampering. The original COC forms accompanied the sample shipment to the laboratory. Upon receipt at the analytical laboratory, the laboratory sample custodian checked the condition of the samples. No problems (????) were noted on the laboratory sample receiving form. Copies of the COCs were returned with the analytical results from the laboratory.

2.5 DECONTAMINATION PROCEDURES. Sufficient equipment for sampling was taken to the field to last for at least one day of sampling to avoid decontamination in between individual sample collection process. Equipment is decontaminated at the end of days work according to the following steps.

1. Washed thoroughly with tap water and Alquinox and scrubbed with a brush to remove any particulate matter or surface film;

2. Rinsed thoroughly with tap water;

3. Rinsed with organic-free water;

4. Rinsed twice with pesticide-grade isopropanol; and

5. Rinsed with organic-free de-ionized water and allowed to air dry for as long as possible before being wrapped in aluminum foil or plastic for transportation.

All decontaminated equipment was dried on a plastic sheeting upwind of the decontamination area. A 10- x 6- x 2.5- foot mud pit lined with plastic sheeting was used to contain all fluids generated from on-site decontamination procedures. The pit was set up in a location away from the area suspected of contamination. Upon completion of the decontamination activities, the plastic sheeting lining the pit was removed and disposed properly. All rinse waters transferred from the decontamination pit into 55-gallon steel drums. The isopropanol rinse used was allowed to evaporate prior to transferring the rinse water into drums. The drums were turned over to the base for proper disposal.

2.6 SAMPLE HANDLING AND SHIPPING PROCEDURES. A sample label including appropriate identification and date and time of collection was placed in coolers with ice packs at approximately 4 ^{0}C to minimize bacterial action. All samples chosen for analyses were packed in shipping coolers, fresh ice was added, and proper COC documents were completed for each sample. Packing material (bubble wrap) was placed around the sample container to prevent breakage during sample transporting. A sufficient number of ice packs were packed in each shipping cooler to maintain the samples at 4 ^{0}C for preservation. All completed COC forms were placed inside a plastic bag, which was sealed and placed inside the shipping cooler(s). Each shipping cooler was closed and taped shut with strapping tape, and custody tape signed by the shipper was placed on the top of each cooler to ensure that the coolers and samples were not tampered with during the shipment process. All the samples were shipped to WADSWORTH/ALERT Laboratories, Canton, Ohio.

2.7 FIELD QUALITY CONTROL SAMPLES. Field Quality Control (QC) samples were collected and used to assess precision and accuracy of sample collection. Field QC samples were collected and analyzed during the investigation include trip blanks, field blanks, equipment rinsate blanks, and field duplicates. Preservative (HNO_3 to a pH < 2) was added to water samples collected for TAL CIP Metals.

Field blanks were collected from the decontamination water source. Approximately 1 gallon of water was collected for each sample and analyzed to ensure that contamination was not imported to the samples from the source. The field blank was analyzed for TAL CIP Metals and TCL COP SVOCs. One field blank was collected from the water ??????.

Equipment rinsate blanks were collected by pouring organic-free water over a decontaminated stainless-steel spoon into a decontaminated glass bowl used for sample collection and pouring the water from the bowl into sample containers. Approximately 1 gallon of water was collected for the analysis of TAL CIP Metals and TCL COP SVOCs. Four equipment rinsate blanks were collected during the period of entire sampling episode (10 % of the number of soil samples).

Field duplicates were collected by homogenizing one soil sample and then splitting that sample into two parts. Each sample will be placed into appropriate container and treated in the same manner as the other soil samples. Field duplicates were collected at a frequency of 10 % of the number of soil samples collected. treated in the same manner as the other soil samples.

2.8 **ANALYTICAL PROCEDURES**. The analytical method used for SVOC analysis was EPA Target Compound List-Caucus Organic Protocol-Contract Laboratory Program (TCL-COP-CLP). The samples will be analyzed for Target Analyte List-Caucus Inorganic Protocol-Contract Laboratory Program (TAL-CIP-CLP) metals and TCLP metals (8 RCRA metals). Table 2-1 presents the list of samples collected and the analysis performed during this investigation. The QC water samples were analyzed by the same methods. Standard laboratory turn around time of 1 week has been taken for all parameters.

Table 2-1. List of samples collected and the parameters of laboratory analysis.

3.0 DATA QUALITY ASSESSMENT

A validation of the laboratory data was conducted to determine its usability. Laboratory deliverables included the information required for NEESA QA Level C (NEESA 1988) as requested. Samples chosen for TCLP Metals were analyzed during the period -----. TAL CIP Metals were analyzed during ----. Extractions for SVOCs were conducted during -----, and analyzed during -----. All samples were initially analyzed within the holding times ???.

3.1 DATA QUALITY. All samples shipped to the WADSWORTH/ALERT Laboratories, Canton, Ohio. The laboratory sample data packages were separated by analysis and sample delivery groups (SDG).
----------.

Precision, accuracy, representativeness, completeness, and comparability (PARCC) are the indicators of data quality. Historical precision and accuracy achieved by various analytical techniques shall form the basis for choosing appropriate analytical method for achieving the set data quality objectives.

3.1.1 Precision. Precision measures the reproducibility of measurements under a given set of conditions. The overall precision of measurement of data is a mixture of sampling and analytical factors.

Sampling precision may be determined by collecting and analyzing collocated or field replicate samples and then creating and analyzing laboratory replicates from one or more of the field samples. The analytical measurements from the field replicates provide the data on the overall precision measurement. Subtracting the analytical precision measurement from the overall precision measurement defines the sampling precision.

Analysis data from a total of two replicate samples was used to evaluate the overall precision measurement. Precision of analytical measurement is not available. Hence the results of overall precision measurements are presented in the Table 2-2.

3.1.2 Accuracy. Accuracy measures the bias in a measurement system. It reflects the error induced in the determination of true value of the concentration in a given matrix. The source of error includes: sampling process, field contamination, preservation, handling, sample matrix, sample preparation and analysis techniques.

Laboratory accuracy is checked with surrogate samples and method blanks, and field accuracy is checked with trip blanks, and equipment rinsate blanks. All method blank spike control charts and surrogate, MS, MSD recoveries included with the laboratory deliverables are included in Appendix B.

3.1.3 Representativeness. Representativeness expresses the degree to which sample data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness can be assessed by the following factors:

Rationale used for selecting sampling locations and sampling techniques.

Relative Percentage Difference (% RPD) in the analysis results of collocated field samples.

Potential bias due to contamination during collection, transportation and analysis of samples (i.e., a review of field blank, rinsate blank, trip blank, laboratory blank/method blank results).

3.1.4 Completeness. Completeness is defined as the percentage of measurements made which are judged to be valid measurements. Usually completeness of a data set increases with the increase in the level of DQO (in other words Levels I and II would be expected to have lower completeness as compared to Levels III and IV).

3.1.5 Comparability. Comparability is qualitative parameter expressing the confidence with which one data set can be compared with another. Comparability of analysis results is assessed by the following factors:

Consistency in the techniques used for sampling, transportation, and analysis.

Knowledge of other PARCC parameters for the data set.

3.2 SUMMARY.

4.0 FINDINGS

4.1 ANALYSIS OF RESULTS. The objective of soil sampling analysis at site 25 and site 27 was to determine whether either of the sites have been impacted by runoff from the former Radium Dial Shop or the adjacent sewer and to classify the soil as non-hazardous or hazardous based on the impact.

Soil samples collected at these sites during earlier investigations were analyzed for VOCs, SVOCs and gross alpha and ^{226}Ra. It was concluded during earlier investigations that there has been no apparent significant environmental impact on the shallow and subsurface soils (ABB-ES, 1992). However, soil samples were not analyzed for metals during the earlier investigations.

During the current investigations, soil samples collected from 0.5-1.5 ft bls and 4.0-5.0 bls and were analyzed for TAL CIP Metals, TCLP Metals and TCL COP SVOCs.

Two background soil samples were collected from an area located north of the sites in the upgradient area of surface water runoff. Analysis results for TAL CIP Metals are included in Table 4-1. None of the background soil samples tested possitive for TCLP test.

Laboratory analytical data is presented in Appendix A. Results of the analysis are interpreted according to the following procedure.

Soil is considered potentially hazardous with respect to metals, if the results of analysis yield either of the following scenario:

> If any of the soil concentrations exceed two times the background concentrations (in statistically significant number of samples).
>
> If any of the soil concentrations exceed the background concentrations but less than two times the background concentrations and fail (in other words extract concentration exceeds the regulatory level) the TCLP test.
>
> If significant number of soil samples fail the TCLP test.

4.1.1 Site 25. A total of five sampling points were distributed randomly to cover the entire area under investigation at site 25. Ten soil samples were obtained from these points and were analyzed for previously mentioned parameters.

Table 4-1 presents analysis results for TAL CIP Metals that were detected above the contract required detection limits (CRDL). None of the analysis results indicate apparent significant environmental impact on the shallow or subsurface soils.

However, there are several metals detected at concentrations equal to or

slightly greater than background soil concentrations. There are only a few metals which were detected at concentrations greater than two times the background soil concentrations: Cadmium (1.9 mg/kg in one surface sample), Lead (50 mg/kg in one surface sample), Manganeese (19 mg/kg in one surface sample), zinc (38 and 66 mg/kg respectively in two surface samples).

Also none of the samples fail the TCLP test. None of the RCRA metals except Lead and Barium were detected in any of the soil samples. Lead and Barium were detected at levels slightly greater than the required limits of detection.

4.1.2 Site 27. A total of ten sampling points were distributed randomly to cover the entire area under investigation at site 27. Twenty soil samples were obtained from these points and were analyzed for previously mentioned parameters.

Table 4-2 presents analysis results for TAL CIP Metals that were detected above the contract required detection limits (CRDL). None of the analysis results indicate apparent significant environmental impact on the shallow or subsurface soils.

However, there are several metals detected at concentrations equal to or slightly greater than background soil concentrations. There are no metals which were detected at concentrations greater than two times the background soil concentrations.

Also none of the samples fail the TCLP test. None of the RCRA metals except Lead and Barium were detected in any of the soil samples. Lead and Barium were detected at levels slightly greater than the required limits of detection.

Table 4-2. Results of soil sample analysis at site 25

4.2 **SUMMARY** Following significant findings were deduced from soil sampling and analysis results at NAS Pensacola:

No significant concentrations of metals were detected at site 25 or site 27. However, Cadmium, Lead, Manganese and Zinc were detected in less than two samples at site 25 at concentration levels slightly greater than twice the background soil concentrations.

All the TCLP concentrations except Lead and Barium were detected below the CRDLs. Lead and Barium were at concentrations below the regulatory levels (RCRA Land Ban Restriction concentrations).

Analysis for TCL COP SVOCs at one sample at site 27 did not indicate the presence of any anlytes which agrees with the conclusion of earlier investigations.

5.0 CONCLUSIONS

Following significant conclusions may be drawn from the present investigations at site 25 and site 27 at NAS Pensacola:

The data does not indicate any apparent significant impact by metals in the surface and subsurface soils at sites 25 or 27 due to runoff from Radium Dial Shop or Sewer.

Since there is no evidence of soils contamination due to metals at the area covered under investigation it is less likely that the proposed construction program could pose any health hazards due to metals.

TABLE 2-1
List of Samples

Sample #	SVOC	Metals	TCLP
SITE 25			
PEN-25-SS-01-(0.5-1.5)		X	X
PEN-25-SS-01-(4.0-5.0)		X	X
PEN-25-SS-02-(0.5-1.5)		X	X
PEN-25-SS-02-(4 0-5.0)		X	X
PEN-25-SS-03-(0.5-1.5)		X	X
PEN-25-SS-03-(4.0-5.0)		X	X
PEN-25-SS-04-(0.5-1.5)		X	X
PEN-25-SS-04-(4.0-5.0)		X	X
PEN-25-SS-05-(0.5-1.5)		X	X
PEN-25-SS-05-(4.0-5.0)		X	X
PEN-25-SS-05-(4.0-5.0)A		X	X
SITE 27		X	X
PEN-27-SS-01-(0.5-1.5)		X	X
PEN-27-SS-01-(4 0-5.0)		X	X
PEN-27-SS-02-(0.5-1.5)		X	X
PEN-27-SS-02-(4.0-5.0)		X	X
PEN-27-SS-03-(0.5-1.5)		X	X
PEN-27-SS-03-(4.0-5.0)		X	X
PEN-27-SS-04-(0.5-1.5)	X	X	X
PEN-27-SS-04-(4 0-5.0)	X	X	X
PEN-27-SS-04-(4.0-5.0)A	X	X	
PEN-27-SS-04-(4 0-5.0)MS	X	X	
PEN-27-SS-04-(4.0-5.0)MSD	X	X	
PEN-27-SS-05-(0.5-1.5)		X	X
PEN-27-SS-05-(4.0-5.0)		X	X
PEN-27-SS-06-(0.5-1.5)		X	X
PEN-27-SS-06-(4 0-5.0)		X	X

$2 \times 5 + 1 = 11$

Sample #	SVOC	Metals	TCLP
PEN-27-SS-07-(0.5-1.5)		X	X
PEN-27-SS-07-(4.0-5.0)		X	X
PEN-27-SS-08-(0.5-1.5)		X	X
PEN-27-SS-08-(4.0-5.0)		X	X
PEN-27-SS-09-(0.5-1.5)		X	X
PEN-27-SS-09-(0.5-1.5)A		X	
PEN-27-SS-09-(4.0-5.0)		X	X
PEN-27-SS-10-(0.5-1.5)		X	X
PEN-27-SS-10-(4.0-5.0)		X	X
BACKGROUND			
PEN-00-SS-01-(0.5-1.5)		X	
PEN-00-SS-01-(4.0-5.0)		X	
QC SAMPLES			
PEN-FB-SS-01	X	X	
PEN-RB-SS-01	X	X	
PEN-RB-SS-02	X	X	
PEN-RB-SS-03		X	
PEN-RB-SS-04		X	
PEN-RB-SS-05		X	

10x2+3+1=

2

5

Total number of samples $2\times5+1=11$, $10\times2+3+1=24$, 2, 5, 42.

5+10 → (15) x2 = 30

SITE 27	PEN27-SS-01		PEN27-SS-02		PEN27-SS-03		PEN27-SS-04		PEN27-SS-05		PEN27-SS-06	
	(0.5'-1.5')	(4.0'-5.0')	(0.5'-1.5')	(4.0'-5.0')	(0.5'-1.5')	(4.0'-5.0')	(0.5'-1.5')	(4.0'-5.0')	(0.5'-1.5')	(4.0'-5.0')	(0.5'-1.5')	(4.0'-5.0')
Aluminum	14000	2600	6400	2400	2000	2300	3000	2000	17	2200	4000	1800
Antimony												
Arsenic				0.8	0.5	0.6	0.6		0.7		0.9	
Barium	4.3	2.5	3.5	2.2	2 3	2.5	3.4	2.2	2.4	2.5	3.4	2.3
Berillium												
Cadmium												
Calcium												
Chromium	11	6	4.6	2 8	3		2.3	3 8	2.4		4.5	
Cobalt												
Copper	2.9	1.4	1.8		1.8	1.2	1.4	1.6			1.2	
Iron	9500	1700	3700	1600	1300	1500	2000	1600	1400	1600	2800	1500
Lead	2.6	1.1		1.1	6.2	1 4	3.1	1.4	2.9	0.9	2.3	0.8
Magnesium												
Manganese	20	5 6	16	4.8	4.5	4.7	6.4	6.2	4.5	4 7	7	4.7
Mercury									0.1			
Nickel												
Potassium												
Selenium												
Silver												
Sodium												
Thallium											5.8	
Vanadium	23		9					10				
Zinc												
Tin												

Note: All the units are in mg/kg

SITE 27 (CONTINUED) TAL METALS	PEN27-SS-07 (0.5'-1.5')	PEN27-SS-07 (4.0'-5.0')	PEN27-SS-08 (0.5'-1.5')	PEN27-SS-08 (4.0'-5.0')	PEN27-SS-09 (0.5'-1.5')	PEN27-SS-09 (4.0'-5.0')	PEN27-SS-10 (0.5'-1.5')	PEN27-SS-10 (4.0'-5.0')	PEN27-SS-4 A,MS,MSD	PEN27-SS-9A (0.5'-1.5')
Aluminum	2100	2100	2900	2100	1600	2400	3800	3500		1300
Antimony										
Arsenic	0 8	0.5		0.8		0.8	2.3	0.5	0.6	1.5
Barium	1.8	2.2	3.6	2	1.8	2 6	3.4	3.4		
Berillium										
Cadmium										
Calcium										
Chromium			6.8	3.8	2.2	3.3	5	4 5		
Cobalt										
Copper	8.6	2 8	2.1		1	2	2.4	1.4		1.2
Iron	1200	1500	2000	1600	740	1700	2600	2200	1.2	660
Lead	7.1	1.3	6.8	1.4	3.6	1 3	11	1.4		3.2
Magnesium										
Manganese	7.8	4.7		4.4	3.3	5.8	14	6.7		2.8
Mercury							0.1		0.1	
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Vanadium							7.1			
Zinc	5.7		5.9			5.5	7 1	5.7		
Tin										

Note. All the units are in mg/kg

SITE 25	PEN00–SS–01		PEN25–SS–01		PEN25–SS–02		PEN25–SS–03		PEN25–SS–04		PEN25–SS–05	
TAL METALS	(0.5'–1.5')	(4.0'–5.0')	(0.5'–1.5')	(4.0'–5.0')	(0.5'–1.5')	(4.0'–5.0')	(0.5'–1.5')	(4.0'–5.0')	(0.5'–1.5')	(4.0'–5.0')	(0.5'–1.5')	(4.0'–5.0')
Aluminum	1000	2400	1700	1800	1700	1600	1400	1800	2400	1600	1800	1700
Antimony												
Arsenic		0.5		0.5	1.4		7.8	0.6	1 4		1.9	
Barium	5.9	2.7	1.5	2.3	15	1 9		2.3	12	2.1	5.5	2.9
Berillium												
Cadmium							1 9					
Calcium	540											
Chromium	4.2		3.1						5 2		2.9	2.5
Cobalt												
Copper	3		1.1		1.7	1.3	12	1.2	12		1.1	1.4
Iron	990	1800	1400	1400	1500	1400	1400	1400	2400	1300	1500	1900
Lead	21	1	1.4	0 9	14	3	50				2.9	3 9
Magnesium												
Manganese	7.8		4.1		8.4	5.5	14	5.2	19	4.1	16	7.6
Mercury	0.1											
Nickel												
Potassium												
Selenium												
Silver												
Sodium												
Thallium												
Vanadium												
Zinc	7.3		7.3	8.1	13	13	66	7.5	79	7.2	38	16
Tin												

* Tin is not analyzed
* None of the metals show TCLP tve
* All the units are in mg/kg

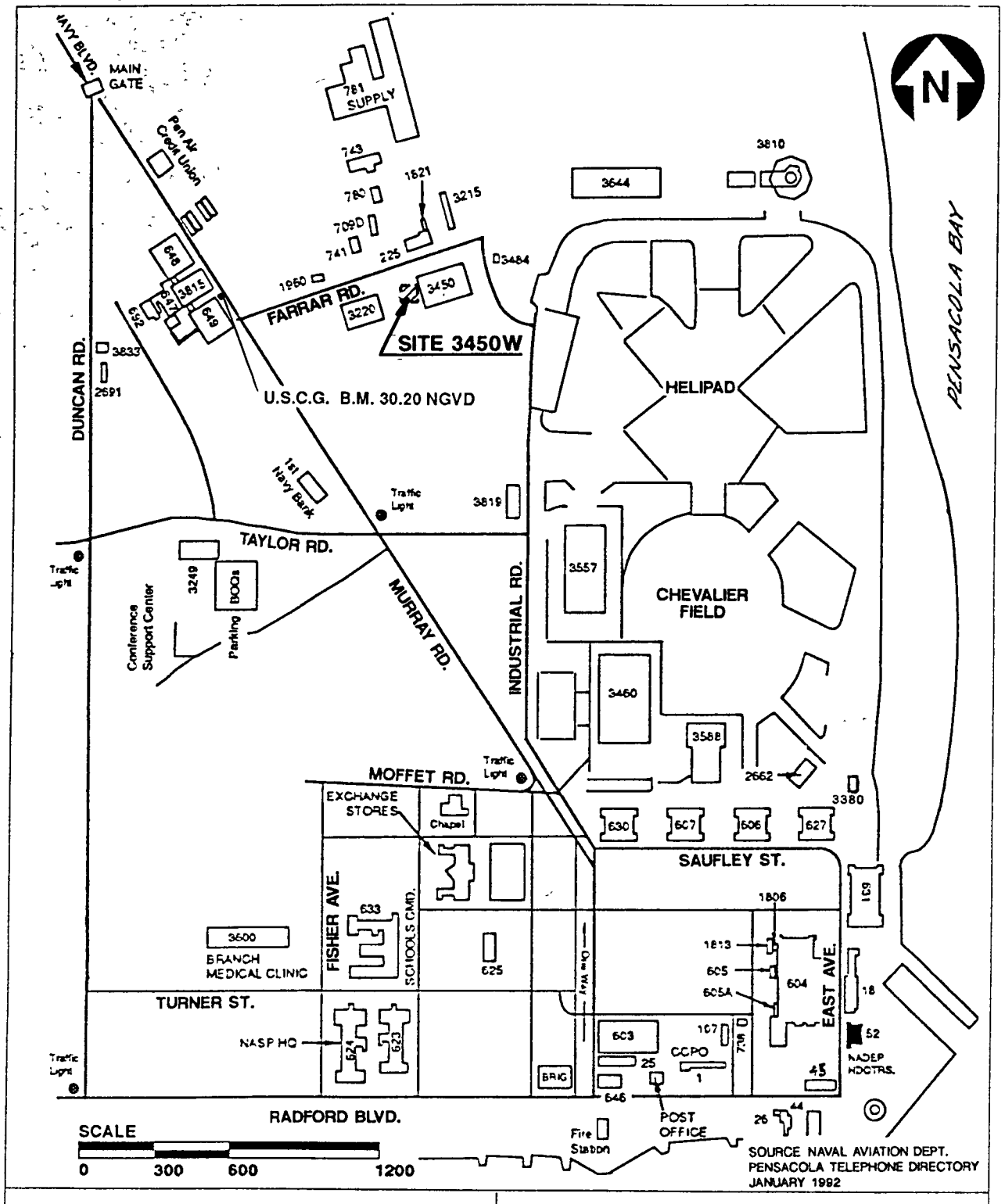


FIGURE 2-1
SITE LOCATION MAP

CONTAMINATION ASSESSMENT REPORT
SITE 3450W
NADEP PENSACOLA
PENSACOLA, FLORIDA

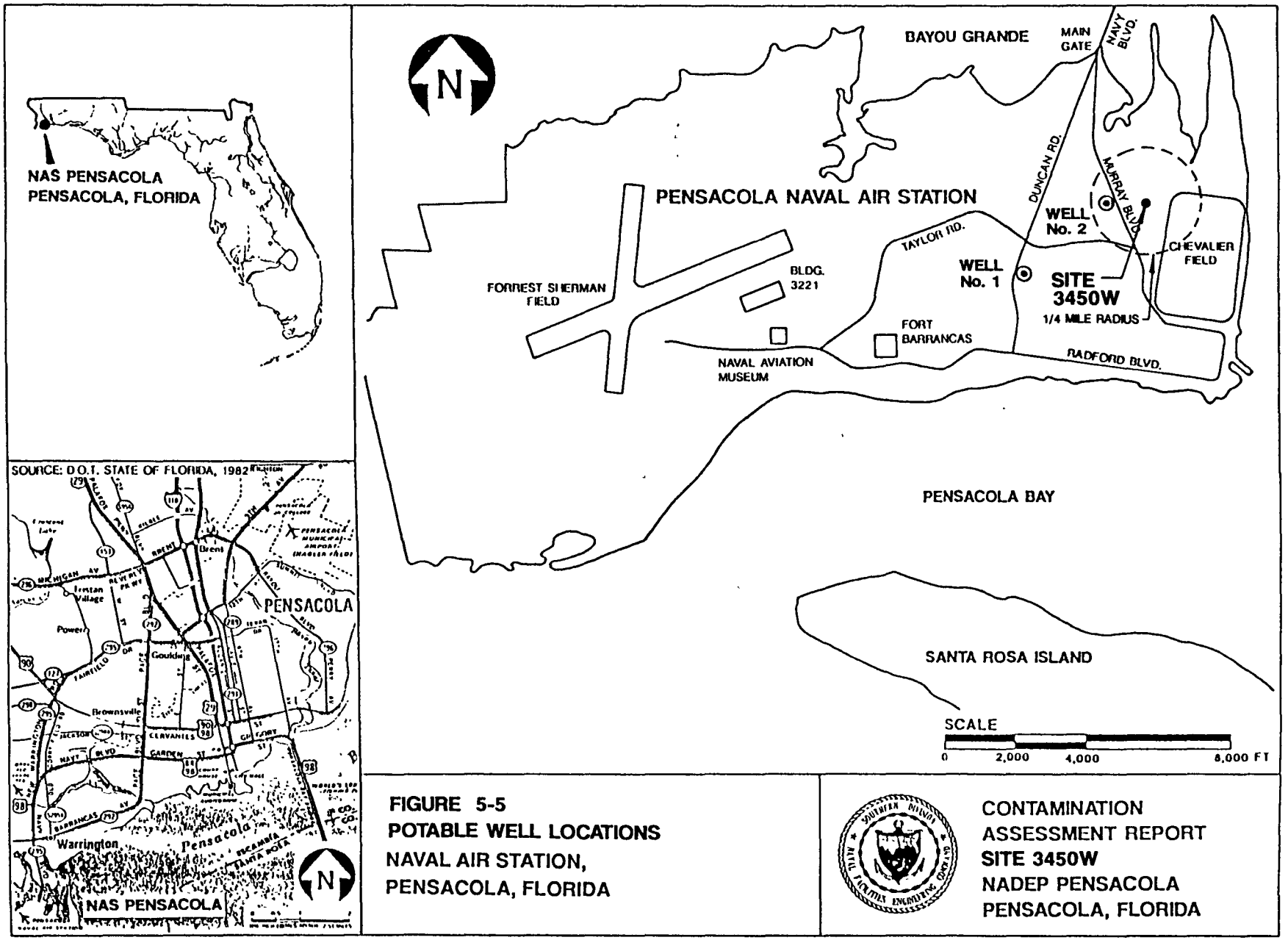
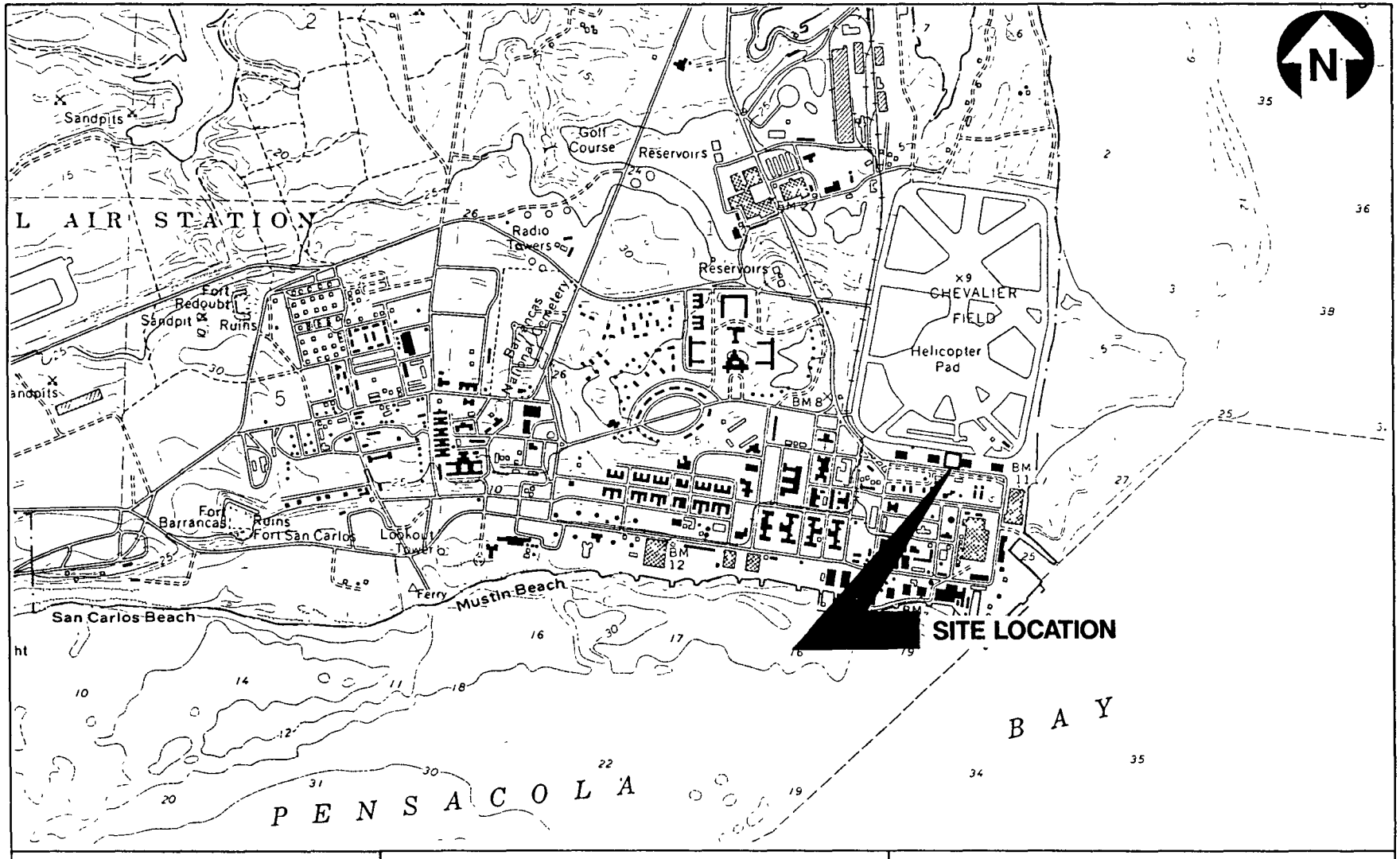


FIGURE 5-5
POTABLE WELL LOCATIONS
NAVAL AIR STATION,
PENSACOLA, FLORIDA

CONTAMINATION
ASSESSMENT REPORT
SITE 3450W
NADEP PENSACOLA
PENSACOLA, FLORIDA



SOURCE USGS QUADRANGLE
FORT BARRANCAS, FLORIDA

SCALE

0 1,000 2,000 4,000 FT

FIGURE 2-2

LOCATION OF SITE
607-NE

CONTAMINATION ASSESSMENT REPORT

NADEP PENSACOLA
PENSACOLA, FLORIDA

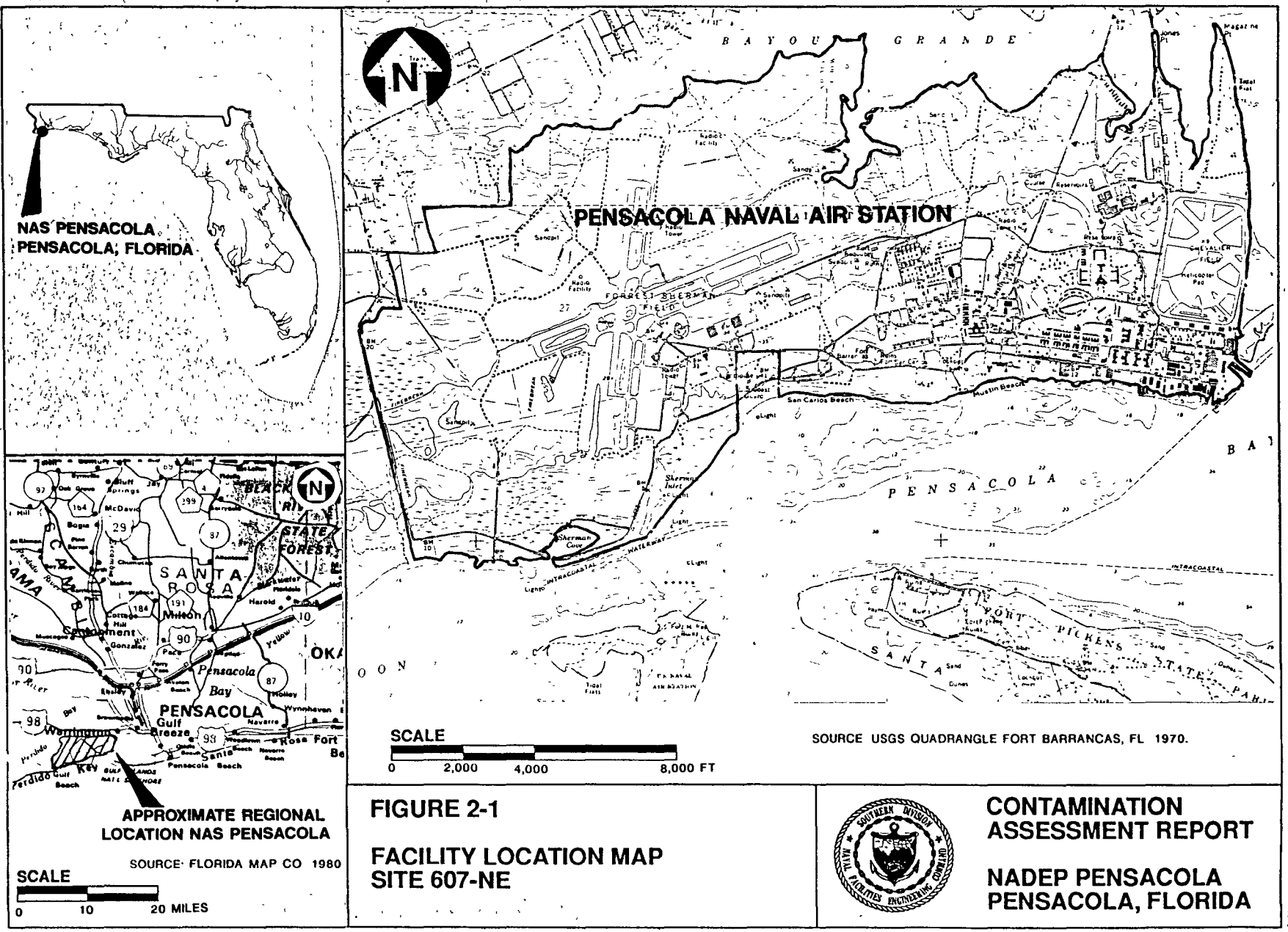
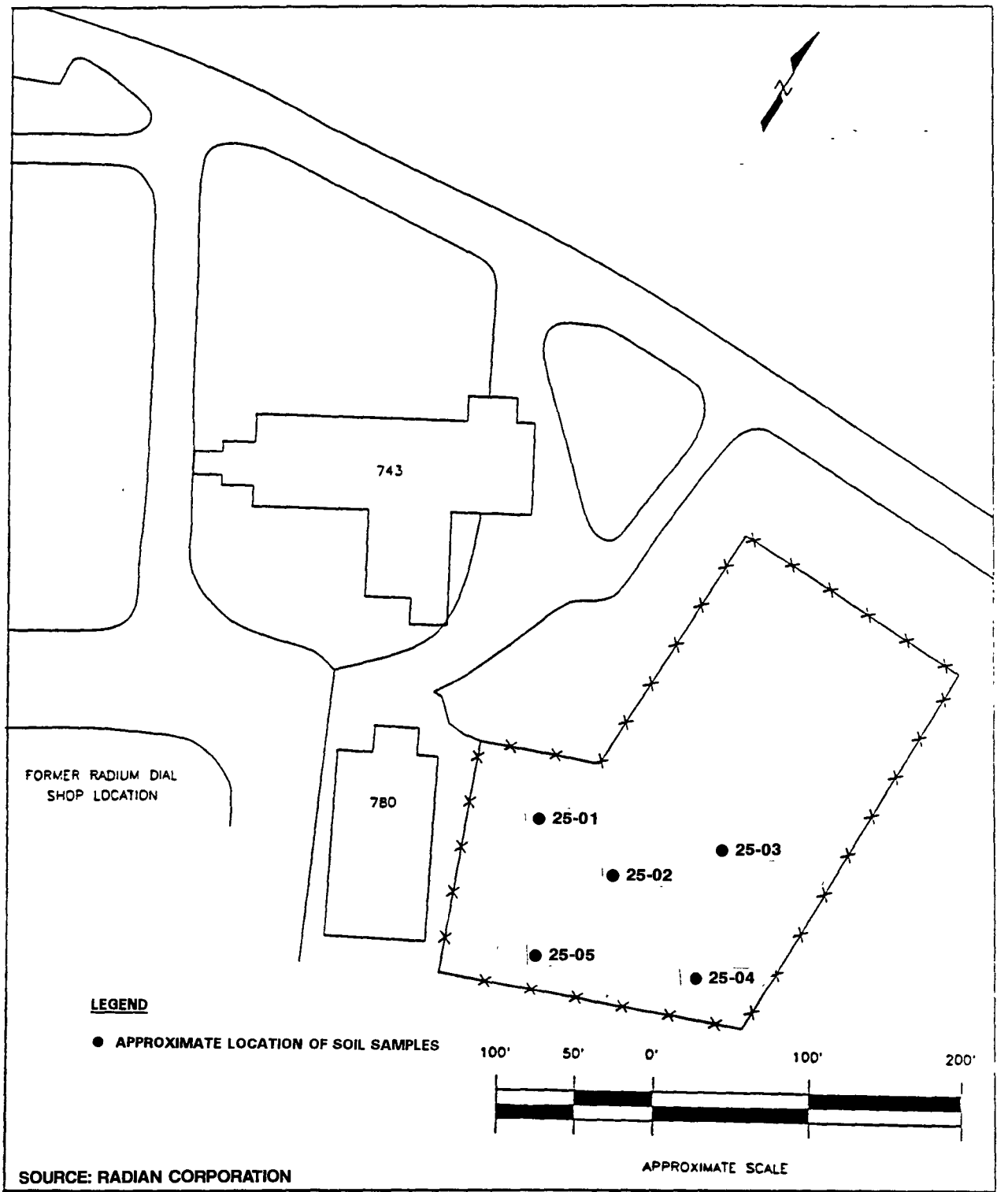


FIGURE 2-1

FACILITY LOCATION MAP
SITE 607-NE

CONTAMINATION ASSESSMENT REPORT

NADEP PENSACOLA
PENSACOLA, FLORIDA

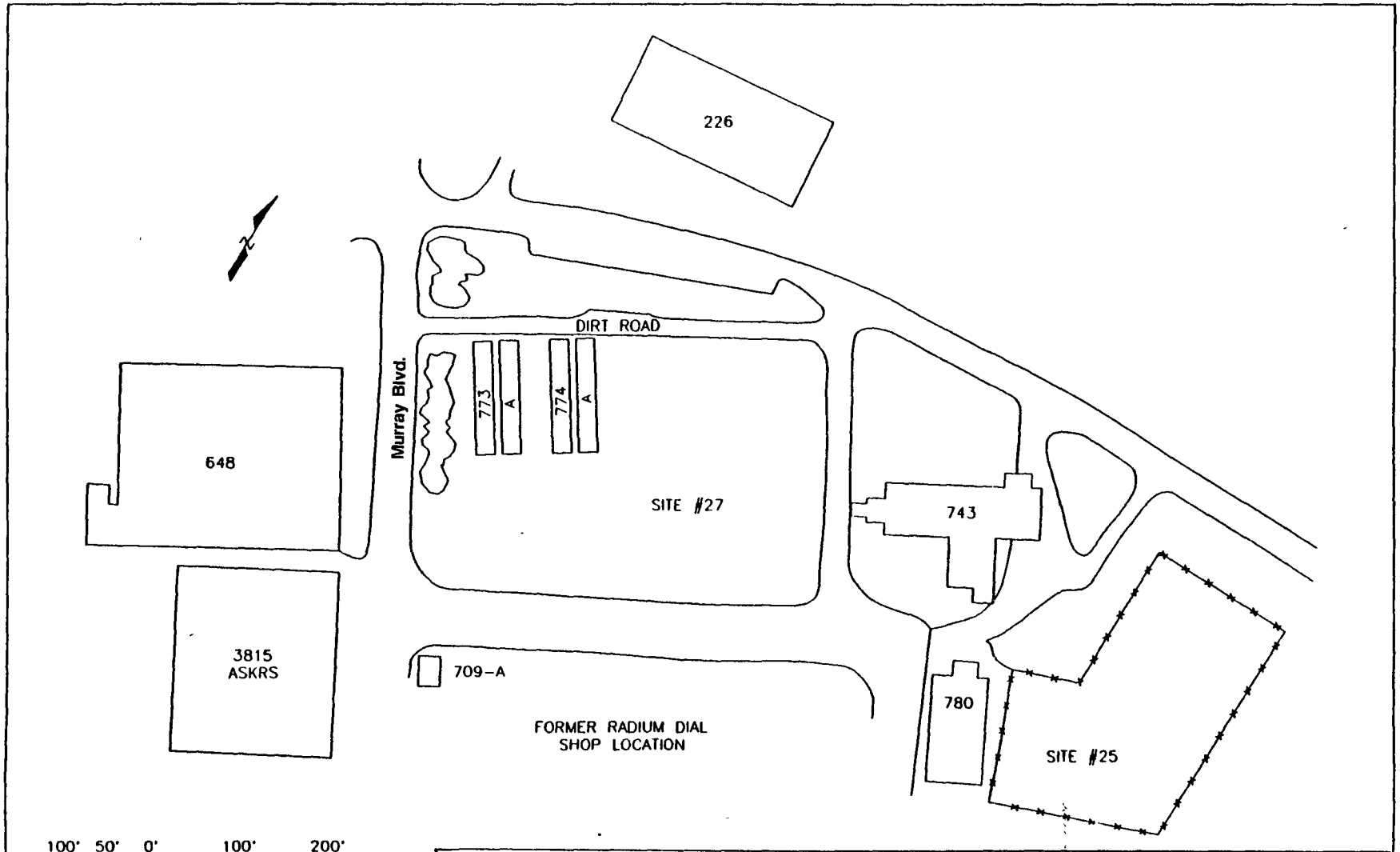


SOURCE: RADIAN CORPORATION

FIGURE 2-1

Location of Soil Samples at Site 25

Radium Dial Shop Sewer Site Investigation Report Naval Air Station Pensacola Pensacola, Florida

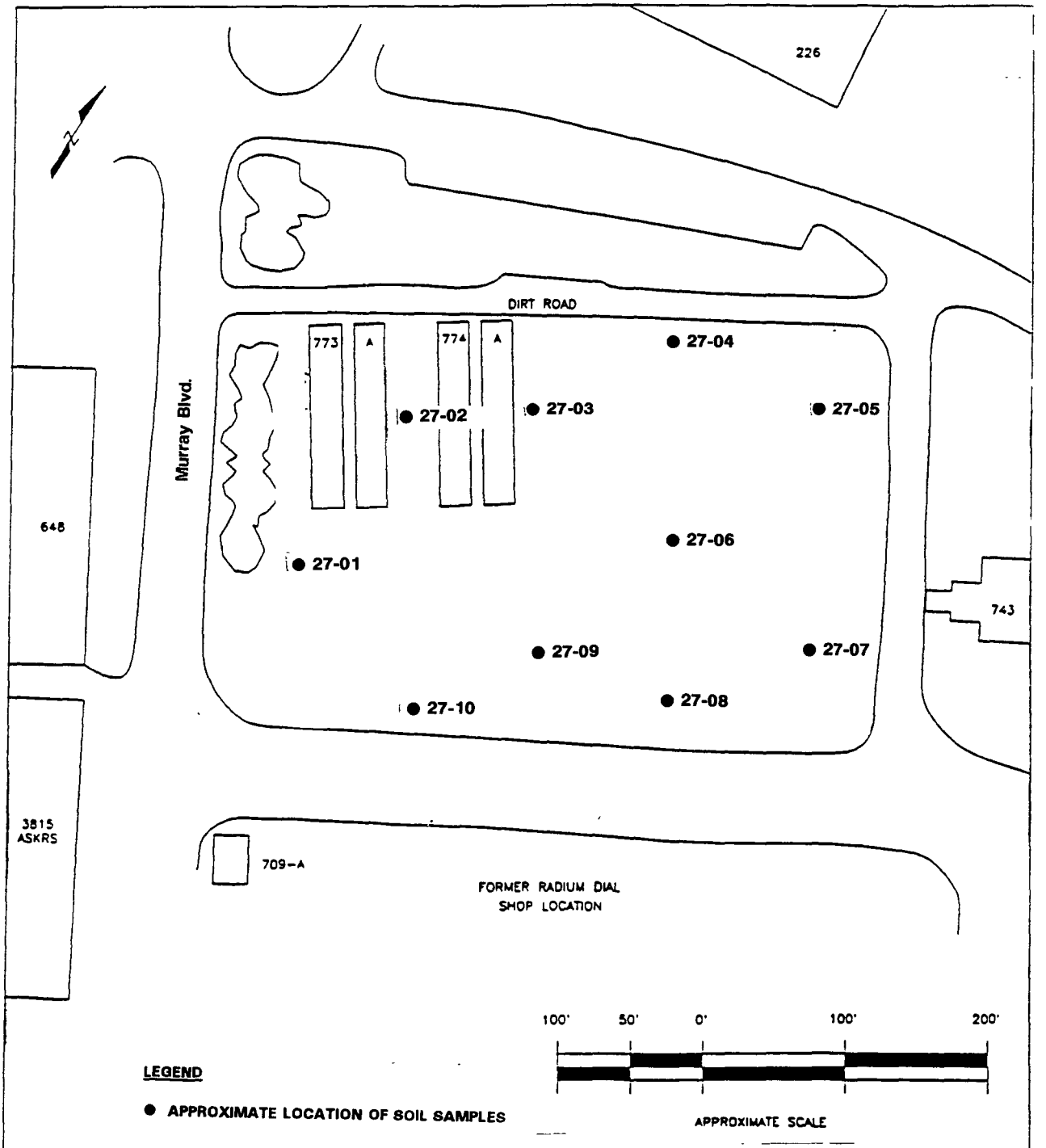


SOURCE: RADIAN CORPORATION

FIGURE 1-2

Location of Site 25 and Site 27

Radium Dial Shop Sewer
Site Investigation Report
Naval Air Station Pensacola
Pensacola, Florida



SOURCE: RADIAN CORPORATION

FIGURE 2-2

Location of Soil Samples at Site 27

Radium Dial Shop Sewer Site Investigation Report
Naval Air Station Pensacola
Pensacola, Florida

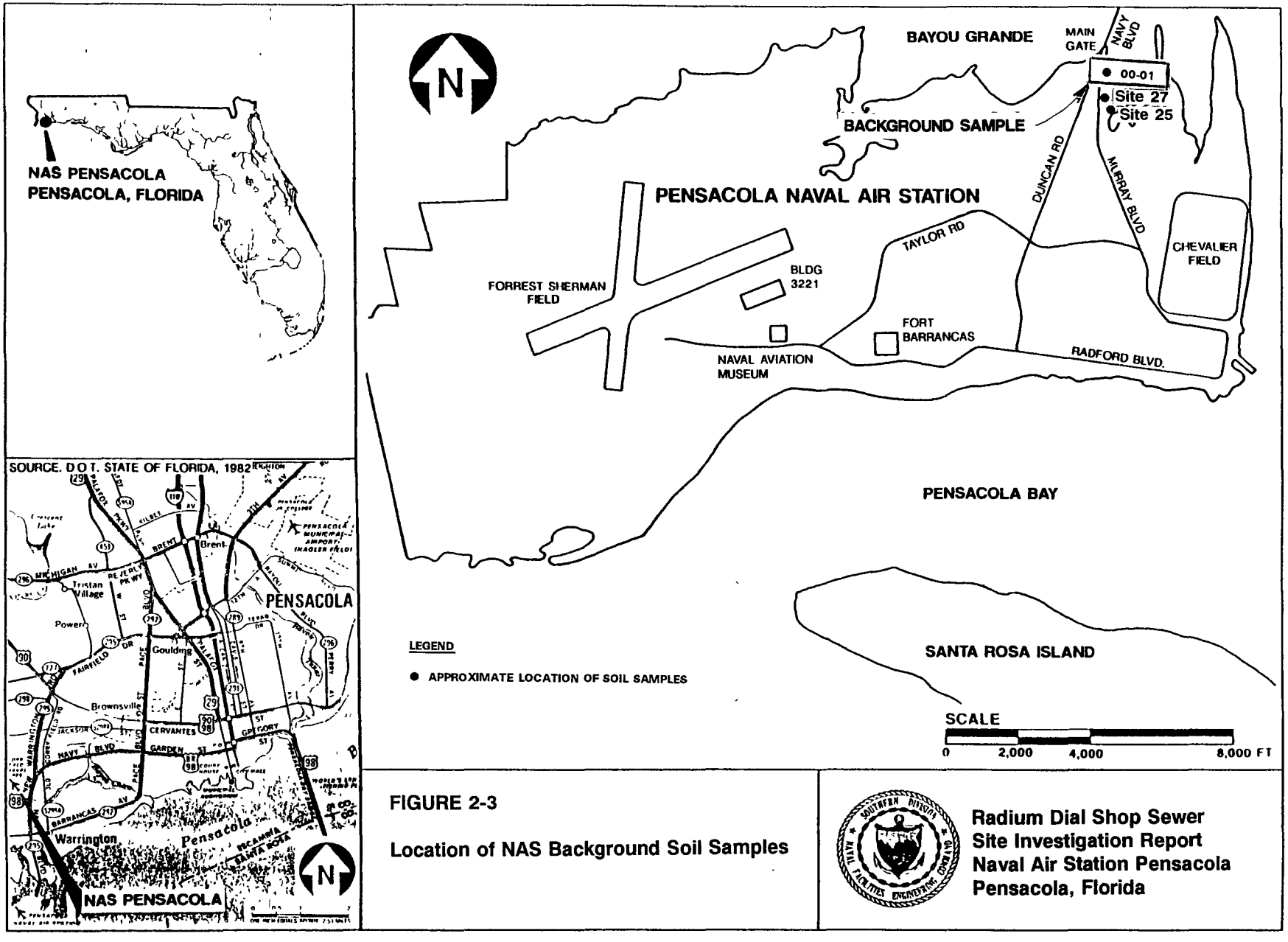


FIGURE 2-3

Location of NAS Background Soil Samples

Radium Dial Shop Sewer
Site Investigation Report
Naval Air Station Pensacola
Pensacola, Florida

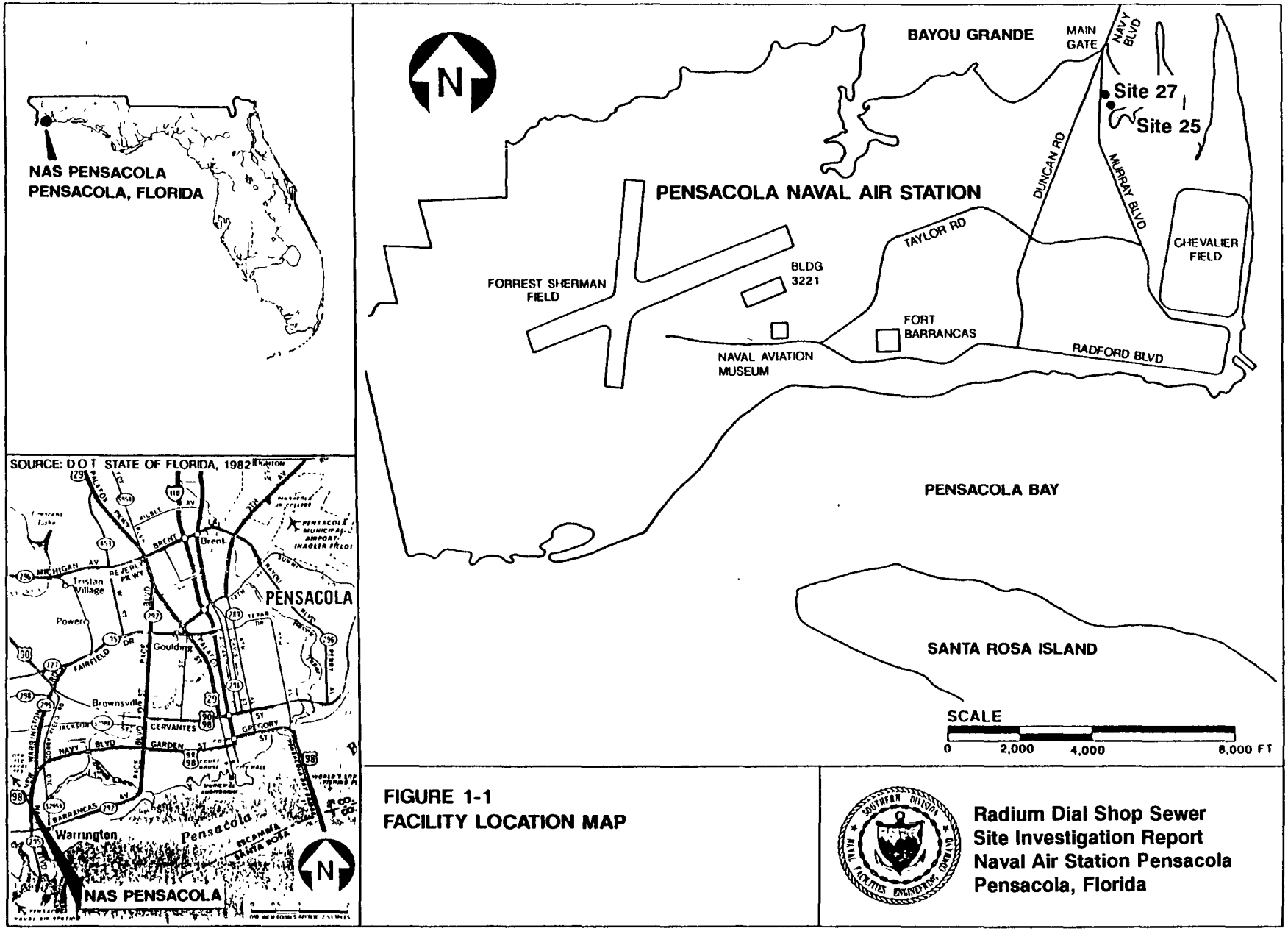


FIGURE 1-1
FACILITY LOCATION MAP

Radium Dial Shop Sewer
Site Investigation Report
Naval Air Station Pensacola
Pensacola, Florida

ABB
ASEA BROWN BOVERI

09 November 1992

Commanding Officer
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
Charleston, SC 29411-0068

Attention: Bob Harvey
Code 0233BH

Subject: **Notification of Costs Incurred under CTO #067**
Contract N62467-89-D-0317

Dear Bob:

In accordance with Contract N62467-89-D-0317, Part VII, Subsection 6, "Limitation of Funds", and pursuant to FAR 52.232-22, ABB Environmental Services, Inc. (ABB-ES) hereby advises the Contracting Officer that ABB-ES has incurred costs approaching seventy-five percent (75%) of the total amount so far allotted by the Government for CTO #067, Site Investigation, Sites 25 and 27, NAS Pensacola, FL.

We believe that sufficient funds are available to perform the currently authorized scope of work. Inquiries concerning this matter may be directed to me at 904-656-1293.

Very truly yours,

ABB ENVIRONMENTAL SERVICES, INC.

Laurie Huffman
Contracts Manager

cc: Kim Queen - RPM
SOUTHNAVFAC

ABB Environmental Services Inc.

2590 Executive Center Circle East
Berkeley Building
Tallahassee, Florida 32301

Telephone (904) 656-1293
Fax (904) 656-3386

Subject: **Notification of Costs Incurred under CTO #067**
Contract N62467-89-D-0317

Blind Copies: Rao Angara
Central Files
Contract File

RADIUM DIAL SHOP
CTO #034

IRP PROGRAM

WORK ASSIGNMENT FILE INDEX

SECTION 1 Project Initiation

File No.	Description
1.1	AVAILABLE INFORMATION (Non C-EE developed)
1.1.1	Previous Investigative Reports (Record Search, HRS. Scoring) RCRA Guidance Doc., Library
1.1.2	Photographs/Historical Imagery
1.1.3	Maps
1.1.4	Site Background/Data-Geology, Soils, Land Use, Fish and Wildlife information, Endangered Species information, Wetland maps.
1.1.5	Miscellaneous Information-Correspondence, Depositions, Demographic Information, Newspaper Clippings, personal etc
1.1.6	Reports by Others (Subs, etc.)
1.2	INITIAL TASKS
1.2.1	Records Search/Review of Existing Data
1.2.2	Site Reconnaissance
1.2.3	Preliminary Identification/Evaluation of Remedial Alternatives (DQO) Data Quality Objective
1.2.4	Other (Meeting Notes, Misc.)
1.3	CORRESPONDENCE AND MEMORANDA

SECTION II Planning/Scoping Reports

File No.	Description
2.1	PROJECT WORK PLAN
2.1.1	Draft, Comments and Revisions
2.1.2	Final
2.2	SAMPLING AND ANALYSIS PLAN (SAP)
2.2.1	Draft, Comments and Revisions
2.2.2	Final
2.3	QUALITY ASSURANCE PROJECT PLAN (QAPP)
2.3.1	Draft, Comments and Revisions
2.3.2	Final

IRP PROGRAM

WORK ASSIGNMENT FILE INDEX

2.4 HEALTH AND SAFETY PLAN (HASP)
- 2.4.1 Draft, Comments and Revisions
- 2.4.2 Final

2.5 TECHNICAL MEMORANDA
- 2.5.1 Technical Memoranda (documentation for proposed work)
- 2.5.2 Minutes of Scoping Meetings

2.6 CORRESPONDENCE AND MEMORANDA

SECTION III Field Investigations (SI & RI)

File No. Description

3.1 LOGS AND FORMS
- 3.1.1 Equipment Request Forms
- 3.1.2 Log Books
- 3.1.3 Boring logs
- 3.1.4 Test pit logs
- 3.1.5 Groundwater Sampling Data Sheets
- 3.1.6 Surface Water Sampling Data Sheets
- 3.1.7 Other

3.2 HYDROGEOLOGIC/GEOLOGIC DATA
- 3.2.1 Groundwater level Measurements
- 3.2.2 Permeability Testing
- 3.2.3 Pumping Tests
- 3.2.4 Cross Sections
- 3.2.5 Groundwater Contour Maps
- 3.2.6 Geologic Contour Maps (e.g.,Isopachs)
- 3.2.7 Other

3.3 REMOTE SENSING/FIELD SCREENING DATA
- 3.3.1 Seismic
- 3.3.2 Magnetometer
- 3.3.3 Soil Gas
- 3.3.4 Field GC Screening
- 3.3.5 Fracture Trace Analysis
- 3.3.6 Other

3.4 ANALYTICAL DATA
- 3.4.1 Groundwater
- 3.4.2 Soil
- 3.4.3 Sediment

IRP PROGRAM

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4.2.5.6 Ecological Risk Characterization
4.2.5.7 Summary of Ecological Risk
4.2.6 Draft Report and Comments
4.2.7 Final Report

4.3 FEASIBILITY STUDY REPORT
- 4.3.1 Calculations/Work Sheets
- 4.3.2 Identificatiion of Remedial Response Objectives
- 4.3.3 Alternatives Identification/Initial Screening
- 4.3.4 Alternatives Screening Report & Comments
- 4.3.5 Detailed Analysis
- 4.3.6 Alternatives Evaluation Report & Comments
- 4.3.7 Internal Draft FS Report & Comments
- 4.3.8 Draft FS Report & Comments
- 4.3.9 AFIRM Draft FS Report & Comments (Air Force Installation Restoration Management)
- 4.3.10 Final FS Report including Responsiveness Summary

4.4 FOCUSED FEASIBILITY REPORT
- 4.4.1 Calculations/Work Sheets
- 4.4.2 Identification of Remedial Response Objectives
- 4.4.3 Alternatives Identification/Initial Screening
- 4.4.4 Detailed Evaluation
- 4.4.5 Internal Draft FFS Report & Comments
- 4.4.6 Draft FFS & Comments
- 4.4.7 Final FFS & Comments

4.5 NO ACTION DECISION DOCUMENTS

4.6 DECISION DOCUMENTS/RECORD OF DECISION

4.7 OTHER REPORTS
- 4.7.1 Technical Memoranda (Reports of Findings)
- 4.7.2 Interim Reports
- 4.7.3 Other

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SECTION V Design

File No.	Description
5.1	CONCEPTUAL DESIGN
5.1.1	Design Criteria Review and Development
5.1.2	Conceptual Design/Drawings
5.1.3	Calculations/Work Sheets
5.1.4	Preliminary Cost Estimates
5.1.5	Review and Comments
5.2	FINAL DESIGN
5.2.1	Calculations/Work Sheets
5.2.2	Graphics
5.2.3	Plans and Specifications
5.2.4	Revised Cost Estimates
5.2.5	Review and Comments
5.3	CONTRACTOR INTERFACING
5.4	REMEDIAL DESIGN REPORT
5.4.1	Draft Report and Comments
5.4.2	Final Report
5.5	CORRESPONDENCE AND MEMORANDA

SECTION VI COMMUNITY RELATIONS

File No.	Description
6.1	COMMUNITY RELATIONS PLAN
6.1.1	Interviews
6.1.2	Draft Plan and Comments
6.1.3	Final CRP
6.2	INFORMATION
6.2.1	On-Site Discussion Summaries
6.2.2	Newspaper and Magazine Clippings
6.2.3	Site History/Background
6.2.4	Summaries of Telephone Conversations
6.2.5	Summaries of Public Meetings
6.3	COMMUNITY RELATIONS SUPPORT
6.3.1	News Releases
6.3.2	Briefings and News Conferences

IRP PROGRAM

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	6.3.3	Fact Sheets
	6.3.4	Public Meetings
	6.3.5	Public Inquiries Responses
	6.3.6	Workshops
	6.3.7	Site Tours
6.4	OTHER	
	6.4.1	Technical Review Committee Minutes
	6.4.2	Responsiveness Summary
	6.4.3	Correspondence
	6.4.4	Memoranda
	6.4.5	Project Notebooks

SECTION VII Quality Assurance/Quality Control

File No.	Description
7.1	SAMPLE HANDLING AND CUSTODY
7.1.1	Chain of Custody/Receipt for Sample Forms Originals/Analytical Forms/Fed/Ex Forms
7.1.2	Shipping Receipts and Forms
7.1.3	Analyical Lab Documentation: Traffic Reports, Dioxin Shipment Records,
7.1.4	Sample Tracking
7.1.5	Bottle Certification (Dated & Initaled)
7.2	ANALYTICAL DATA
7.2.1	Documentation
7.2.2	Significance of Deviation from Standard Protocol
7.2.3	Data Transfer and Storage
7.3	FIELD DATA
7.3.1	Assessment of Field Data Accuracy and Precision
7.3.2	Adequacy of Calibration
7.4	REPORTS
7.4.1	Formal Review Reports/QA/QC AUDIT
7.5	DESIGN/CONSTRUCTION

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SECTION VIII Health & Safety File Index

File No.	Description
8.1	HEALTH & SAFETY
8.1.1	Subcontractor Certification of Training and Medical Monitoring
8.1.2	Audit Reports
8.1.3	Incident Reports
8.1.4	Health & Safety CE Personal List
8.1.5	Site Sign-off Sheets
8.1.6	Field Team Review/Medical Data Sheet

SECTION IX LEGAL

File No.	Description
9.1	INTER AGENCY AGREEMENT
9.2	CORRESPONDENCE
9.3	OTHER
9.3.1	Memoranda
9.3.2	Other

SECTION X Correspondence and Memoranda

File No.	Description
10.1	PROJECT INITIATION
10.1.1	Internal
10.1.2	Other
10.2	REMEDIAL INVESTIGATION
10.2.1	Internal
10.2.2	Other
10.3	FEASIBILITY STUDY
10.3.1	Internal
10.3.2	Other
10.4	DESIGN
10.4.1	Internal
10.4.2	Other

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SECTION XI Administrative

File No.	Description
11.1	TASK ORDER AUTHORIZATION
11.1.1	SOW/RFP's
11.1.2	Technical and Cost Proposals
11.1.3	Task Order Authorization
11.1.4	Record of Project Change
11.2	SCHEDULES/PROJECT REPORTS
11.2.1	Monthly Progress Reports
11.2.2	Project Manager Meeting Minutes
11.2.3	Project Schedule
11.2.4	Monthly Program Activity Report
11.3	FINANCIAL MANAGEMENT REPORTS
11.3.1	Budget Tracking Tables
11.3.2	Project Action Notices (PANs)
11.3.3	Change of Scope/Cost Growth Documentation
11.3.4	Other
11.4	SUBCONTRACTS
11.4.1	Procurement (Bids, Correspondence)
11.4.2	Task Order Agreements/Task Order Memoranda
11.4.3	Purchase Orders
11.4.4	Receipts, Packing Slips, Etc.

ATTACHMENT 2

CENTRAL FILE PROCEDURES

INACTIVE RECORDS AND DRAWINGS

MEMO TO: PROJECT MANAGERS

FROM: JIM ATWELL
PETER HARROD
JIM LAWSON

DATE: MARCH 21, 1989

SUBJECT: CENTRAL FILE PROCEDURES-INACTIVE RECORDS AND DRAWINGS

AS PART OF THE NEW PROJECT MANAGEMENT PROGRAM WE ARE IMPLEMENTING A PROCESS TO MANAGE ALL OF OUR INACTIVE PROJECT RECORDS AND DRAWINGS. THE RESPONSIBILITY FOR CARRYING OUT THE PROGRAM WILL BE PLACED WITH PROJECT MANAGEMENT AND CENTRAL FILE. THE PROJECT MANAGER (PM) WILL HAVE THE RESPONSIBILITY OF ORGANIZING THE FILES AND COORDINATING WITH CENTRAL FILES PRIOR TO CLOSING THE PROJECT ACCOUNT. IT IS OUR OBJECTIVE TO PULL ALL THE PROJECT FILES TOGETHER, CULL THEM, INVENTORY THE FILES AND TRANSMIT THEM TO CENTRAL FILES WHILE THE PROJECT IS ACTIVE SO THAT THESE COSTS CAN BE RECOVERED.

THE PROJECT MANAGER WILL INSURE THAT PROCEDURES ARE FOLLOWED FOR SUCH ACTIVITIES AS: SETTING UP THE FILES, SELECTING THE SPECIFIC FILE CODES TO BE USED FOR GIVEN PROJECTS, MAINTAINING THE FILES AND CONSOLIDATING THE FILES AT PROJECT CLOSEOUT. THE EXISTING FILE PROCEDURE SHOULD BE REFERRED TO FOR USE IN SETTING UP FILES. A COPY IS AVAILABLE ON REQUEST.

WHEN A PROJECT IS CLOSED OUT ALL THE FILES WILL BE BROUGHT TOGETHER, CULLED, INVENTORIED AND PLACED IN ARCHIVE STORAGE BOXES WHICH ARE AVAILABLE THROUGH THE LIBRARY. THE PROJECT MANAGER WILL BE RESPONSIBLE FOR THE INVENTORY AND THE PLACEMENT OF FILES INTO THE STORAGE BOXES. THE PROJECT MANAGER WILL THEN TRANSMIT THE INACTIVE RECORDS TO CENTRAL FILES. THE TIME LIMIT FOR THIS WILL BE ONE (1) MONTH FROM PROJECT COMPLETION.

THE LIBRARY WILL BE RESPONSIBLE FOR CENTRAL FILE AND FOR PROCESSING THE FILES TO INSURE THE ORDERLY STORAGE AND EFFICIENT RETRIEVAL OF PROJECT RECORDS. CENTRAL FILE WILL ACCEPT ONLY RECORDS THAT HAVE BEEN AUTHORIZED FOR STORAGE BY THE PROJECT MANAGER.

THE LIBRARY WILL BE CREATING A DATABASE OF ALL THE CLOSED FILES. THE DATABASE WILL CONSIST OF THE PROJECT NUMBER, BOX NUMBER, CLIENT NAME, PROJECT DESCRIPTION, SITE LOCATION, BEGINNING AND ENDING DATE OF THE PROJECT, PROJECT TITLE, BRIEF DESCRIPTION AND INDIVIDUAL FILE FOLDER DESCRIPTION. PRINTOUTS OF THE DATABASE WILL BE DISTRIBUTED TO INDIVIDUAL DEPARTMENTS AS THEY BECOME AVAILABLE.

ALL INACTIVE PROJECT RECORDS WILL BE STORED OFF SITE AT THE CONFIDENTIAL COMPANIES WHICH IS A COMPLETE RECORDS STORAGE AND MANAGEMENT CENTER LOCATED ON CUMBERLAND AVENUE WITH A FULL TIME STAFF DEDICATED TO RECORDS MANAGEMENT. A TOUR OF THEIR FACILITY WILL BE ARRANGED FOR ANYONE INTERESTED.

THERE WILL NO LONGER BE RANDOM STORING OF RECORDS IN HARBOR PLAZA OR THE BAXTER BUILDING. ALL TRANSFILES THAT ARE CURRENTLY STORED IN THE BASEMENT OF HARBOR PLAZA AND IN VARIOUS AREAS OF THE BAXTER BUILDING WILL BE REBOXED AND INVENTORIED BY THE CENTRAL FILE STAFF FOR SHIPMENT TO THE ARCHIVE FACILITY. WHEN LARGE

PROJECTS ARE FOUND THAT NEED TO BE CULLED BEFORE THEY ARE INVENTORIED AND REBOXED, PERSONNEL FAMILIAR WITH THE PROJECT OR THAT PARTICULAR CLIENT WILL BE ASKED TO REVIEW THE FILES. A LOCATION IN THE BAXTER BUILDING WILL BE SET UP FOR THIS PURPOSE. A PRIORITY LIST OF OLD FILE LOCATIONS WILL BE PREPARED IN CONJUNCTION WITH OPERATING DIVISION MANAGEMENT AND SYSTEMATICALLY CLEANED UP.

AT PRESENT THE COMPANY HAS A RECORDS RETENTION POLICY THAT IS NOT BEING FOLLOWED. THIS POLICY IS AVAILABLE AND WILL BE REVIEWED AND REVISED AS NECESSARY.

CENTRAL FILE STAFF ARE AVAILABLE TO DISCUSS WITH THE BRANCH OFFICES SUGGESTIONS FOR HANDLING THEIR CLOSED FILES.

AN ORGANIZED HISTORICAL PROJECT FILES SYSTEM IS NEEDED TO QUICKLY REFERENCE INACTIVE PROJECTS AND TO RETRIEVE PROJECT FILES. WITH A VIABLE SYSTEM AND EVERYONE'S COOPERATION TO SUPPORT THE EFFORT WE CAN ELIMINATE THE HISTORICAL FILES PROBLEMS OF THE PAST.

CC: DIVISION MANAGERS
DEPARTMENT MANAGERS
DON COTE
GEORGE CHARPENTIER
BILL ADAMS
STAN WALKER
JIM HAMILTON
DON BUSHEY

CENTRAL FILES GUIDELINES

1. PROJECT MANAGER WILL GATHER ALL FILES AND DRAWINGS PRIOR TO FINAL PROJECT CLOSE OUT.

2. FILES WILL BE CULLED, INVENTORIED AND PLACED IN ARCHIVE BOXES BY THE RESPONSIBLE DEPARTMENT WHILE THE PROJECT IS ACTIVE.

3. PENDAFLEX FOLDERS WILL NOT BE PLACED IN ARCHIVE BOXES AS THEY DO NOT PERMIT THE TOP TO FIT PROPERLY. MATERIAL SHOULD BE PLACED IN MANILA FOLDERS AND PROPERLY LABELED.

4. A PROJECT CLOSE OUT DATA SHEET WILL BE COMPLETED AND FORWARDED TO ACCOUNTING, MARKETING AND CENTRAL FILES BY THE PROJECT MANAGER. A NEW PROJECT CLOSE OUT FORM WILL BE IMPLEMENTED TO PROVIDE INFORMATION TO MARKETING AND CENTRAL FILES. THE FORM SHOULD BE COMPLETELY FILLED OUT AS THIS INFORMATION WILL BE USED TO BUILD THE MARKETING AND CENTRAL FILE DATABASES AS WELL AS CLOSE THE PROJECT FOR ACCOUNTING PURPOSES. THE DATA SHEET WILL BE AN IMPORTANT LINK BETWEEN PROJECT NUMBER, CLIENT AND BOX NUMBER.

5. CENTRAL FILES WILL BE NOTIFIED SO THEY CAN ASSIGN BOX NUMBERS AND COORDINATE THE SHIPMENT OF RECORDS TO THE ARCHIVE FACILITY.

6. CENTRAL FILE WILL ASSIGN A UNIQUE BOX NUMBER TO EACH ARCHIVE BOX. THE ARCHIVE FACILITY WILL ASSIGN A BAR CODED NUMBER TO EACH BOX. THIS WILL PROVIDE A CROSS-REFERENCE FOR RETRIEVING BOXES. THESE NUMBERS WILL BE UNIQUE TO EACH BOX AND WILL NOT BE USED AGAIN. A PERMANENT LOCATION IS ASSIGNED AT THE FACILITY FOR EACH BOX.

7. COPIES OF THE INVENTORY SHEET WILL BE DISTRIBUTED BY CENTRAL FILE AS FOLLOWS:

   A. CENTRAL FILE
   B. DEPARTMENT RESPONSIBLE FOR PROJECT
   C. ARCHIVE FACILITY
   D. INDIVIDUAL ARCHIVE BOX

8. ARCHIVE BOXES WILL BE DELIVERED BY OFFICE SERVICE PERSONNEL TO THE ARCHIVE FACILITY FOR STORAGE.

9. RETRIEVAL OF INFORMATION WILL BE COORDINATED THROUGH CENTRAL FILE (MARELY GROSS OR JIM LAWSON). AS THE VOLUME OF INFORMATION INCREASES AT OFF-SITE STORAGE, ADDITIONAL PERSONNEL WILL BE ADDED TO THE AUTHORIZED LIST OF PEOPLE TO CONTACT FOR RETRIEVAL PURPOSES. IT WILL BE NECESSARY TO HAVE A BOX NUMBER FOR RETRIEVAL PURPOSES. IDENTIFICATION OF A BOX NUMBER WILL BE DONE THROUGH THE CENTRAL FILE DATABASE.

   WHEN A BOX NUMBER IS KNOWN THE ARCHIVE FACILITY WILL BE CONTACTED. THE BOX WILL BE PICKED UP BY OFFICE SERVICE PERSONNEL AND DELIVERED TO THE PERSON THAT REQUESTED IT. THE MINIMUM TIME FOR A BOX TO BE PICKED UP AND

DELIVERED IS ONE (1) HOUR, BUT IT IS REQUESTED THAT A 24 HOUR NOTICE BE PROVIDED FOR RETRIEVAL OF INFORMATION. A BOX RETRIEVED FROM STORAGE SHOULD BE RETURNED TO CENTRAL FILE WITHIN (5) WORKING DAYS OR SOME OTHER TIME PERIOD SPECIFIED AT THE TIME OF THE RETRIEVAL REQUEST.

10. THE ARCHIVE FACILITY HAS A CONFERENCE ROOM WITH A TELEPHONE AND A FAX MACHINE FOR PERSONNEL WHO MAY WISH TO WORK THERE. PERSONNEL WHO WISH TO GO TO THE FACILITY TO USE RECORDS WILL HAVE TO MAKE ARRANGEMENTS THROUGH CENTRAL FILE AS ACCESS IS RESTRICTED FOR SECURITY PURPOSES. THIS WILL BE DONE WITH A TELEPHONE CALL AND A FOLLOW-UP LETTER FROM US TO THE ARCHIVE FACILITY. EVENING AND WEEKEND ACCESS IS AVAILABLE FOR A FEE.

DEPARTMENT OF THE NAVY
SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
2155 EAGLE DR. P O BOX 10068
CHARLESTON, S C 29411-0068

PLEASE ADDRESS REPLY TO THE COMMANDING OFFICER NOT TO THE SIGNER OF THIS LETTER REFER TO

4330
Code 0233JM
89-D-0317
03 July 1991

ABB Environmental Services, Inc.
Attn: Mr. Tony Allen
2571 Executive Center Circle East
Suite 100
Tallahassee, FL 32301

CONTRACT N62467-89-D-0317, COST PLUS AWARD FEE CONTRACT FOR COMPREHENSIVE LONG-TERM ENVIRONMENTAL ACTION NAVY (C.L.E.A.N.) DISTRICT I; SOW #13, SITE INVESTIGATION FOR THE RADIUM DIAL SHOP SEWER, NAVAL AIR STATION, PENSACOLA, FL

Gentlemen:

In accordance with the terms of the subject contract, the Government wishes to place a contract task order (CTO). The required services for this CTO are stated in enclosure (1), Statement of Work No. 13 dated 3 July 1991.

Within five (5) days of receipt of this letter, please contact the Engineer-in-Charge, Ms. Kimberly Queen at (803) 743-0358 to schedule a site visit. Upon completion of the site visit, you should submit a site visit report with a plan of action and cost proposal to this office, attention Janet Morris, Code 0232JM.

This project will be funded by DERA funds. Therefore, all costs related to the preparation of the cost proposal/site visit shall be charged to the Program Management Office (PMO) as established in CTO 0001.

You are reminded that this letter does not constitute authority to proceed with any work specified in the statement of work other than the site visit and preparation of the cost proposal. Issuance of a CTO is dependent upon the successful completion of negotiations. In the unlikely event that these negotiations are unsuccessful, the Government cannot be held liable for any expenses incurred by your firm for items other than those previously negotiated under CTO 0001 (PMO).

RELEASE OF INFORMATION: Southern Division, Naval Facilities Engineering Command is the releasing authority for all information/documents regarding projects contracted out to private firms. Therefore, the contractor or any contractor personnel shall obtain approval before publicizing, discussing, or releasing any documents or information concerning this or any other project with anyone other than Government personnel associated with the project in question.

Please direct any inquiries to Janet Morris, Code 0233JM at (803) 743-0908.

Sincerely,

Dwight Cargile

DWIGHT CARGILE
Head, Environmental Contracts Branch
Contracting Officer

Enclosure:
(1) Statement of Work

Copy to: w/enclosure (1)
NAS Pensacola, FL

FOR OFFICIAL USE ONLY

Code 18219
03 July 1991
SOW #13

Department of the Navy
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive, PO Box 10068
Charleston, South Carolina 29411-0068

STATEMENT OF WORK CONTRACT N62467-89-D-0317

SITE INVESTIGATION FOR THE RADIUM
DIAL SHOP SEWER - SITE 27
(PROPOSED COLD STORAGE FACILITY LOCATION)

SECTION 1.0 - PROJECT DESCRIPTION AND BACKGROUND

1.1 The project is located at Naval Air Station, Pensacola, Florida.

1.2 The purpose of this CTO is to perform a site investigation for the Radium Dial Shop Sewer - Site 27. This site is the proposed location for a Cold Storage Facility for the Naval Supply Center (NSC), Pensacola, Florida.

SECTION 2.0 - IMPLEMENTATION PLAN/PROJECT PLANNING

The contractor shall provide monthly progress reports describing actions which have taken place during the previous month and activities scheduled to take place during the following month. The reports shall identify any anticipated delays in meeting time schedules, reason(s) for the delay, and actions taken to prevent or mitigate the delay. The project schedule shall be updated and submitted with this report.

SECTION 3.0 - RELATIONSHIPS

3.1 Work Element 1 - Access to Site

The contractor shall be responsible for obtaining permission to enter the station and perform the required field work.

3.2 Work Element 2 - Guidance and Coordination of Work

During the course of the contract, the contractor shall follow such instructions as may be issued to him by the project EIC, Ms. Kimberly Queen, Code 18219 (telephone (803) 743-0341), unless otherwise directed. The contractor may consult the Public Works Officer in matters concerning local conditions and detail operational procedures of Command as may be necessary to develop the scope of this CTO; however, the contractor will be responsible

directly to the project EIC for insuring that project limitations incorporated herein are not exceeded.

3.3 Work Element 3 - Licenses and Permits

The contractor will be responsible for obtaining any necessary licenses and permits, and for complying with all applicable laws, codes and regulations in connection with prosecution of the work.

SECTION 4.0 - SITE INVESTIGATION

4.1 Work Element 1 - Radiation Survey

An extensive radiation survey will be conducted within the proposed construction limits for the new Cold Storage Facility as shown in Attachment 1. A gamma scintillation detector survey will be conducted at ground level to locate areas with above background radioactivity measurements. The survey will be conducted over the entire proposed site, as outlined by the construction limits in Attachment 1, on a grid based on 5-foot centers.

4.2 Work Element 2 - Analytical Screening

Soil samples shall be taken on a grid based on 50-foot centers as shown on Attachment 1. Samples shall be obtained from a composite sample taken at 5-foot intervals to a depth of 10-feet (two soil samples per location). Each sample shall be taken using a decontaminated bucket auger or split spoon. Contractor shall supply enough decontaminated augers and/or split spoons to minimize time spent on decontamination between sampling points. Samples taken for volatile organic analysis shall not be composited but shall be taken from the mid-point of the 5-foot interval. All other samples taken for analysis shall be thoroughly mixed composites.

All samples will be screened with an Organic Vapor Analyzer and for radiation with a sodium iodide probe. All samples exhibiting an OVA reading greater than 50 ppm will be analyzed for volatile and semi-volatile organics using EPA Methods 8240 and 8270. All soil samples shall be analyzed for gross alpha and radium-226. Radiation screening is for the purpose of establishing proper handling and shipping procedures.

4.3 Work Element 3 - Quality Control Samples

One trip blank per shipping container holding VOC samples (estimate 4) shall be analyzed using EPA Method 8240. One field blank per decontamination source water (estimate 1), six field duplicates (soil samples), and one equipment rinseate sample per day (estimate 5) shall be taken and analyzed for EPA Methods 8240 and 8270, gross alpha, and radium-226.

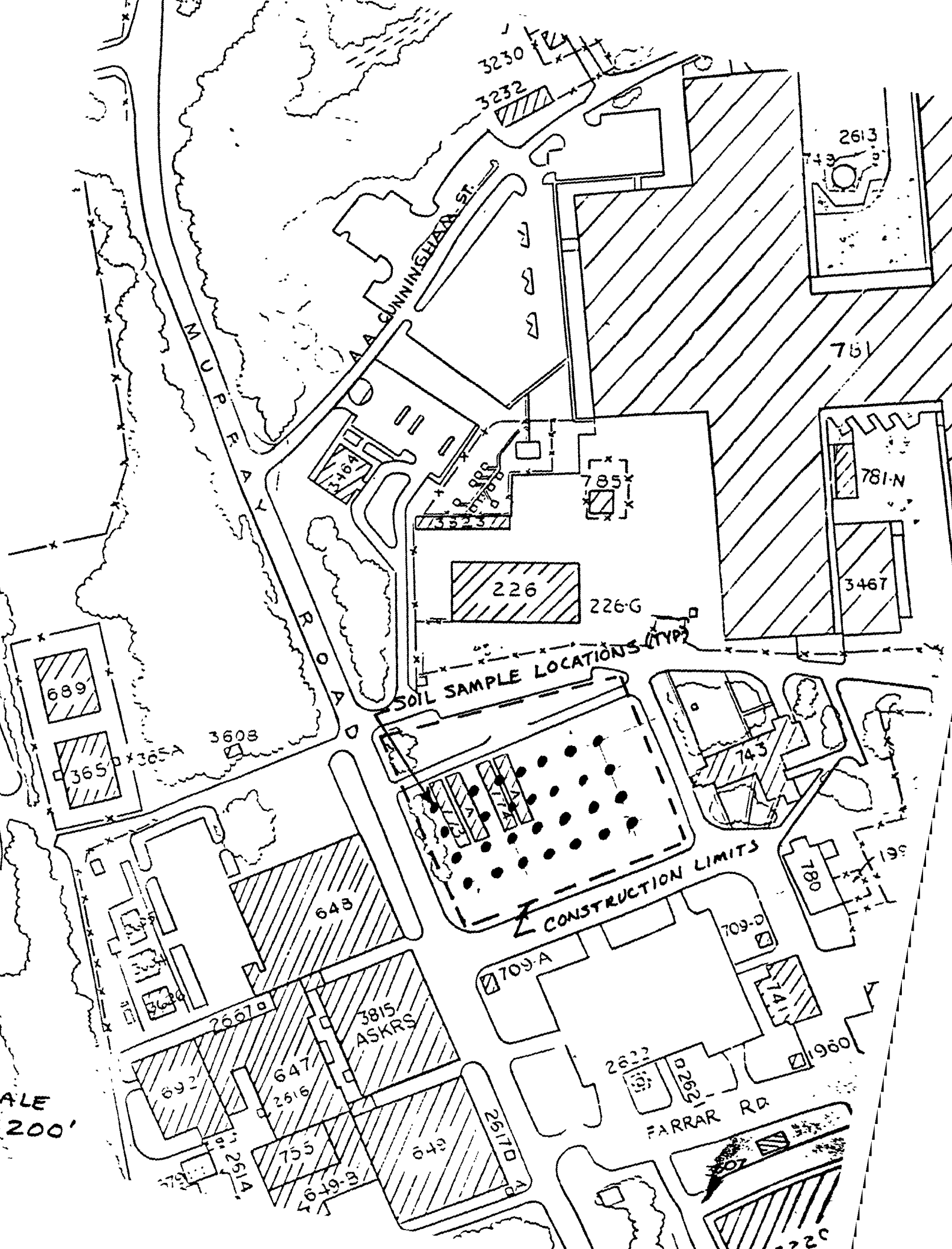
Contractor shall provide three copies of the analysis results and a brief summary for field conditions encountered at the site and

sampling methods used. Contractor shall containerize all wastes generated during this work and shall provide activity personnel with sufficient information to properly dispose of the waste materials.

SECTION 5.0 - SCHEDULE AND SUBMITTALS

All work described in Section 4.0 shall be submitted within 60 calendar days after notice to proceed is received.

Commanding Officer, Southern Division
Naval Facilities Engineering Command
Attn: Code 18219 (Ms. Kimberly Queen)
2155 Eagle Drive, PO Box 10068
Charleston, South Carolina 29411-0068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A.A. CUNNINGHAM ST.
MURRAY ROAD
761
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SOIL SAMPLE LOCATIONS (TYP)
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CONSTRUCTION LIMITS
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