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CONTAMINATION ASSESSMENT REPORT ADDENDUM SITE 1Q AVIATION GASOLINE PIPELINE NAS PENSACOLA FL
1/1/1998
ABB ENVIRONMENTAL SERVICES, INC

CONTAMINATION ASSESSMENT REPORT ADDENDUM

SITE 1Q, AVIATION GASOLINE PIPELINE

NAVAL AVIATION DEPOT, NAVAL AIR STATION PENSACOLA, FLORIDA

Unit Identification Code: N00204

Contract No.: N62467-89-D-0317/008

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January 1998

CERTIFICATION OF TECHNICAL
DATA CONFORMITY (MAY 1987)

The Contractor, ABB Environmental Services, Inc., hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-89-D-0317/008 are complete and accurate and comply with all requirements of this contract.

DATE: January 20, 1998

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(DFAR 252.227-7036)

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FOREWORD

To meet its mission objectives, the U.S. Navy performs a variety of operations, some requiring the use, handling, storage, or disposal of hazardous materials. Through accidental spills and leaks and conventional methods of past disposal, hazardous materials may have entered the environment in ways unacceptable by today's standards. With growing knowledge of the long-term effects of hazardous materials on the environment, the Department of Defense initiated various programs to investigate and remediate conditions related to suspected past releases of hazardous materials at their facilities.

One of these programs is the Comprehensive Long-Term Environmental Action, Navy Underground Storage Tank (UST) program. This program complies with Subtitle I of the Resource Conservation and Recovery Act and the Hazardous and Solid Waste Amendments of 1984. In addition, the UST program complies with all appropriate State and local storage tank regulations as they pertain to each naval facility.

The UST program includes the following activities:

- registration and management of Navy and Marine Corps storage tank systems,
- contamination assessment planning,
- site field investigations,
- preparation of contamination assessment reports,
- remedial (corrective) action planning,
- implementation of the remedial action plans, and
- tank and pipeline closures.

The Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM) manages the UST program and the U.S. Environmental Protection Agency and the Florida Department of Environmental Protection (formerly Florida Department of

Environmental Regulation) oversee the Navy UST program at Naval Aviation Depot (NADEP) Pensacola.

Questions regarding the UST program at NADEP Pensacola should be addressed to Mr. Bias Glover, SOUTHNAVFACENGCOM, Code 18410, at (803) 820-5651

ACKNOWLEDGMENTS

In preparing this report, the Underground Storage Tank Section of the Comprehensive Long-Term Environmental Action, Navy Group at ABB Environmental Services, Inc., commends the support, assistance, and cooperation provided by the personnel at Naval Aviation Depot, Naval Air Station, Pensacola, Florida, and Southern Division, Naval Facilities Engineering Command.

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GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
AVGAS	aviation gasoline
BaA	benzo(a)anthracene
BaP	benzo(a)pyrene
BbF	benzo(b)fluoranthene
bls	below land surface
CA	contamination assessment
CAR	Contamination Assessment Report
DahA	dibenzo(a,h)anthracene
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FID	flame ionization detector
ft/day	feet per day
ft/ft	feet per foot
GC	gas chromatograph
GCTL	groundwater cleanup target level
HSA	hollow stem augers
i_{avg}	average hydraulic gradient
IRA	initial remedial action
K_{avg}	average hydraulic conductivity
μg/kg	micrograms per kilogram
μg/ℓ	micrograms per liter
mg/kg	milligrams per kilogram
mg/ℓ	milligrams per liter
ml	milliliter
MTBE	methyl tert-butyl ether
NADEP	Naval Aviation Depot
NEX	Naval Exchange
OVA	organic vapor analyzer
PAH	polynuclear aromatic hydrocarbons
ppm	parts per million
PVC	polyvinyl chloride
QA/QC	Quality assurance and quality control
SCTL	soil cleanup target level

GLOSSARY (Continued)

TM	Trademark
TOC	top of casing
TRPH	total recoverable petroleum hydrocarbons
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
V	velocity
VOC	volatile organic compound
yd^3	cubic yard

1.0 INTRODUCTION

The following report summarizes the data gathered during the Aviation Gasoline (AVGAS) Pipeline Area site assessment and applies only to Site 1Q. General information, such as regional and local physiography, regional hydrology, investigative methodologies, and procedures, is included in the August 1995 AVGAS Pipeline Area Contamination Assessment Report (CAR) (ABB Environmental Services, Inc. [ABB-ES], 1995a).

1.1 Site 1Q DESCRIPTION AND BACKGROUND. Site 1Q is located on the southwest edge of Chevalier Field, Naval Aviation Depot (NADEP), Pensacola, Florida (Figure 1-1). It was identified during the Site 1, AVGAS Pipeline, investigation. The AVGAS pipeline was approximately 8,000 feet long and formed a perimeter around the north, west, and south sides of Chevalier Field. It was used to supply AVGAS to aircraft stationed on Chevalier Field from the early 1940s until the mid-1970s. The AVGAS pipeline was constructed of unprotected steel and buried to depths varying from 1 to 3 feet below land surface (bls). The northern 1,700 feet of the AVGAS pipeline were abandoned in place in the fall of 1994. The remaining southern sections of the pipeline were removed in January through March 1995. Figure 1-1 shows the former location of the AVGAS pipeline and the location of Site 1Q.

Site 1Q is located at what was referred to by site personnel as an "oil pit." The oil pit was near the west end of the southern-most segment of the former AVGAS pipeline, approximately 130 feet west of Site 8. No underground storage tank (UST) was associated with the oil pit at Site 1Q. At the time of removal, the oil pit contained a variety of piping, valves, and a hose on a steel reel. The purpose of the pit is uncertain, although the suspected usage was to dispense lube oil and air during aircraft maintenance. During the pipeline removal operations in February 1995, Site 1Q was identified as an area of soil contamination and potential groundwater contamination. The suspected contaminant at Site 1Q, AVGAS, is part of the gasoline analytical group.

1.2 CONSTRUCTION ACTIVITIES. In January 1995, the demolition of Chevalier Field commenced. The airfield and many associated facilities were demolished or extensively remodeled as part of the Base Realignment and Closure program. A Naval Technical Training Center was constructed on the former airfield. Building 630, a building on the northeast side of Site 1Q, underwent asbestos remediation in 1995. In 1996, the building and the surrounding parking areas and tarmac were stripped and remodeled for use as the new Naval Exchange (NEX) Mini-mall. Construction of the NEX Mini-mall and surrounding lawns and parking areas were completed in September 1997. Soil and groundwater data were collected from Site 1Q before and after construction. Figure 1-2 presents Site 1Q as it appeared prior to construction in 1995. Figure 1-3 presents Site 1Q as it appears now.

1.3 ADJACENT SITE - SITE 8. Site 8 is located on the southwest edge of Chevalier Field, approximately 130 feet east of Site 1Q. It is the former location of a 500-gallon UST associated with the AVGAS pipeline (Figure 1-2). The tank, designated UST 130, was located next to the northwest corner of

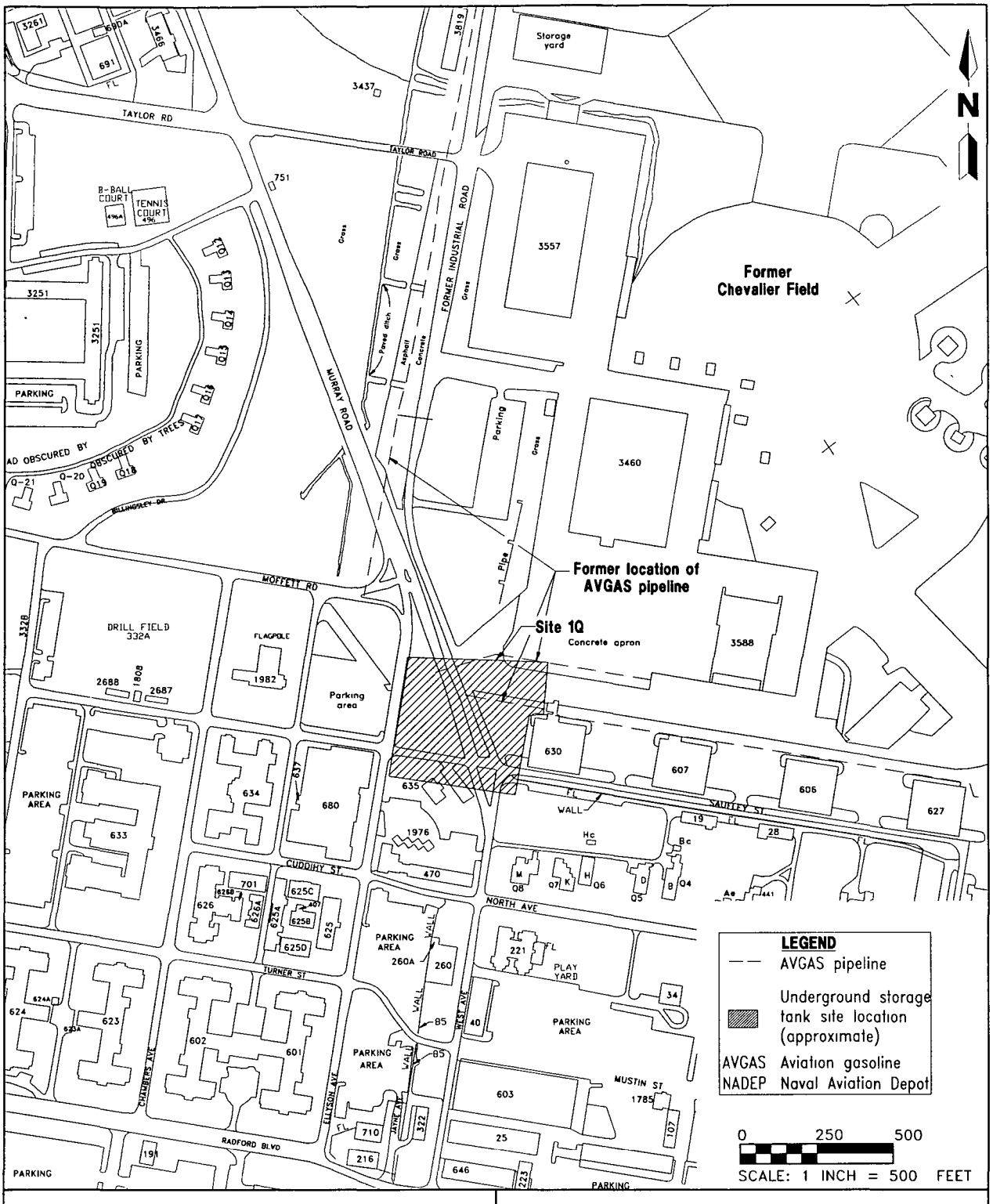

FIGURE 1-1
SITE LOCATION MAP

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SITE 1Q

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PENSACOLA, FLORIDA

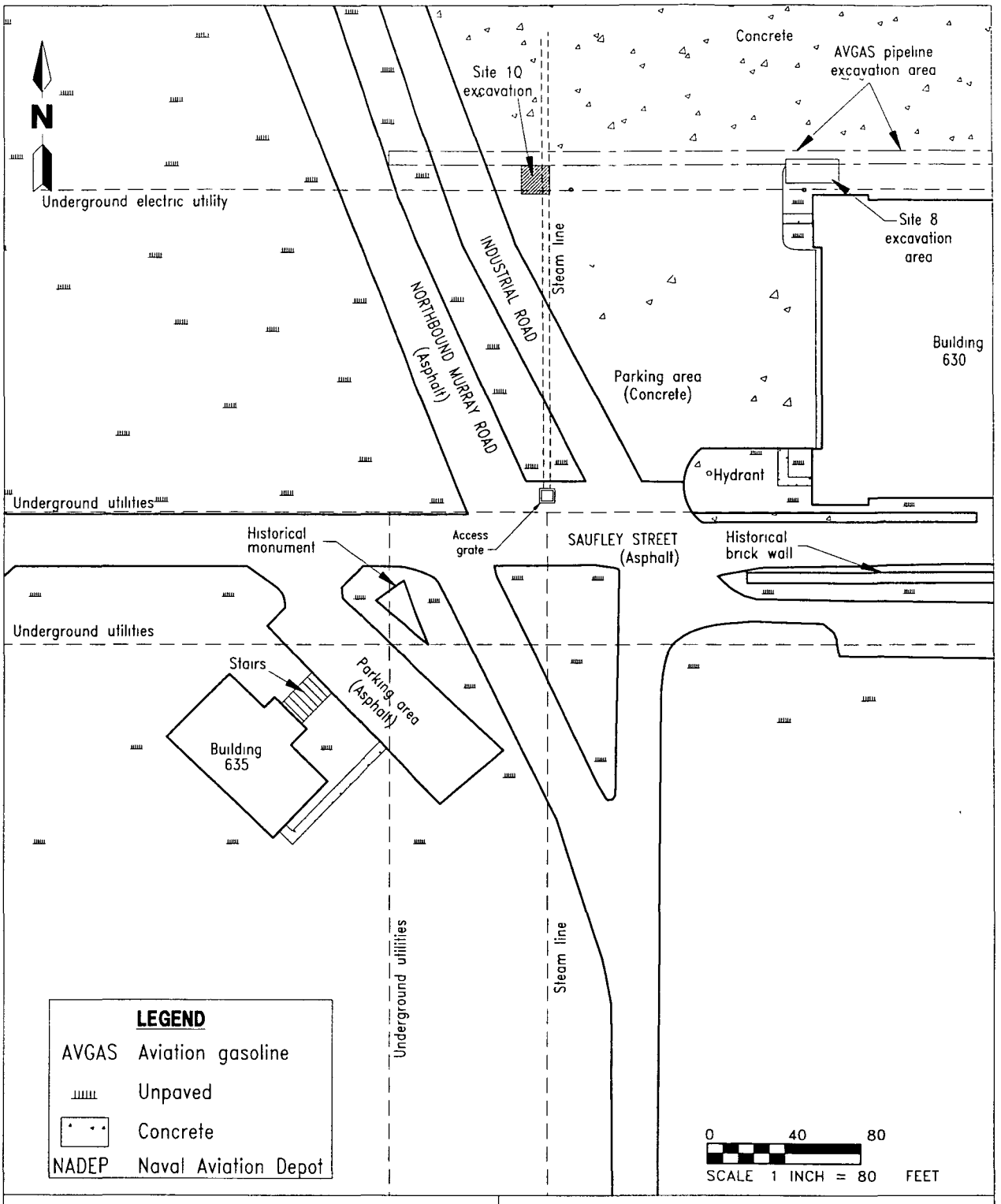

FIGURE 1-2
SITE PLAN, MAY 1995

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CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 1Q

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PENSACOLA, FLORIDA

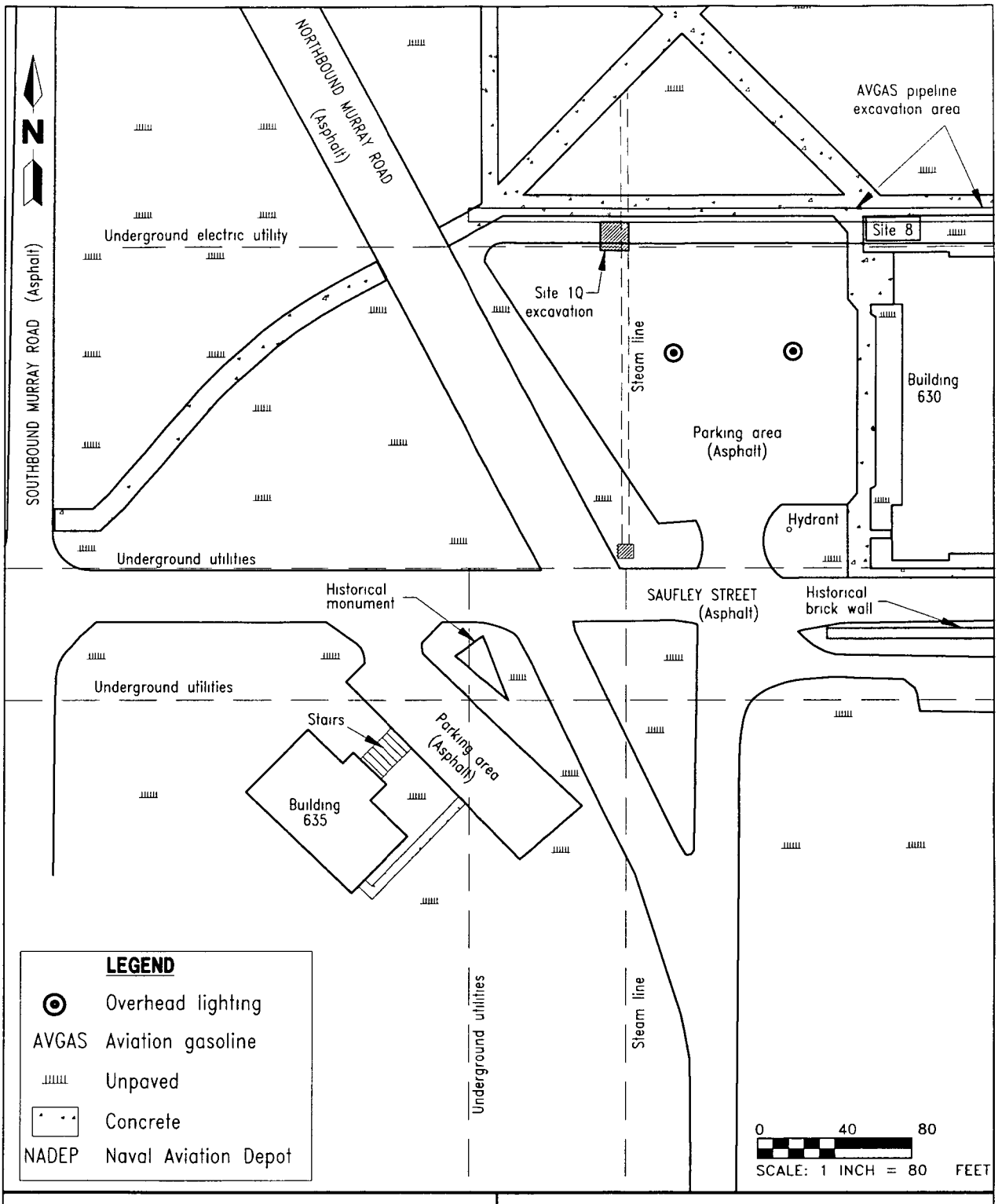

FIGURE 1-3
SITE PLAN, OCTOBER 1997

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CONTAMINATION ASSESSMENT REPORT ADDENDUM SITE 1Q

NADEP PENSACOLA PENSACOLA, FLORIDA

Building 630. UST 130 was constructed of unprotected steel and installed next to a steel containment area referred to by site personnel as an "oil pit." Site 8 was investigated concurrently with Site 1Q in 1995 and a CAR Addendum for Site 8 was submitted in November 1995 (ABB-ES, 1995b). The following is a summary of the 1995 CAR Addendum findings and conclusions.

- The sources of contamination—the UST and the AVGAS pipeline—have been removed.

- The groundwater flow direction at both sites is predominantly southeast. The average hydraulic gradient across Sites 8 and 1Q is 1.7×10^{-3} feet per foot (ft/ft). The average hydraulic conductivity at the sites is 27.3 feet per day (ft/day). The average pore water velocity is 1.85×10^{-1} ft/day.

- Excessively contaminated soil from the Site 8 UST excavation area was removed. Four confirmatory soil samples were collected from the Site 8 UST excavation walls. Contaminants detected in these samples were below 1995 State target levels (Chapter 62-770, Florida Administrative Code [FAC]).

- The groundwater at Site 8 was not impacted by the soil contamination detected during this investigation. Petroleum contamination detected in groundwater samples collected from monitoring wells in the vicinity of the former UST location was below State No Further Action target levels.

A No Further Action Proposal was recommended for Site 8. Florida Department of Environmental Protection (FDEP) approved the proposal on January 2, 1996. The approval letter is included in Appendix A of this report.

2.0 CONTAMINATION ASSESSMENT RESULTS

2.1 SOIL ASSESSMENT RESULTS.

2.1.1 Initial Remedial Action (IRA) On February 7, 1995, an IRA in the form of soil removal and remediation was conducted at Site 1Q during the AVGAS pipeline removal (ABB-ES, December 1995c). The horizontal and vertical extent of soil contamination was assessed with an organic vapor analyzer (OVA) equipped with a flame ionization detector (FID). OVA readings ranged from 1 to 150 parts per million (ppm). Approximately 29 cubic yards (yd^3) of soil were removed from an area approximately 13 feet by 15 feet. Excavation continued until the water table was reached at 4 feet bls. The soil removed from the site primarily consisted of very fine- to fine-grained, moderately well sorted sand, ranging in color from very pale orange to light gray. OVA screening of soil samples, 1QB00101 through 1QB00601, collected from the edges of the excavation confirmed that the contaminated soil had been removed from Site 1Q. The soil transportation manifests and receipts are included in the appendices of the August 1995 AVGAS Pipeline Area CAR (ABB-ES, 1995a).

2.1.2 Soil Screening Soil screening samples were collected for OVA headspace screening of volatile organic compound (VOC) concentrations from each borehole advanced at Site 1Q. Soil boring locations are show on Figure 2-1. These soil screening samples were placed in 16-ounce soil jars and covered with heavy duty aluminum foil. An OVA equipped with an FID was used to screen each soil sample. All soil screening samples were collected and screened in accordance with FDEP procedures outlined in Chapter 62-770, FAC.

Twenty-four soil samples were collected for soil screening at Sites 8 and 1Q in 1995. An additional 19 soil screening samples were collected from Site 1Q in October 1997. Table 2-1 summarizes the OVA headspace screening results. Figure 2-2 presents areal distribution of both soil screening and analytical soil sampling results.

VOC concentrations ranged from below instrument detection limits to 7 ppm detected in sample 1QB00001.

2.1.3 Confirmatory Soil Sampling On October 23, 1997, one confirmatory soil sample, 1QB00902, was collected from the area of highest groundwater contamination. On November 10, 1997, a second confirmatory soil sample, 1QB00002, was collected from the area of highest soil contamination as indicated by 1995 soil screening results. The second confirmatory soil sample, 1QB000, was collected from the west side of the Site 1Q excavation area. The VOC concentration detected at 1QB00001 was 7 ppm. Both confirmatory soil samples were collected from 1.5 to 2.5 feet bls. They were analyzed for VOCs by U.S. Environmental Protection Agency (USEPA) Method 8020, polynuclear aromatic hydrocarbons (PAHs) by USEPA Method 8100, and total recoverable petroleum hydrocarbons (TRPH) by FL-PRO in accordance with Chapter 62-770.600, FAC (September 23, 1997). Figure 2-2 and Table 2-2 present laboratory analytical results.

All analytical results for soil sample 1QB00002 were below method detection limits.

Table 2-1
Summary of Organic Vapor Analyzer Headspace Results, February 1995 through October 1997

Contamination Assessment Report Addendum
Site 1Q, AVGAS Pipeline, Naval Aviation Depot
Pensacola, Florida

Sample Designation	VOC Concentration	Sample Location	VOC Concentration
*1QG00001	7	1QB01202	<1
*1QB00101	1	1QB01302	<1
1QB001R01	<1	1QB01402	<1
*1QB00201	2	1QB01502	<1
*1QB00301	<1	1QB01602	<1
*1QB00401	1	1QB01702	<1
*1QB00501	5	1QB01802	<1
1QB00602	<1	1QB01902	<1
1QB00702	<1	1QB02002	<1
1QB00802	<1	1QB02102	<1
1QB00902	<1	1QB02202	<1
1QB01002	<1	1QB02302	<1
1QB01102	<1		

Notes: Concentration reported in parts per million.

VOC = volatile organic compound
< = less than.
* = Samples were collected in 1995 All other samples were collected in 1997.

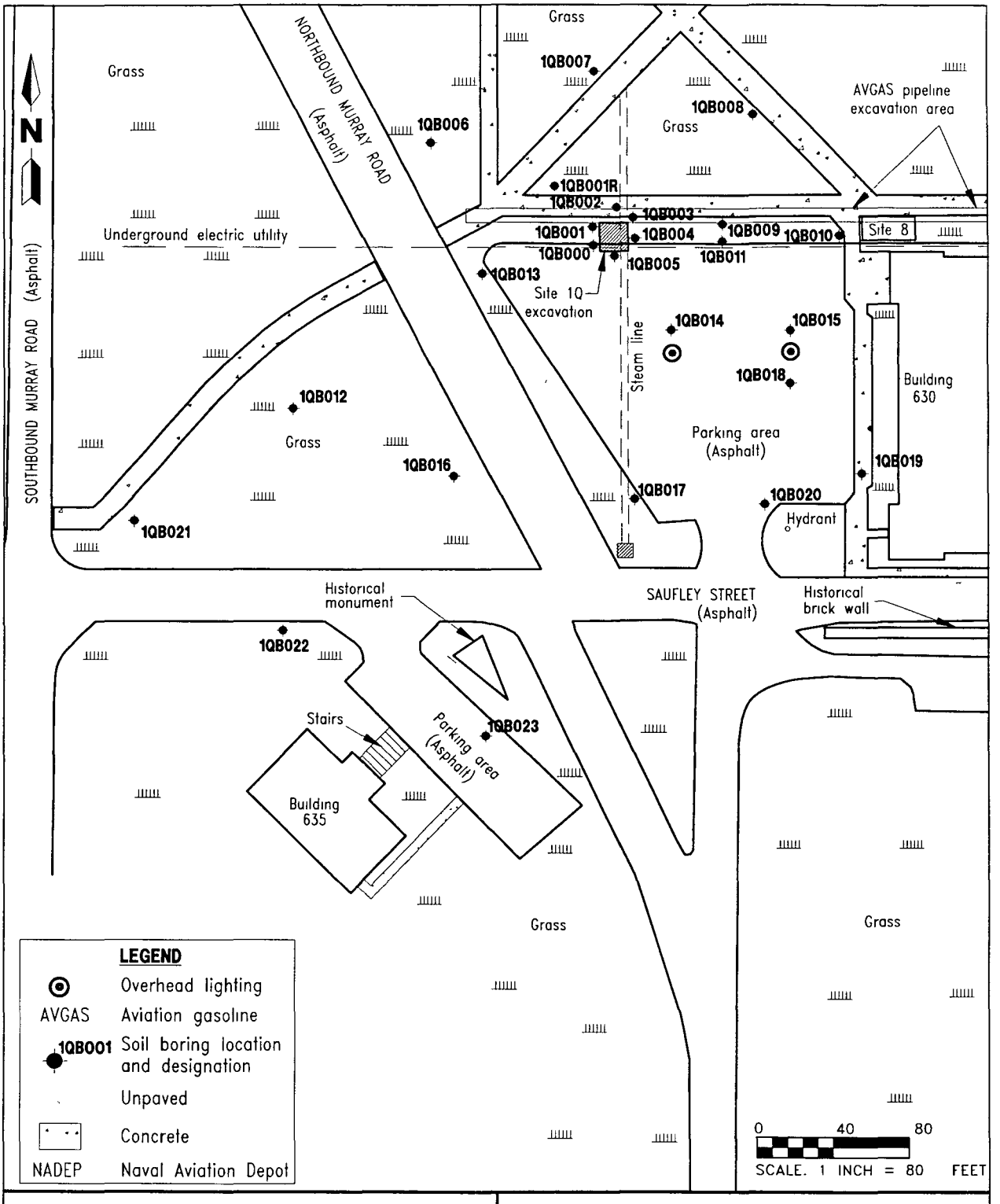

FIGURE 2-1
SOIL BORING LOCATION MAP, FEBRUARY 1995 AND OCTOBER 1997

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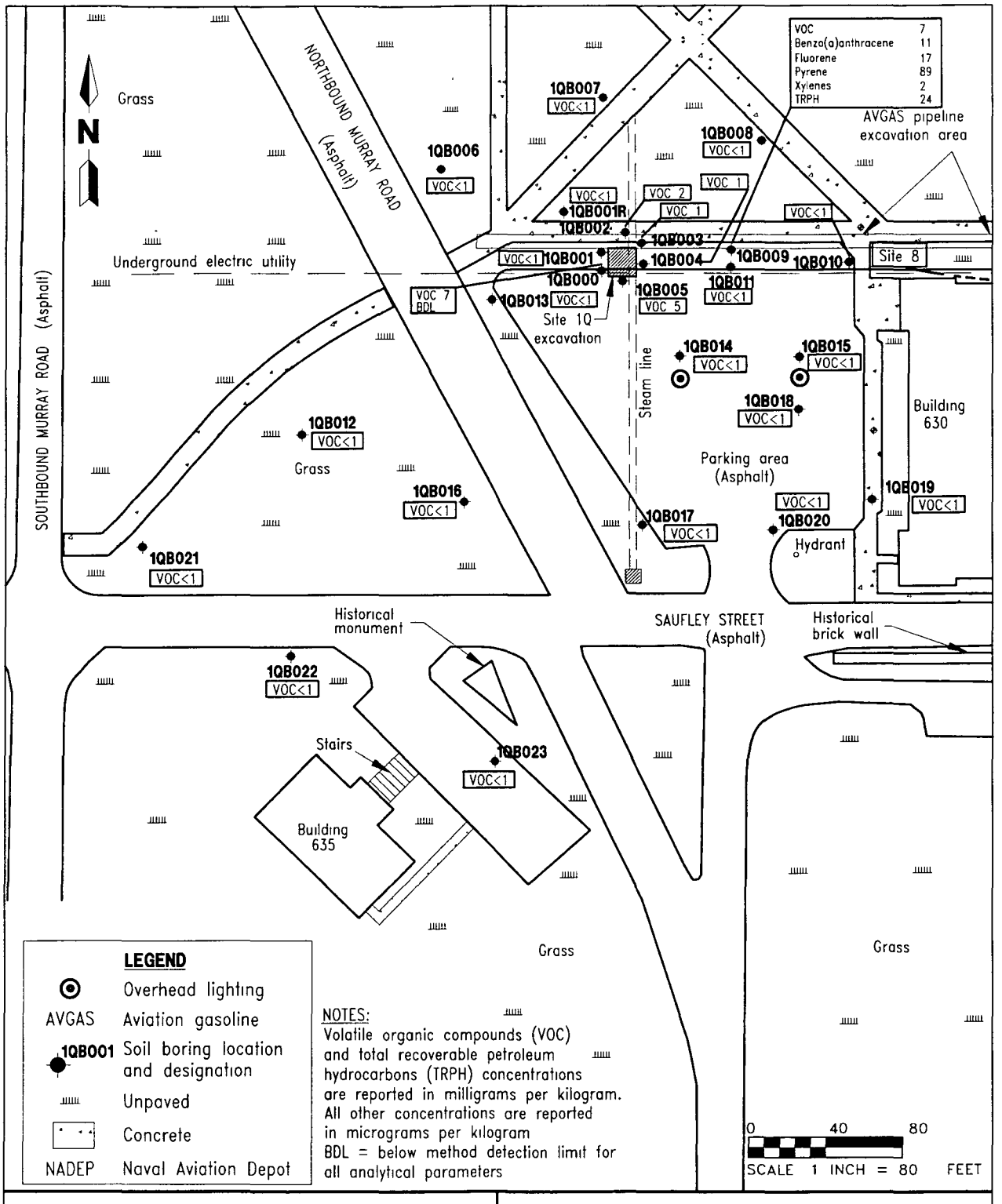

FIGURE 2-2
SOIL SCREENING AND ANALYTICAL RESULTS, 1995 AND 1997

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Table 2-2
Summary of Confirmatory Soil Sampling Results, October and November 1997

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Site 1Q, AVGAS Pipeline, Naval Aviation Depot
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Chemical Name	1QB00902	1QB00002	Soil Cleanup Target Levels[1]
Volatile Organic Aromatics (µg/kg)			
Total Xylenes	2	<2	290,000
Polynuclear Aromatic Hydrocarbons (µg/kg)			
Benzo(a)anthracene	11	<10	1,400
Fluorene	17	<10	2,100,000
Pyrene	89	<10	2,200,000
Total Recoverable Petroleum Hydrocarbons (TRPH) (mg/kg)			
TRPH	24	<2 6	350

[1] Direct exposure soil cleanup target levels Florida Department of Environmental Protection, Chapter 62-770, Florida Administrative Code

Notes: µg/kg = micrograms per kilogram.
mg/kg = milligrams per kilogram
< = less than.

A total xylene concentration of 2 micrograms per kilogram (μg/kg) was detected in soil sample 1QB00902. No other volatile compounds were detected in this soil sample. The soil cleanup target level (SCTL) for xylenes is 290 milligrams per kilogram (mg/kg).

Three PAHs were detected in soil sample 1QB00902: benzo(a)anthracene, fluorene, and pyrene. Their respective concentrations were 11 μg/kg, 17 μg/kg, and 89 μg/kg. These concentrations were each well below the respective SCTLs of 1.4 mg/kg, 2,100 mg/kg, and 2,200 mg/kg.

A TRPH concentration of 24 mg/kg was detected in soil sample 1QG00902. The SCTL for TRPH is 350 mg/kg.

2.2 GROUNDWATER ASSESSMENT.

2.2.1 Monitoring Well Installation

1995 Installation. Five shallow permanent monitoring wells, 1QG001 through 1QG005, were installed at Site 1Q in March 1995. One deep permanent monitoring well, 08G018, and seventeen shallow permanent monitoring wells, 08G001 through 08G017, were installed in the vicinity of Site 1Q in February through March 1995. The shallow monitoring wells were installed to a depth of 12 feet bls. The deep well was installed to a depth of 35 feet with 28 feet of 6-inch polyvinyl chloride (PVC) protective casing.

In September 1995, all Site 1Q and Site 8 monitoring wells were abandoned due to construction activities.

1997 Installation. In October 1997, 19 monitoring wells were installed at Site 1Q. One monitoring well, 1QG001R was installed at approximately the same location as the previous monitoring well, 1QG001. All other monitoring wells, 1QG006 through 1QG023, were installed in new locations based on 1995 groundwater sampling data. Eighteen of the monitoring wells are permanent flush-mount wells installed to depths of 13 to 14 feet bls. One vertical extent, flush-mount well, 1QG011D, was installed to a depth of 27 feet bls with 20 feet of 6-inch PVC protective casing.

Monitoring well construction details are included in the August 1995 AVGAS Pipeline Area CAR (ABB-ES, 1995). Monitoring well logs for all wells installed at both Site 1Q and Site 8 are included in Appendix B of this report. Figure 2-3 presents the 1995 monitoring well locations. Figure 2-4 presents the 1997 monitoring well locations.

A portable gas chromatograph (GC) was used to screen selected groundwater samples prior to monitoring well placement. GC groundwater screening samples collected in 1995 were obtained by drilling to 10 feet bls with 4.25-inch hollow-stem augers (HSAs) and lowering a 40 milliliter (mℓ) vial into the groundwater within the augers. GC groundwater screening samples collected in 1997 were obtained by drilling to 15 feet bls with 4.25-inch HSAs and using a peristaltic pump with polyethylene tubing to fill a 40 mℓ vial with groundwater. Each GC groundwater sample was screened for benzene, toluene, ethylbenzene, and xylenes. GC screening results from 1995 were used to determined monitoring well placement.

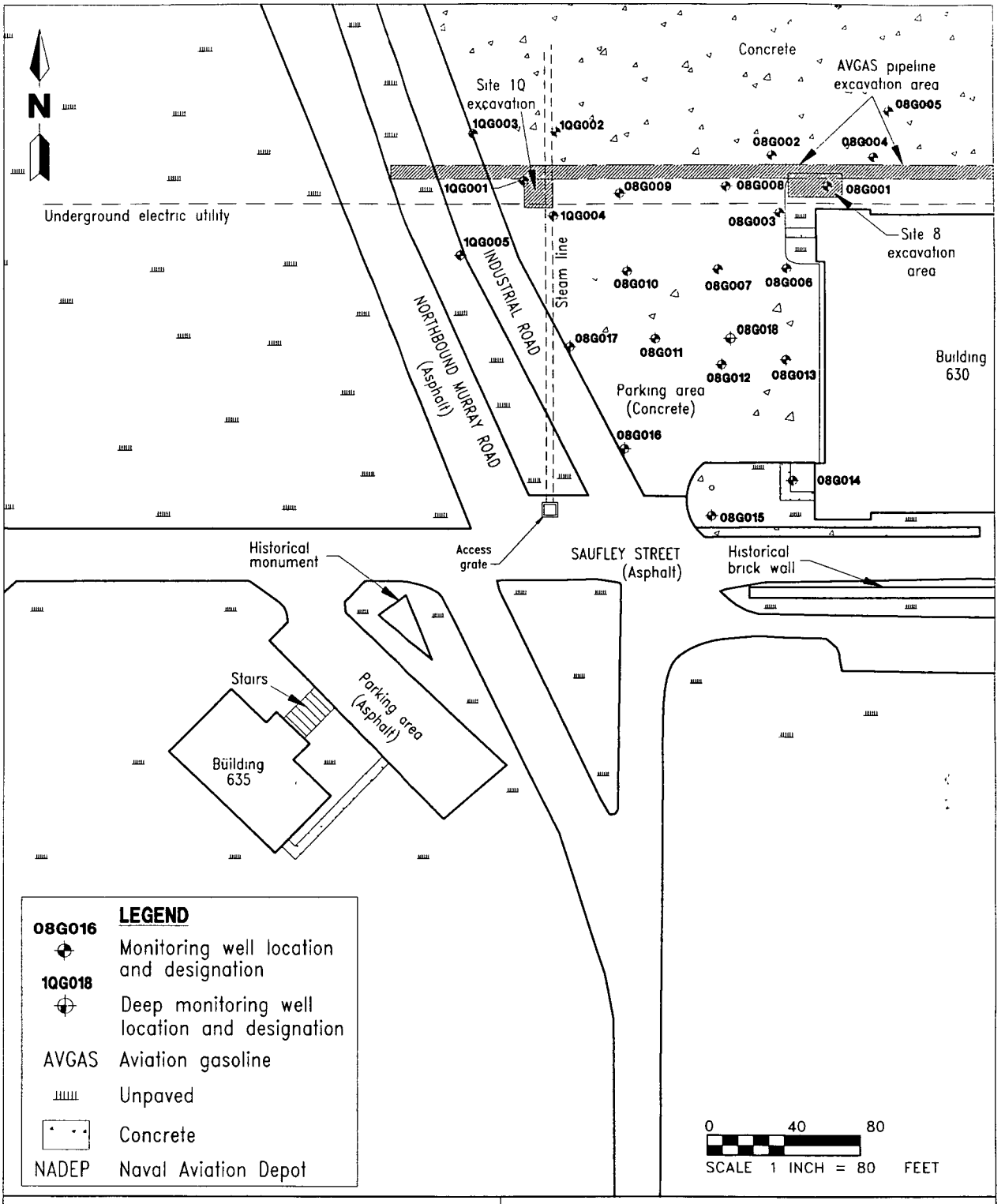

FIGURE 2-3
MONITORING WELL LOCATION MAP, JUNE 1995

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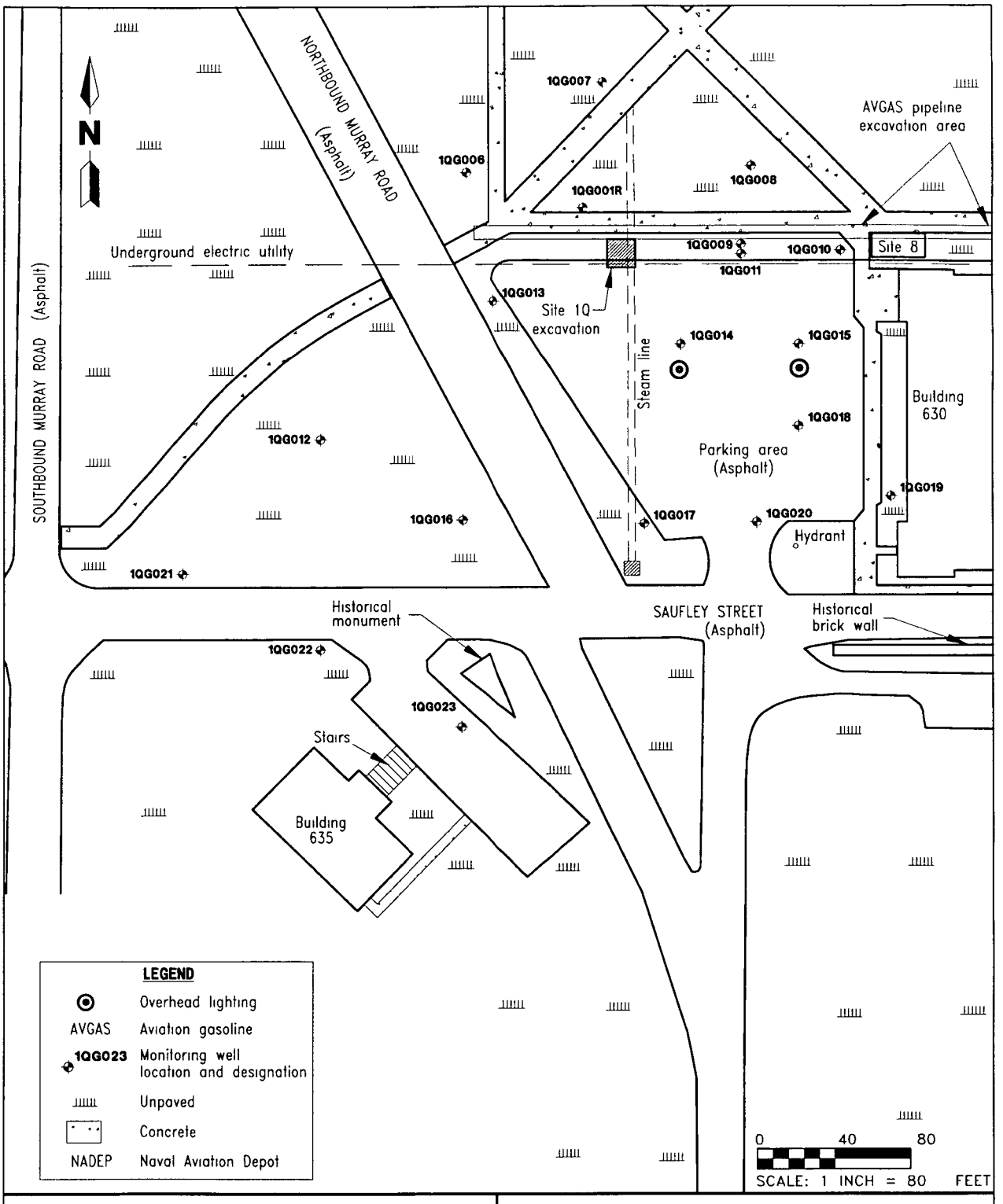

FIGURE 2-4
MONITORING WELL LOCATION MAP, OCTOBER 1997

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GC screening data from 1997 were used to verify that benzene concentrations at perimeter well locations were below method detection limits.

2.2.2 Site-Specific Hydrology The elevation and slope of the water table at Site 1Q was measured once in 1995 and twice in 1997. Groundwater elevation was calculated using the field-surveyed top-of-casing (TOC) elevation data for each monitoring well, and correlating the elevation data to a common datum. Groundwater levels were measured on May 16, 1995; October 30, 1997; and November 10, 1997. Groundwater flow direction is predominantly southwest. Figures 2-5, 2-6, and 2-7 present the water table elevation contour maps for Site 1Q. Table 2-3 presents the TOC elevations, total depths, and groundwater elevations for both Sites 1Q and 8 in 1995. Table 2-4 presents the elevations and depths for Site 1Q in 1997.

Rising-head slug tests were conducted June 8, 1995, in monitoring wells 08G009 and 08G011 to estimate the average hydraulic conductivity (K_{avg}) of the surficial aquifer in the vicinity of both Sites 8 and 1Q. The slug test developed by Bouwer and Rice (1976) measures the saturated K value using a single well. The test method used is termed a "rising head" test and is performed by quickly withdrawing a volume of water (slug) from the well and measuring the subsequent rate of the rising water level in the well. Bouwer (1989) recommends the rising-head slug test for wells with screened intervals that are only partially submerged or partially penetrate unconfined aquifers. Slug test procedures, graphs, and calculations are attached in Appendix C, Aquifer Parameter Calculations.

The K_{avg} for the aquifer material intersected by the well screens is 27.3 ft/day. The calculated average hydraulic gradient (i_{avg})across the site is 9.3×10^{-4} ft/ft. The calculated pore water velocity (V) is 1.02×10^{-1} ft/day.

2.2.3 Groundwater Assessment Results All groundwater samples were collected in accordance with ABB-ES's approved Comprehensive Quality Assurance Plan using either an extruded Teflon™ bailer or a peristaltic pump and Teflon™ tubing. Samples were placed in the appropriate containers, labeled, packed in ice, and shipped by overnight carrier to Quanterra Environmental Services in Tampa, Florida, for analysis. Laboratory data sheets are presented in this report in Appendix E, Laboratory Analytical Data Sheets. Quality assurance and quality control (QA/QC) samples—duplicate samples, trip blanks, and rinsate blanks—were collected during the 1995 sampling event. Duplicate samples were the only QA/QC samples collected during the 1997 sampling event. Table 2-5 presents the 1995 laboratory results for each groundwater sample collected from both Site 8 and 1Q. Table 2-6 presents the 1997 laboratory results for each groundwater sample collected from Site 1Q. Figures 2-8 through 2-22 present laboratory analytical results and areal distribution of contaminants from each sampling event.

June 1995. In June 1995, groundwater samples were collected from all Site 8 and Site 1Q monitoring wells. The groundwater sample collected from monitoring well 08G001 was analyzed for the Used Oil analytical group parameters, as defined in Rule 62-770.600(4)(b), because it was located in the former UST excavation area. Because AVGAS from the adjacent AVGAS pipeline was the suspected contaminant at Site 1Q, the remaining monitoring well samples were analyzed for the Gasoline

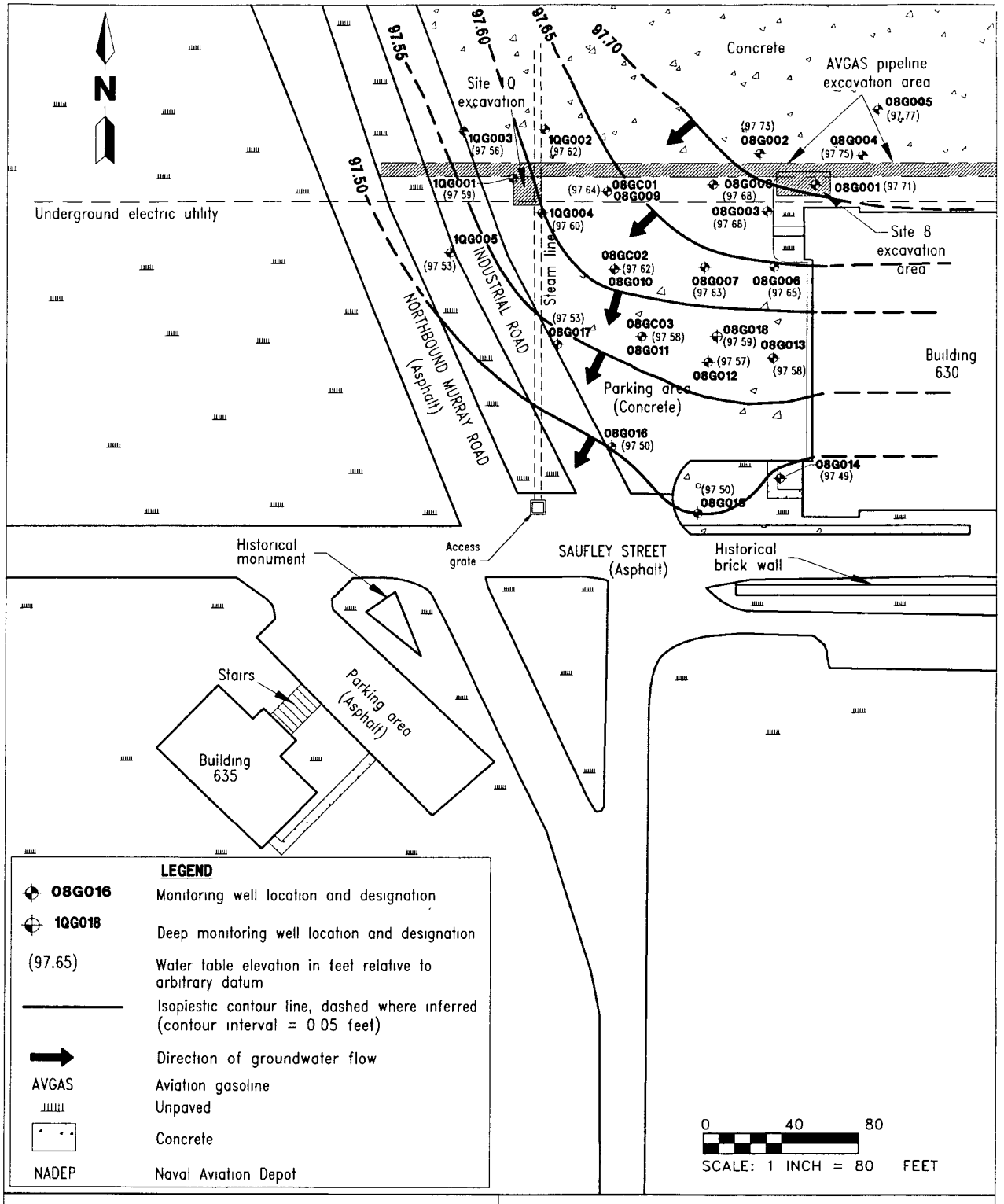


FIGURE 2-5
WATER TABLE ELEVATION CONTOUR MAP, MAY 16, 1995

K \02502\02502-02\CAR\02502510 DWG NAB- 01/21/98 12 09 08 AutoCAD R12

CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 1Q

NADEP PENSACOLA
PENSACOLA, FLORIDA

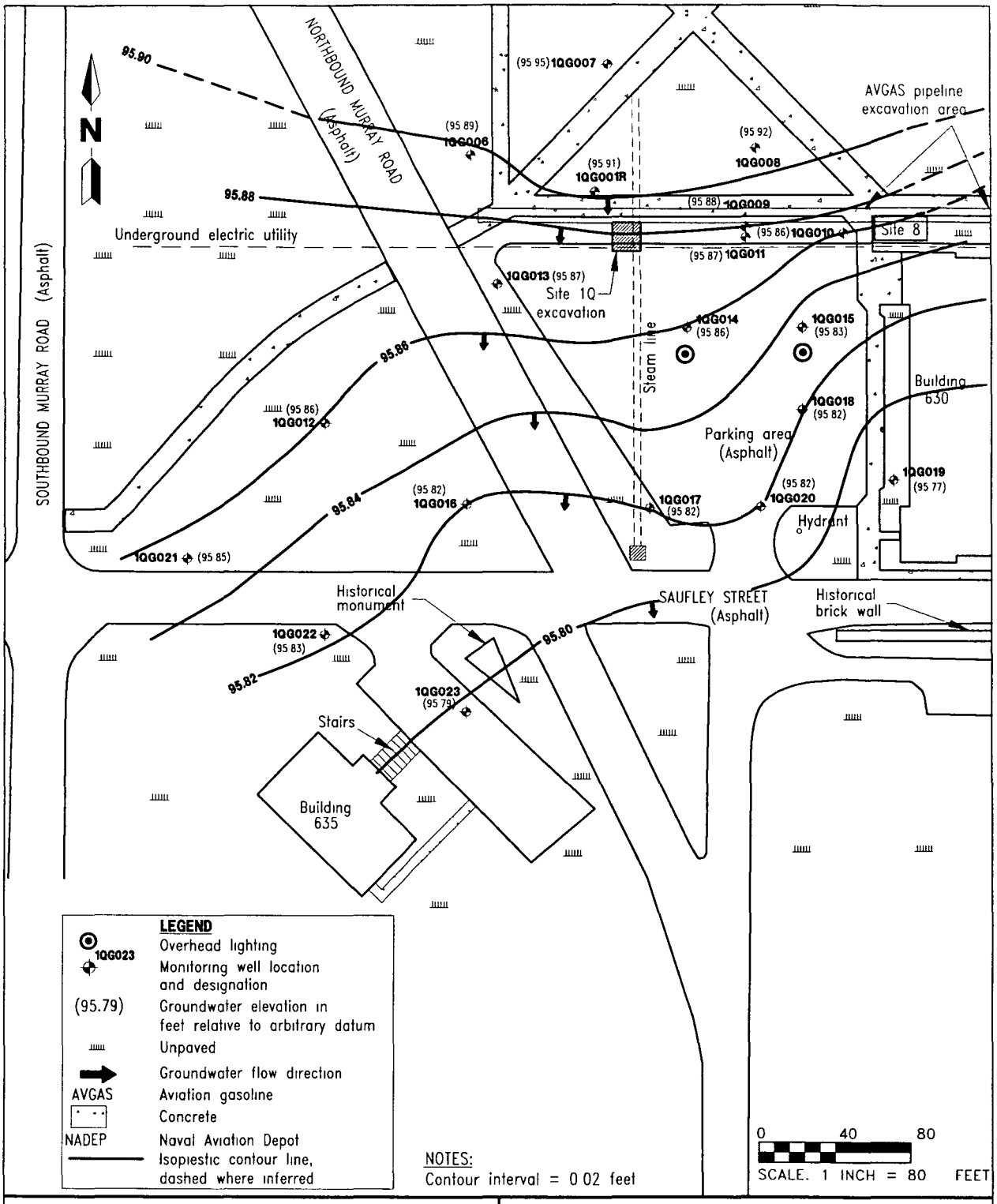


FIGURE 2-6
WATER TABLE ELEVATION CONTOUR MAP, OCTOBER 30, 1997

K \02502\02502-02\CAR\02502515 DWG NAB- 01/20/98 14 31 28 AutoCAD R12

CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 1Q

NADEP PENSACOLA
PENSACOLA, FLORIDA

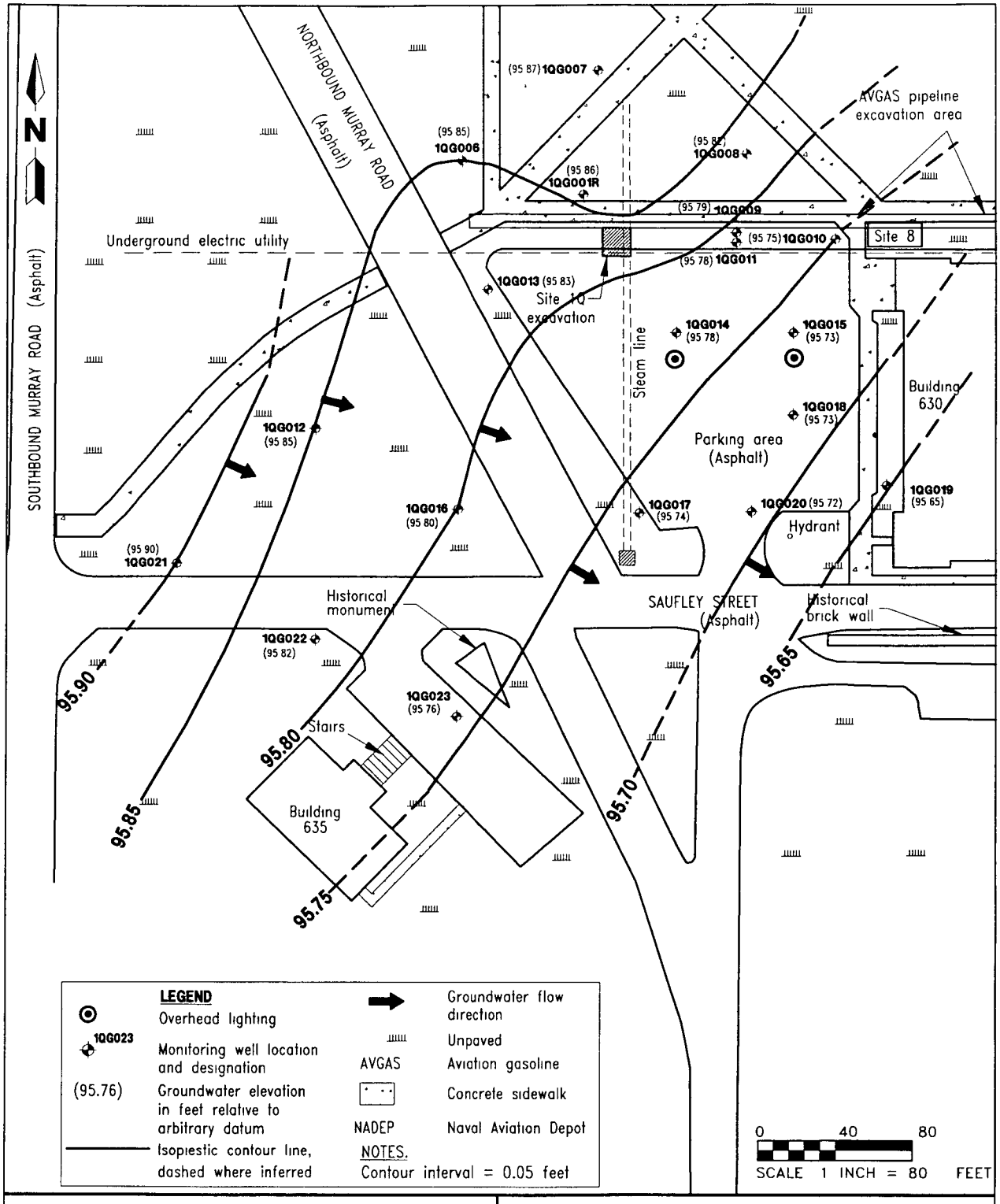


FIGURE 2-7
WATER TABLE ELEVATION CONTOUR MAP, NOVEMBER 10, 1997

K \02502\02502-02\CAR\02502516 DWG NAB- 01/20/98 14 40 02 AutoCAD R12

CONTAMINATION ASSESSMENT REPORT ADDENDUM SITE 1Q

NADEP PENSACOLA PENSACOLA, FLORIDA

Table 2-3
Top-of-Casing and Groundwater Elevations
May 16, 1995

Contamination Assessment Report Addendum
Site 1Q, AVGAS Pipeline, Naval Aviation Depot
Pensacola, Florida

Monitoring Well Designation	Total Depth	Top-of-Casing Elevation	Depth to Groundwater	Groundwater Elevation
08G001	12.20	100.00	2 29	97 71
08G002	11.65	99 68	1 95	97 73
08G003	11.98	100.01	2.33	97 68
08G004	11.70	99.61	1.86	97.75
08G005	11.93	99 72	1 95	97 77
08G006	12 10	100 47	2.82	97.65
08G007	12 10	100 17	2.54	97.63
08G008	12 43	99.65	1 97	97.68
08G009	12 34	99.59	1 95	97 64
08G010	11.93	100 01	2.39	97.62
08G011	12.05	100.32	2 74	97 58
08G012	12 38	100 60	3.03	97 57
08G013	12.13	100.80	3 22	97 58
08G014	12 47	101.58	4.09	97.49
08G015	12.08	101 60	4.10	97 50
08G016	12.18	100 60	3.10	97 50
08G017	12.37	100.17	2 64	97.53
08G018	35	100 63	3 04	97 59
1QG001	12.09	99 53	1 93	97 59
1QG002	12.10	99.27	1.65	97 62
1QG003	12.41	99 23	1.67	97.56
1QG004	12.29	99 72	2.12	97.60
1QG005	12 18	99.71	2 18	97 53

Notes: All depths and elevations recorded in feet.
Elevations are based on an arbitrary elevation of 100.00 feet for 06G001

Table 2-4
Top-of-Casing and Groundwater Elevations,
October 30 and November 10, 1997

Contamination Assessment Report Addendum
Site 1Q, AVGAS Pipeline, Naval Aviation Depot
Pensacola, Florida

Monitoring Well Designation	Total Depth	Top-of-Casing Elevation	October 30, 1997		November 10, 1997	
			Depth to Groundwater	Groundwater Elevation	Depth to Groundwater	Groundwater Elevation
1QG001R	14.16	100.00	4 09	95.91	4.14	95.86
1QG006	14.29	99.54	3 65	95.89	3.69	95.85
1QG007	13.96	100 84	4.89	95.95	4.97	95.87
1QG008	14 99	100.01	4 09	95 92	4.19	95 82
1QG009	14.23	100.02	4 14	95.88	4.23	95 79
1QG010	14 36	100.45	4.59	95.86	4 70	95.75
1QG011D	27.42	100.26	4.39	95 87	4.48	95.78
1QG012	13.91	100.45	4.59	95 86	4 60	95 85
1QG013	14 38	99 73	3.86	95.87	3.90	95.83
1QG014	13.56	99.10	3.24	95.86	3 32	95.78
1QG015	13 40	99.23	3.40	95.83	3.50	95 73
1QG016	14 27	100.25	4.43	95.82	4.45	95.80
1QG017	14.39	100.34	4 53	95.81	4.60	95.74
1QG018	14.36	99 41	3.59	95 82	3.68	95.73
1QG019	14.59	100.55	4 78	95.77	4.90	95.65
1QG020	14.29	99 79	3.97	95.82	4.07	95.72
1QG021	14 83	100.63	4 78	95.85	4.73	95 90
1QG022	14.15	100.39	4 56	95.83	4.57	95 82
1QG023	14 22	100.27	4 48	95.79	4.51	95.76

Notes All depths and elevations recorded in feet.
Elevations are based on an arbitrary elevation of 100.00 feet for 06G001

Table 2-5
Summary of Groundwater Analytical Results, Sites 8 and 1Q, June 1995

Contamination Assessment Report Addendum
Site 1Q, AVGAS Pipeline, Naval Aviation Depot
Pensacola, Florida

Contaminant	Groundwater Sample Designation							Groundwater Cleanup Target Levels[1]
	08G00101	08G00201	08G00301	08G00401	08G00501	08G00601	08G00601D	
Volatile Organic Aromatics (µg/ℓ)								
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1
Toluene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	40
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	30
Total Xylenes	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	20
Bromomethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	None
Methylene Chloride	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	5
Methyl tert-butyl ether	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	35
Base-Neutral Acid Extractables (µg/ℓ)								
Di-n-butyl phthalate	21	NS	NS	NS	NS	NS	NS	None
Total Recoverable Petroleum Hydrocarbons (TRPH) (mg/ℓ)								
TRPH	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	5
Metals (µg/ℓ)								
Total Lead[2]	[3]29.6	<5.0	5.3	<5.0	<5.0	7.1	7.9	15

See notes at end of table

Table 2-5 (Continued)
Summary of Groundwater Analytical Results, Site 8 and 1Q, June 1995

Contamination Assessment Report Addendum
Site 1Q, AVGAS Pipeline, Naval Aviation Depot
Pensacola, Florida

Contaminant	Groundwater Sample Designation							Groundwater Cleanup Target Levels[1]
	08G00701	08G00801	08G00901	08G01001	08G01101	08G01201	08G01301	
Volatile Organic Aromatics (μg/ℓ)								
Benzene	<2.0	<20	[3]340	[3]5.9	[3]2.3	[3]9 0	<1.0	1
Toluene	<2 0	<20	29	<5.0	<1 0	<5.0	<1 0	40
Ethylbenzene	<2 0	[3]32	<25	<5.0	6.9	24	<1.0	30
Total Xylenes	<2 0	[3]120	[3]2,300	[3]65	[3]68	16	<1 0	20
Bromomethane	<2.0	<2 0	<25	<2 0	<1.0	6.0	<1 0	None
Methylene Chloride	<2.0	<20	<25	[3]5.9	<1 0	[3]6 0	<1.0	5
Methyl tert-butyl ether	<2.0	34	<25	17	6.4	34	<1.0	35
Total Recoverable Petroleum Hydrocarbons (TRPH) (mg/ℓ)								
TRPH	<1 0	2 2	[3]5.6	1 0	<1 0	1.2	<1 0	5
Metals (μg/ℓ)								
Total Lead[2]	7 9	[3]26.2	[3]148	14.5	8.5	5.3	[3]16.1	15

See notes at end of table

Table 2-5 (Continued)
Summary of Groundwater Analytical Results, Sites 8 and 1Q, June 1995

Contamination Assessment Report Addendum
Site 1Q, AVGAS Pipeline, Naval Aviation Depot
Pensacola, Florida

Contaminant	Groundwater Sample Designation							Groundwater Cleanup Target Levels[1]
	08G01301D	08G01401	08G01501	08G01601	08G01701	08G01801	[4]1QG00101	
Volatile Organic Aromatics (µg/ℓ)								
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	[3]35	1
Toluene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	31	40
Ethylbenzene	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	25	30
Total Xylenes	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	13	20
Bromomethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<1.0	2.0	<10	5
Methyl tert-butyl ether	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	[3]94	35
Total Recoverable Petroleum Hydrocarbons (TRPH) (mg/ℓ)								
TRPH	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	[3]5.1	5
Metals (µg/ℓ)								
Total Lead[2]	[3]15.1	8.2	<5.0	<5.0	<5.0	<5.0	7.5	15

See notes at end of table.

Table 2-5 (Continued)
Summary of Groundwater Analytical Results, Sites 8 and 1Q, June 1995

Contamination Assessment Report Addendum
Site 1Q, AVGAS Pipeline, Naval Aviation Depot
Pensacola, Florida

Contaminant	Groundwater Sample Designation							Groundwater Cleanup Target Levels[1]
	1QG00201	1QG00202	1QG00301	1QG00302	1QG00401	1QG00501	1QG00502	
Volatile Organic Aromatics (μg/ℓ)								
Benzene	<1	[3]11	[3]4 1	[3]26	[3]4 6	[3]4.1	[3]12	1
Toluene	2.8	<10	<1	<10	<2.0	<1.0	<2.0	40
Ethylbenzene	1.9	<10	2.5	20	7.5	6.0	17	30
Total Xylenes	<1	<10	<1	<10	12	<1	7.9	20
Bromomethane	<1	<10	<1	<10	<2 0	<1	2 0	None
Methylene Chloride	<1	<10	<1	<10	<2 0	<1	<2.0	5
Methyl tert-butyl ether	<1	[3]36	<1	[3]53	6.6	<1	<2.0	35
Total Recoverable Petroleum Hydrocarbons (TRPH) (mg/ℓ)								
TRPH	<1 0	NS	<1 0	NS	1 2	<1 0	NS	5
Metals (μg/ℓ)								
Lead[2]	[3]49 8	NS	[3]32 1	NS	6.8	<5.0	NS	15

[1] Cleanup target levels: Chapters 62-550 and 62-770, Florida Administrative Code
[2] Lead was detected in an equipment blank at a concentration of 44.8 parts per billion
[3] Concentration exceeds groundwater cleanup target level
[4] Monitoring well 1QG001 was sampled for the Used Oil Group because it is located at a former lube-oil underground storage tank location. All other groundwater samples were analyzed for the Gasoline Group.

Notes μg/ℓ = micrograms per liter.
< = less than.
NS = not sampled.
mg/ℓ = milligrams per liter.

Table 2-6
Summary of Groundwater Analytical Results, Site 1Q, October 1997

Contamination Assessment Report Addendum
Site 1Q, AVGAS Pipeline, Naval Aviation Depot
Pensacola, Florida

Contaminant	Groundwater Sample Designation								Groundwater Cleanup Target Levels[1]
	1QG001R01	1QG00601	1QG00701	1QG00801	1QG00901	1QG00901D	1QG01001	1QG01101	
Volatile Organic Aromatics (µg/ℓ)									
Ethylbenzene	<10	<10	<10	<10	[2]330	[2]200	<10	16	30
Total Xylenes	<10	<10	<10	<10	[2]2,100	[2]1,300	<10	3	20
Polynuclear Aromatic Hydrocarbons (µg/ℓ)									
Benzo(a)anthracene	<0 2	<0.2	[2]0.27	[2]0.20	[2]0 33	[2]0.35	[2]0 23	<0.2	0 2
Benzo(a)pyrene	<0 2	[2]0 51	[2]0 51	<0 2	[2]0 45	<0 2	<0 2	<0 2	0 2
Benzo(b)fluoranthene	<0.2	[2]0.20	[2]0.44	<0.2	[2]0 36	[2]0.20	[2]0 20	<0 2	0 2
Benzo(g,h,i)perylene	<1	<1	<1	1	1	<1	<0.2	<1	210
Dibenzo(a,h)anthracene	<0 2	<0 2	<0 2	<0 2	2	<0.2	<0 2	<0.2	0 2
Chrysene	<1	<1	<1	<1	<1	<1	1	<1	5
Fluoranthene	1	1	<1	1	2	2	<1	<1	280
Indeno(1,2,3-cd)pyrene	<0 2	[2]0 23	[2]0 62	[2]0.47	[2]0.60	[2]0 64	[2]0 41	[2]0 24	0 2
Naphthalene	<1	<1	<1	<1	[2]58	[2]32	<1	<1	20
Phenanthrene	<1	<1	<1	<1	1	<1	<1	<1	210
Pyrene	3	1	<1	1	4	2	<1	<1	210
1-Methylnaphthalene	<1	<1	<1	<1	44	<1	<1	<1	None
2-Methylnaphthalene	<1	<1	<1	<1	<1	24	<1	1	None
Total Recoverable Petroleum Hydrocarbons (TRPH) (mg/ℓ)									
TRPH	1.7	<0.1	0 13	0.23	3.3	4 0	0.24	1 2	5
Metals (µg/ℓ)									
Lead	[3]28/5	<3	<3	<3	[2]25	[2]25	<3	<3	15

See notes at end of table.

Table 2-6 (Continued)
Summary of Groundwater Analytical Results, Site 1Q, October 1997

Contamination Assessment Report Addendum
Site 1Q, AVGAS Pipeline, Naval Aviation Depot
Pensacola, Florida

Contaminant	Groundwater Sample Designation								Groundwater Cleanup Target Levels
	1QG01201	1QG01201D	1QG01301	1QG01401	1QG01501	1QG01601	1QG01701	1QG01801	
Volatile Organic Aromatics (µg/ℓ)									
Ethylbenzene	<10	<10	3	[2]210	<10	4	[2]62	<10	30
Total Xylenes	<10	<10	<10	[2]290	<10	<10	[2]300	<10	20
Polynuclear Aromatic Hydrocarbons (µg/ℓ)									
Benzo(a)anthracene	<0.2	<0 2	<0 2	<0 2	[2]0 29	<0 2	[2]0.20	<0 2	0 2
Benzo(a)pyrene	<0 2	<0 2	<0 2	<0 2	<0 2	<0.2	<0.2	<0 2	0.2
Benzo(b)fluoranthene	<0 2	<0.2	<0.2	<0.2	<0.2	<0 2	[2]0 23	<0.2	0 2
Benzo(g,h,i)perylene	<1	<1	<1	<1	<1	<1	<1	<1	210
Dibenzo(a,h)anthracene	[2]0 27	<0 2	<0 2	<0 2	<0 2	<0.2	<0 2	<0.2	0 2
Chrysene	<1	<1	<1	<1	2	<1	<1	<1	5
Fluoranthene	2	3	1	2	<1	<1	1	4	280
Indeno(1,2,3-cd)pyrene	<0 2	<0 2	[2]0 38	<0 2	<0.2	<0.2	<0.2	[2]0 50	[2]0.2
Naphthalene	<1	<1	<1	<1	<1	<1	<1	<1	20
Phenanthrene	<1	<1	<1	<1	<1	<1	<1	<1	210
Pyrene	1	2	2	2	<1	<1	1	2	210
1-Methylnaphthalene	<1	<1	<1	1	<1	<1	<1	<1	None
2-Methylnaphthalene	<1	<1	<1	<1	<1	<1	<1	<1	None
Total Recoverable Petroleum Hydrocarbons (TRPH) (mg/ℓ)									
TRPH	0.11	0.2	0 14	1 5	0 28	0.12	0 5	0 39	5
Metals (µg/ℓ)									
Lead	11	3	10	[2]18	<3	8	[2]20	<3	15

See notes at end of table.

Table 2-6 (Continued)
Summary of Groundwater Analytical Results, Site 1Q, October 1997

Contamination Assessment Report Addendum
Site 1Q, AVGAS Pipeline, Naval Aviation Depot
Pensacola, Florida

Contaminant	Groundwater Sample Designation					Groundwater Cleanup Target Levels[1]
	1QG01901	1QG02001	1QG02101	1QG02201	1QG02301	
Volatile Organic Aromatics (µg/ℓ)						
Ethylbenzene	<10	<10	<10	<10	<10	30
Total Xylenes	<10	<10	<10	<10	<10	20
Polynuclear Aromatic Hydrocarbons (µg/ℓ)						
Benzo(a)anthracene	<0 2	<0.2	[2]0 20	<0 2	<0 2	0 2
Benzo(a)pyrene	<0.2	<0.2	[2]0.39	<0.2	<0.2	0.2
Benzo(b)fluoranthene	<0.2	<0 2	<0.2	<0.2	<0.2	0.2
Benzo(g,h,i)perylene	<1	<1	<1	<1	<1	210
Dibenzo(a,h)anthracene	<0.2	<0 2	<0 2	<0.2	[2]0 58	0 2
Chrysene	<1	<1	<1	<1	<1	5
Fluoranthene	2	<1	4	2	2	280
Indeno(1,2,3-cd)pyrene	<0.2	<0 2	[2]0.56	[2]1	<0.2	0 2
Naphthalene	<1	<1	3	<1	<1	20
Phenanthrene	<1	<1	<1	<1	<1	210
Pyrene	1	<1	1	1	<1	210
1-Methylnaphthalene	<1	<1	<1	<1	<1	None
2-Methylnaphthalene	<1	<1	<1	<1	<1	None
Total Recoverable Petroleum Hydrocarbons (TRPH) (mg/ℓ)						
TRPH	0 32	0.4	0.19	BDL	0.17	5
Metals (µg/ℓ)						
Lead	<3	10	<3	<3	<3	15

[1] Chapter 62.770 Table V, Florida Administrative Code (FAC)
[2] Concentration exceeds groundwater cleanup target level.
[3] Both an unfiltered and a filtered lead sample were collected from this location The unfiltered result is shown first, the filtered result is the second value

Notes µg/ℓ = micrograms per liter
< = less than.
mg/ℓ = milligrams per liter
BDL = below detection limit

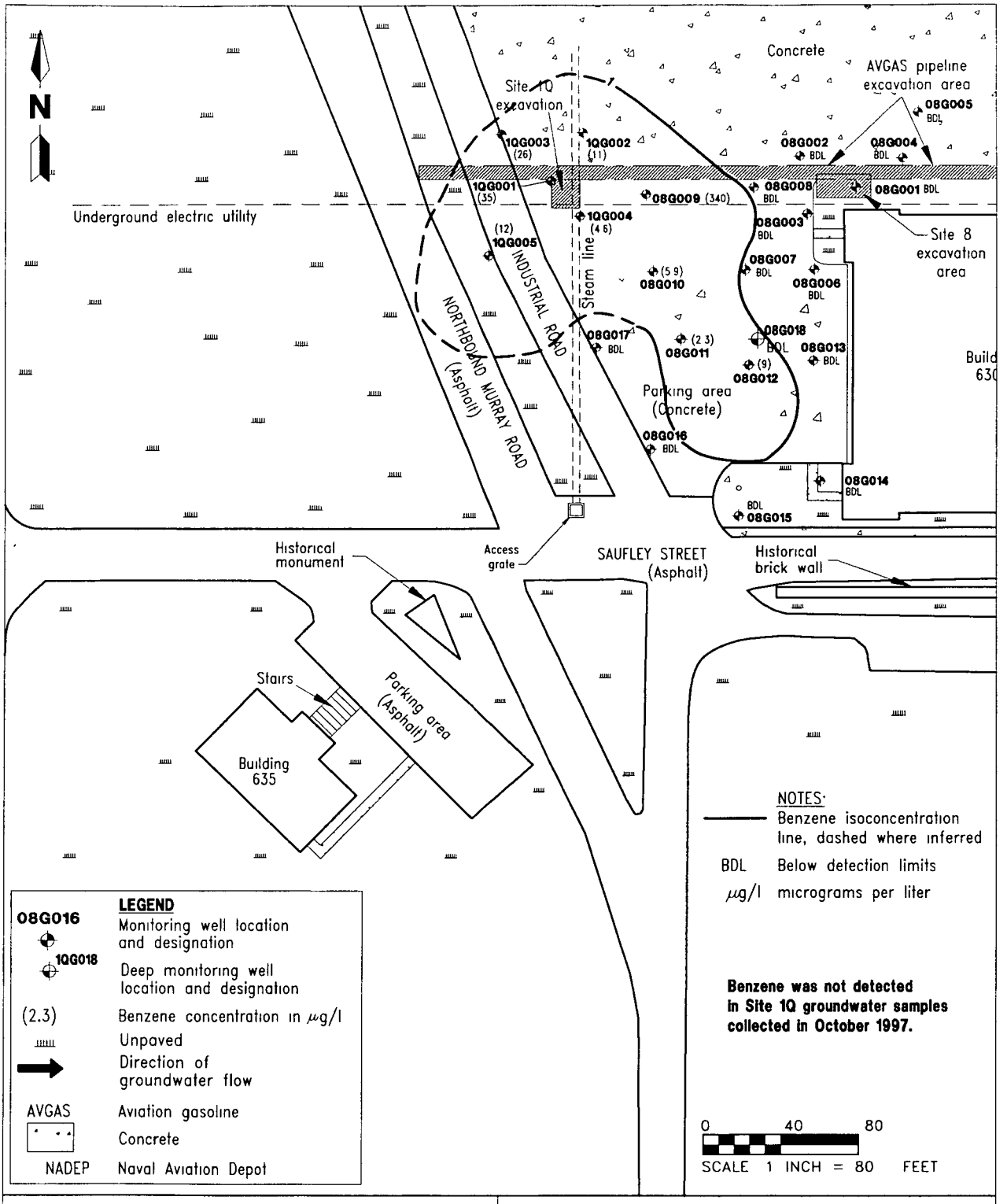


FIGURE 2-8
BENZENE ISOCONCENTRATION MAP, JUNE 1995

K \02502\02502-02\CAR\02502517 DWG NAB- 01/20/98 14 46 50 AutoCAD R12

CONTAMINATION ASSESSMENT REPORT ADDENDUM SITE 1Q

NADEP PENSACOLA PENSACOLA, FLORIDA

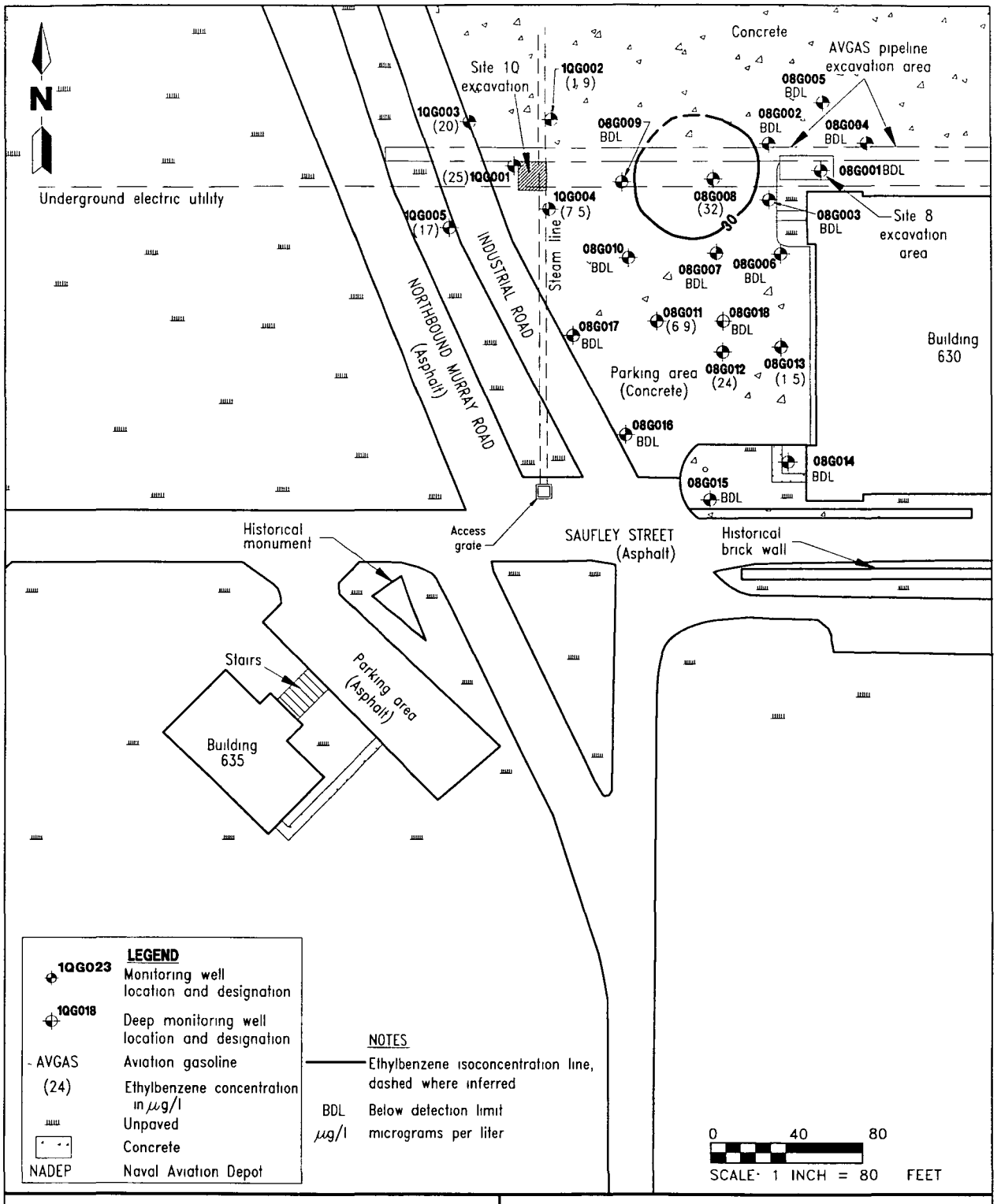


FIGURE 2-9
ETHYLBENZENE ISOCONCENTRATION MAP, JUNE 1995

K \02502\02502-02\CAR\02502518 DWG, NAB- 01/20/98 12 46 26, AutoCAD R12

CONTAMINATION ASSESSMENT REPORT ADDENDUM SITE 1Q

NADEP PENSACOLA PENSACOLA, FLORIDA

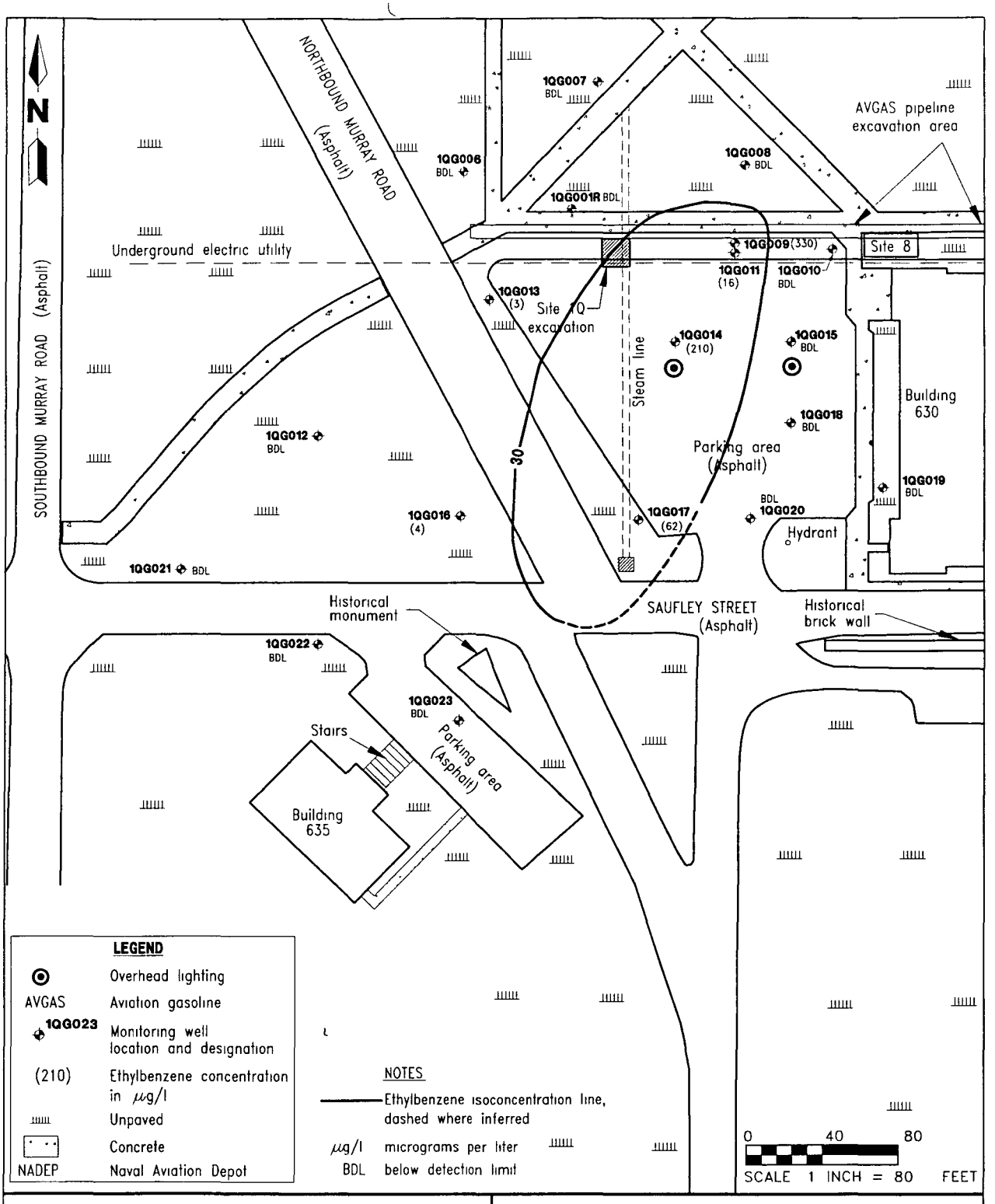


FIGURE 2-10
ETHYLBENZENE ISOCONCENTRATION MAP, OCTOBER 1997

K \02502\02502-02\CAR\02502527 DWG NAB- 01/20/98 10 26 32 AutoCAD R12

CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 1Q

NADEP PENSACOLA
PENSACOLA, FLORIDA

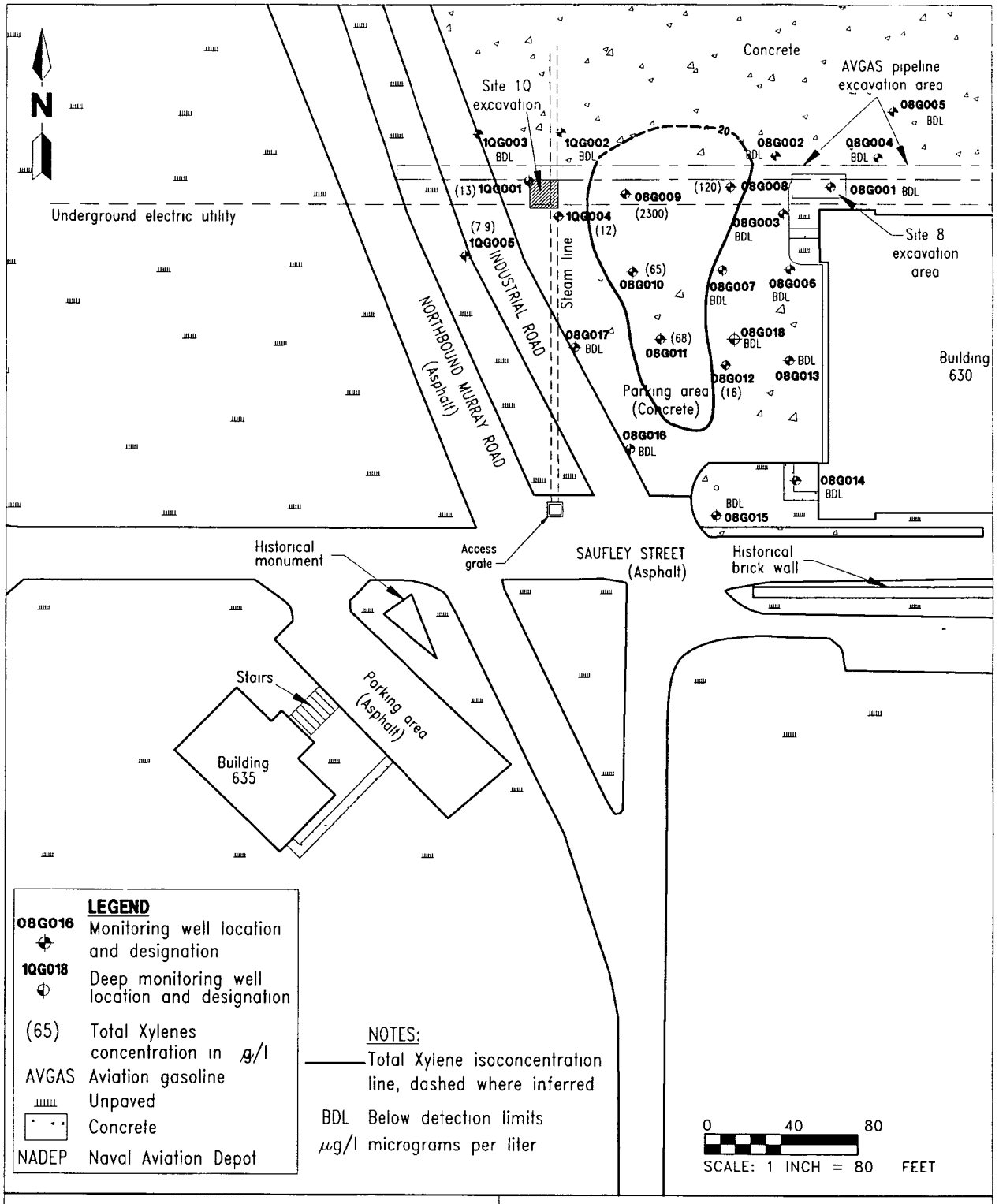


FIGURE 2-11
TOTAL XYLENES ISOCONCENTRATION MAP, JUNE 1995

K \02502\02502-02\CAR\02502519 DWG NAB- 01/20/98 10 44 37 AutoCAD R12

CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 1Q

NADEP PENSACOLA
PENSACOLA, FLORIDA

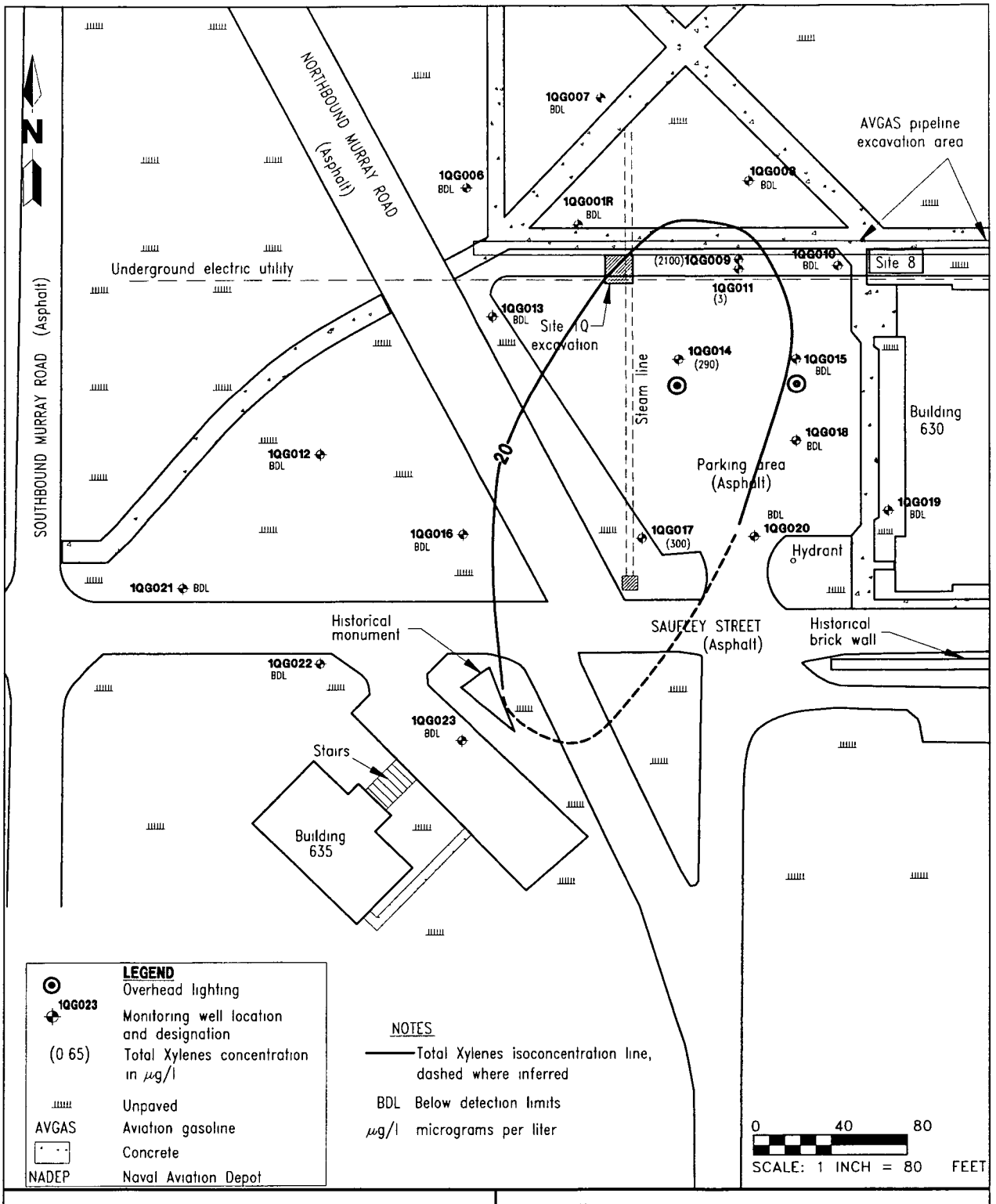


FIGURE 2-12
TOTAL XYLENES ISOCONCENTRATION MAP, OCTOBER 1997

K \02502\02502-02\CAR\02502534 DWG NAB- 01/20/98 10 48 57 AutoCAD R12

CONTAMINATION ASSESSMENT REPORT ADDENDUM SITE 1Q

NADEP PENSACOLA PENSACOLA, FLORIDA

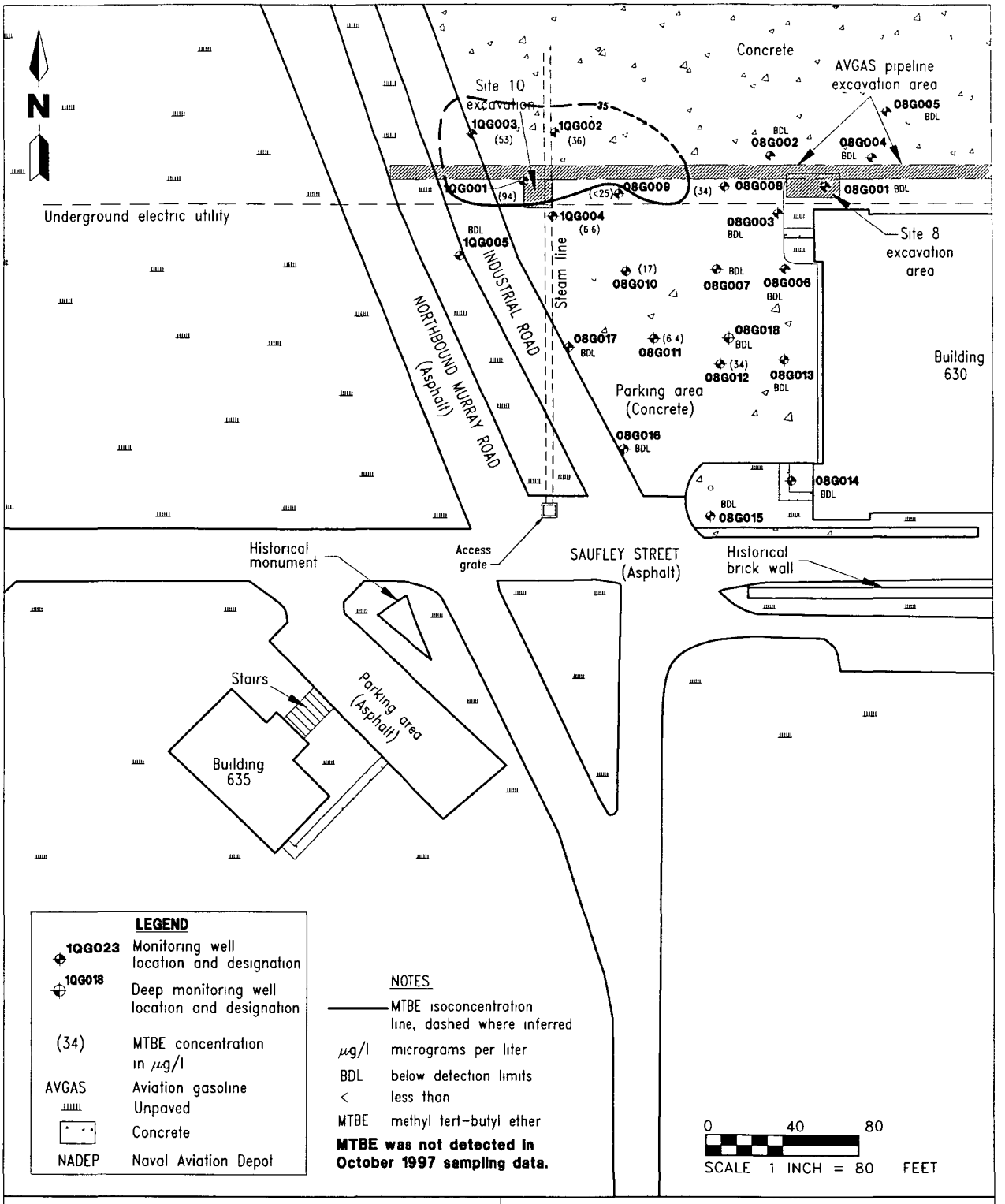


FIGURE 2-13
MTBE ISOCONCENTRATION MAP, JUNE 1995

K \02502\02502-02\CAR\02502520 DWG NAB- 01/20/98 10 59 02 AutoCAD R12

CONTAMINATION ASSESSMENT REPORT ADDENDUM SITE 1Q

NADEP PENSACOLA PENSACOLA, FLORIDA

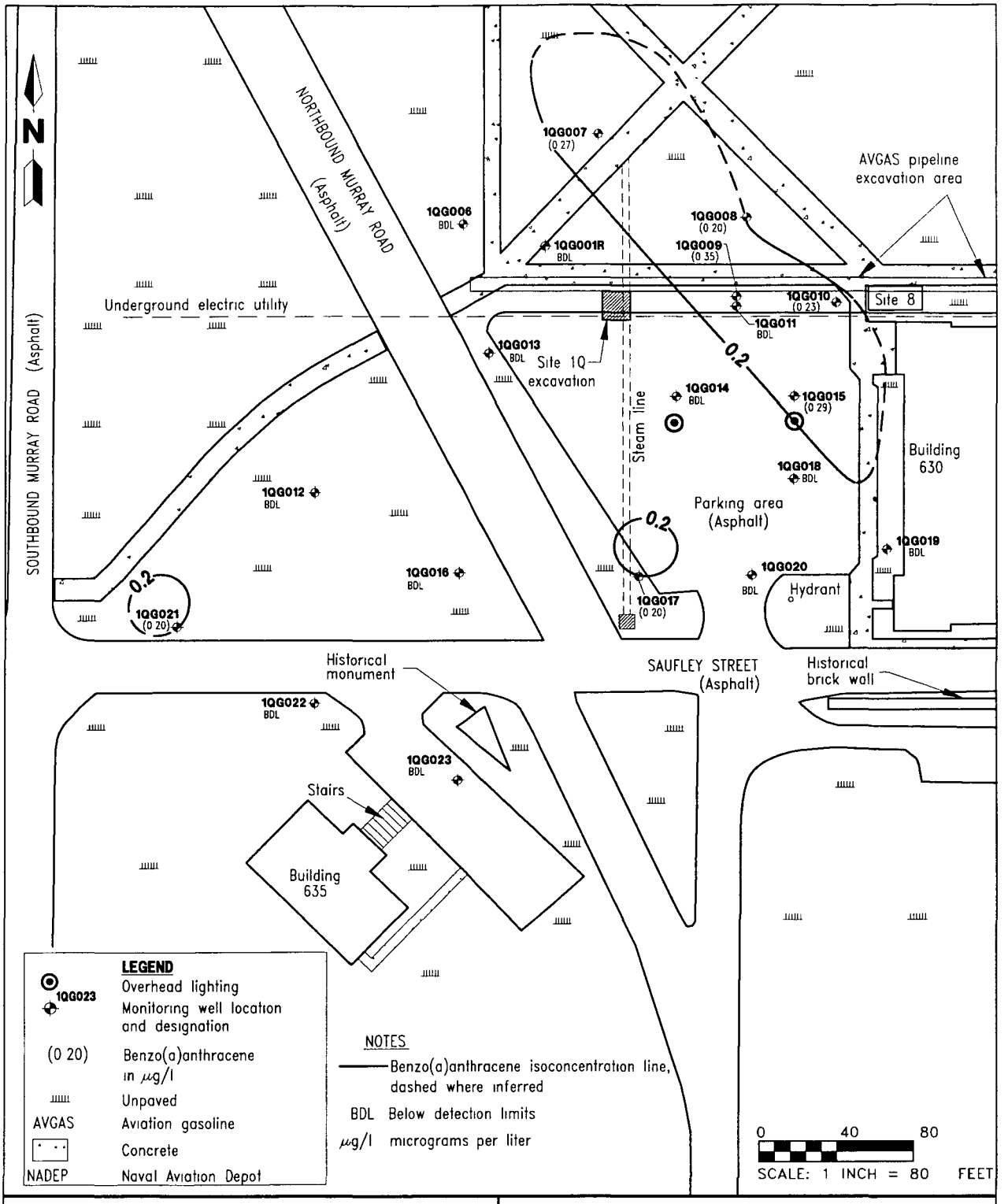


FIGURE 2-14
BENZO(A)ANTHRACENE ISOCONCENTRATION MAP, OCTOBER 1997

K \02502\02502-02\CAR\02502521 DWG NAB- 01/16/98 09 57 11 AutoCAD R12

CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 1Q

NADEP PENSACOLA
PENSACOLA, FLORIDA

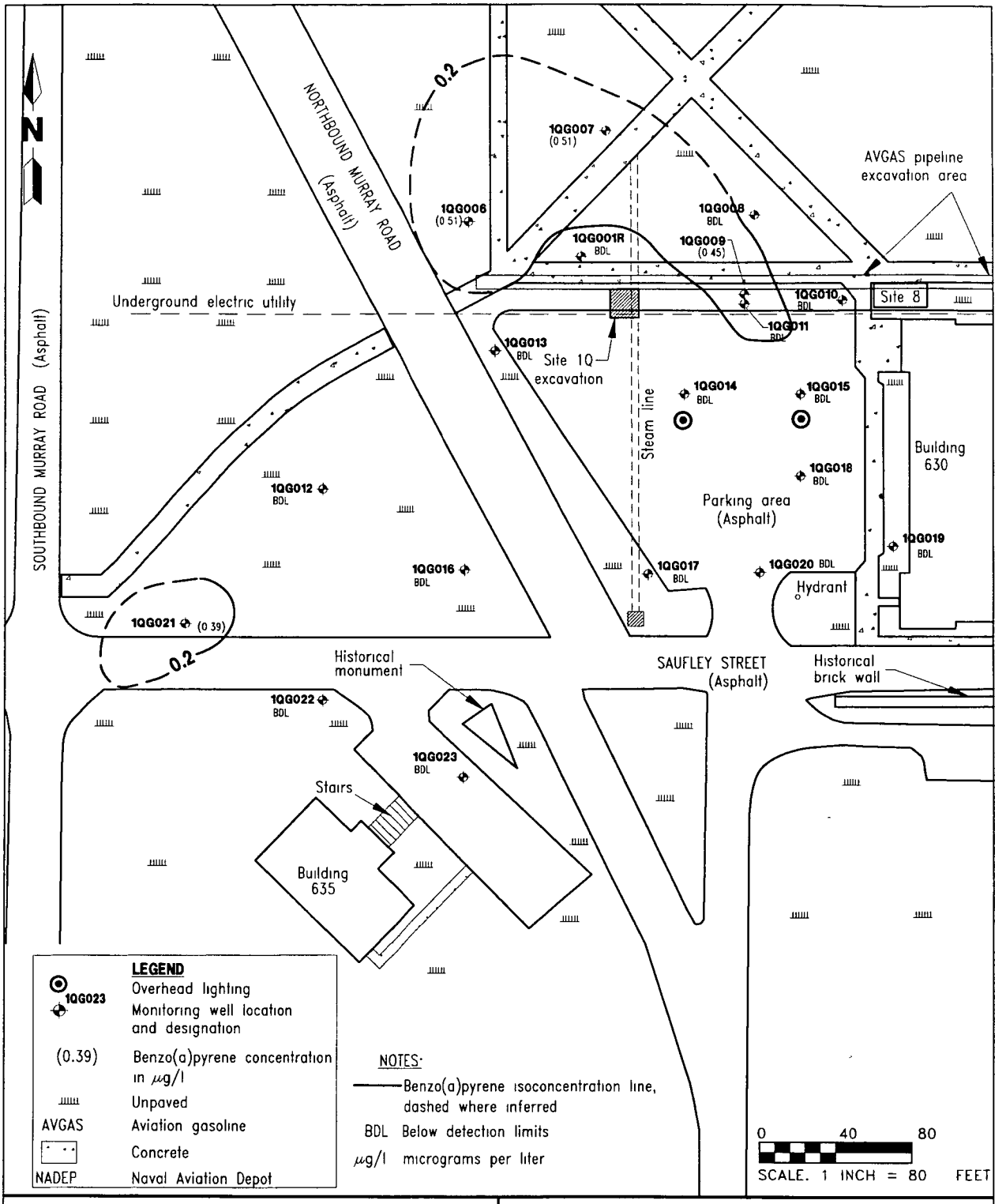


FIGURE 2-15
BENZO(A)PYRENE ISOCONCENTRATION MAP, OCTOBER 1997

K \02502\02502-02\CAR\02502529 DWG NAB- 01/16/98 12 39 37 AutoCAD R12

CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 1Q

NADEP PENSACOLA
PENSACOLA, FLORIDA

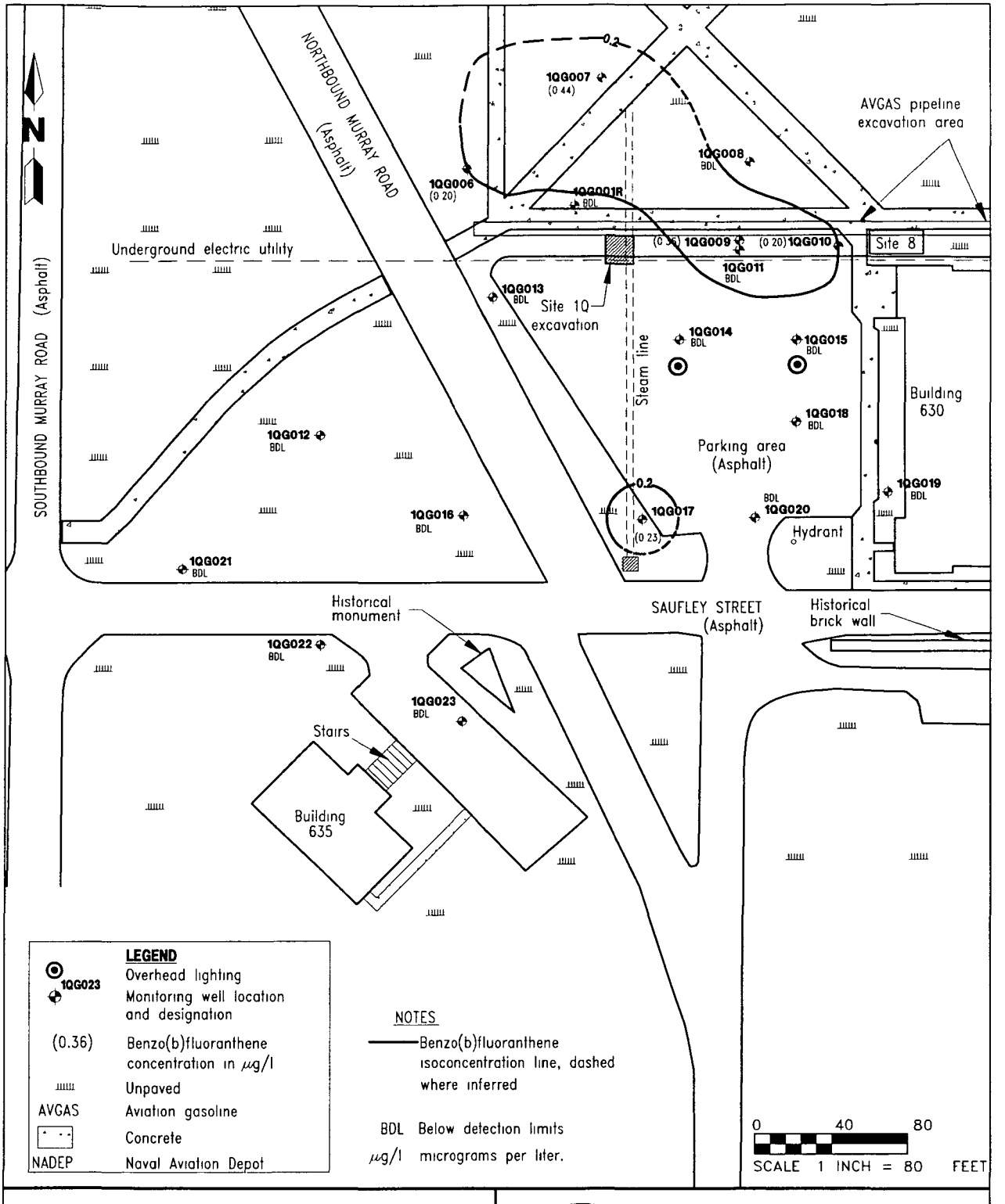


FIGURE 2-16
BENZO(B)FLUORANTHENE ISOCONCENTRATION MAP, OCTOBER 1997

K \02502\02502-02\CAR\02502522 DWG NAH- 01/20/98 12 53 48 AutoCAD R17

CONTAMINATION ASSESSMENT REPORT ADDENDUM SITE 1Q

NADEP PENSACOLA PENSACOLA, FLORIDA

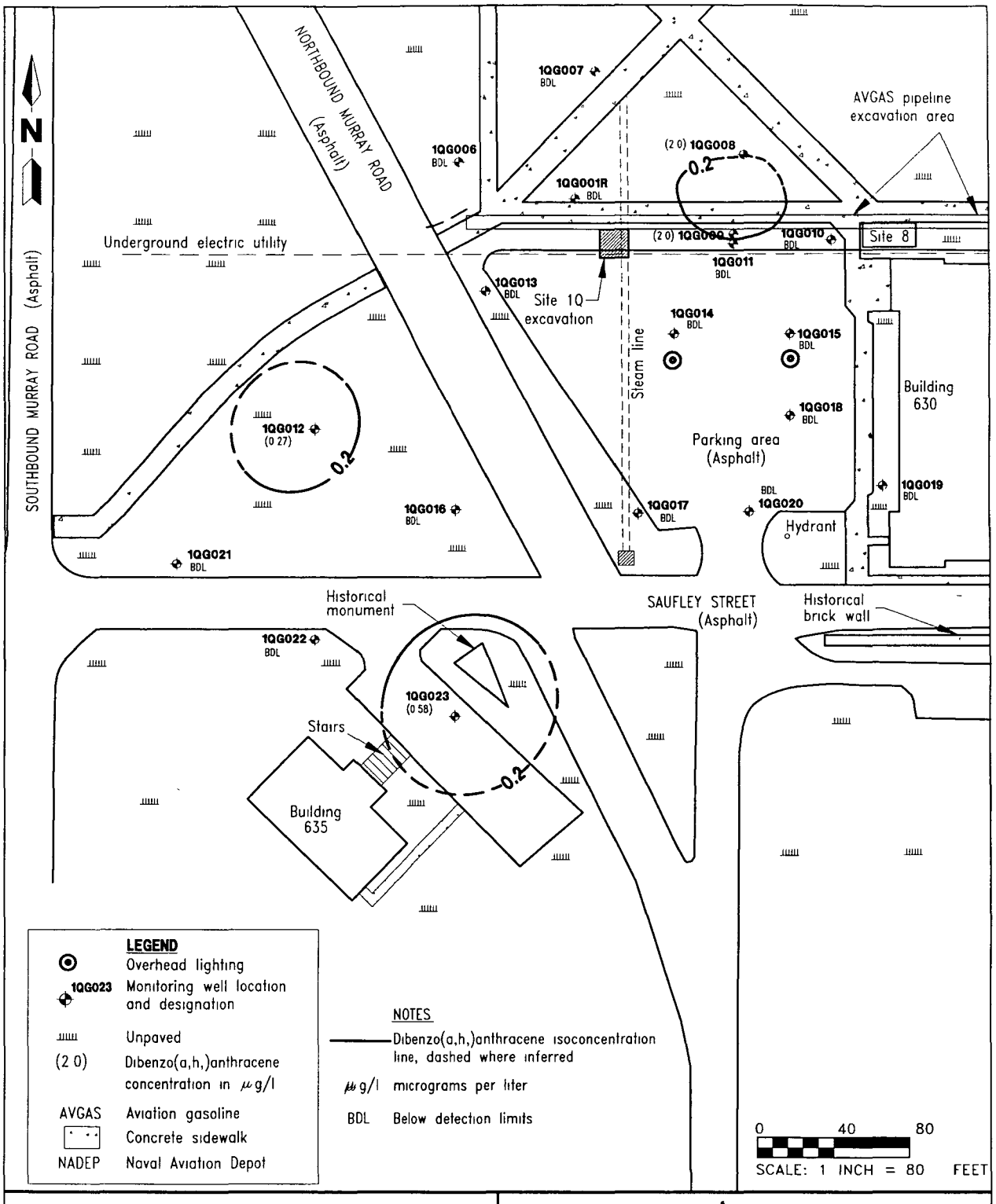


FIGURE 2-17
DIBENZO(A,H,)ANTHRACENE ISOCONCENTRATION MAP, OCTOBER 1997

K \02502\02502-02\CAR\02502531 DWG NAB- 01/20/98 13 14 52 AutoCAD R12

CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 1Q

NADEP PENSACOLA
PENSACOLA, FLORIDA

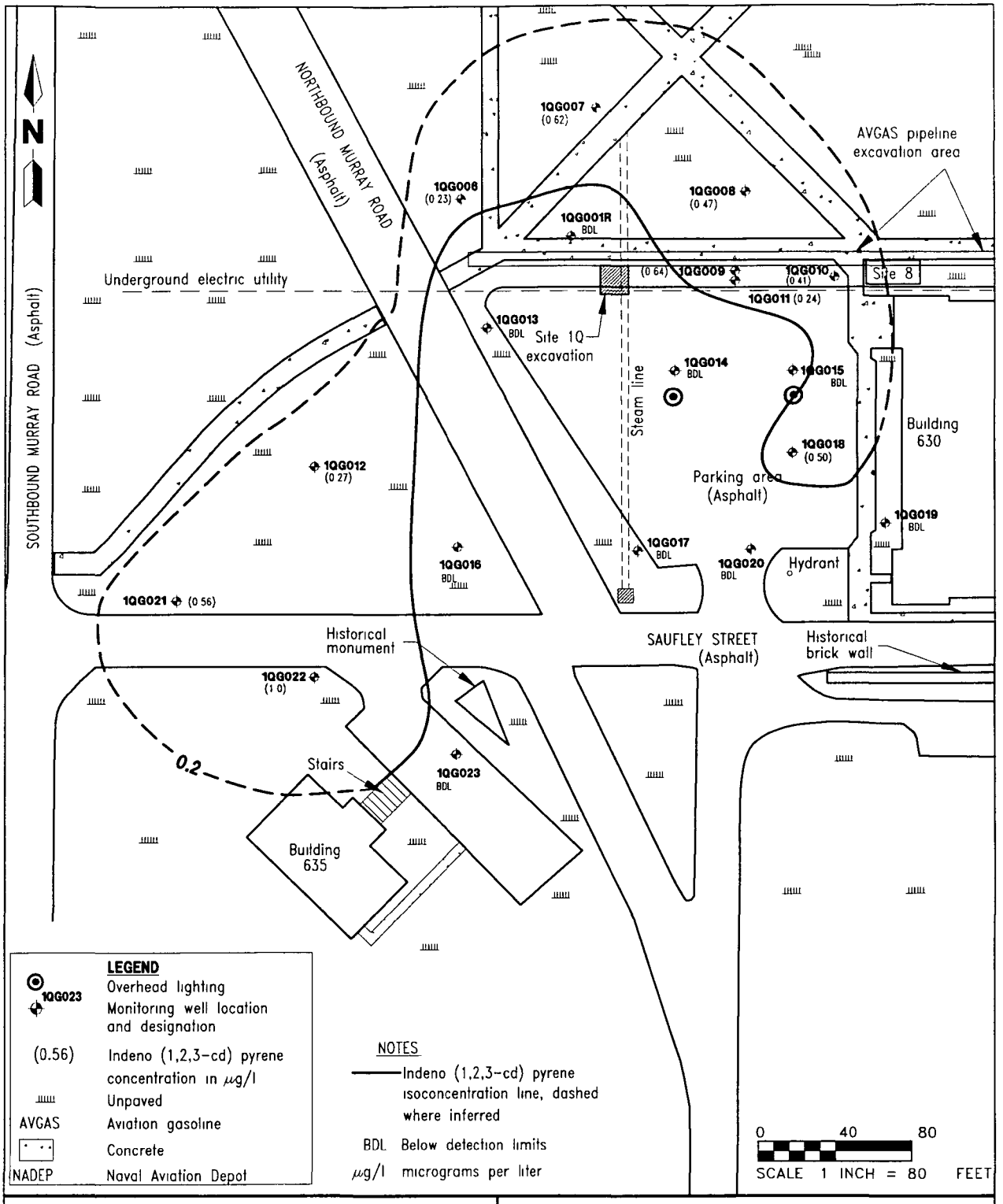


FIGURE 2-18
INDENO(1,2,3-CD)PYRENE ISOCONCENTRATION MAP, OCTOBER 1997

K \02502\02502-02\CAR\02502526 DWG NAB- 01/20/98 13 17 48 AutoCAD R12

CONTAMINATION ASSESSMENT REPORT ADDENDUM SITE 1Q

NADEP PENSACOLA PENSACOLA, FLORIDA

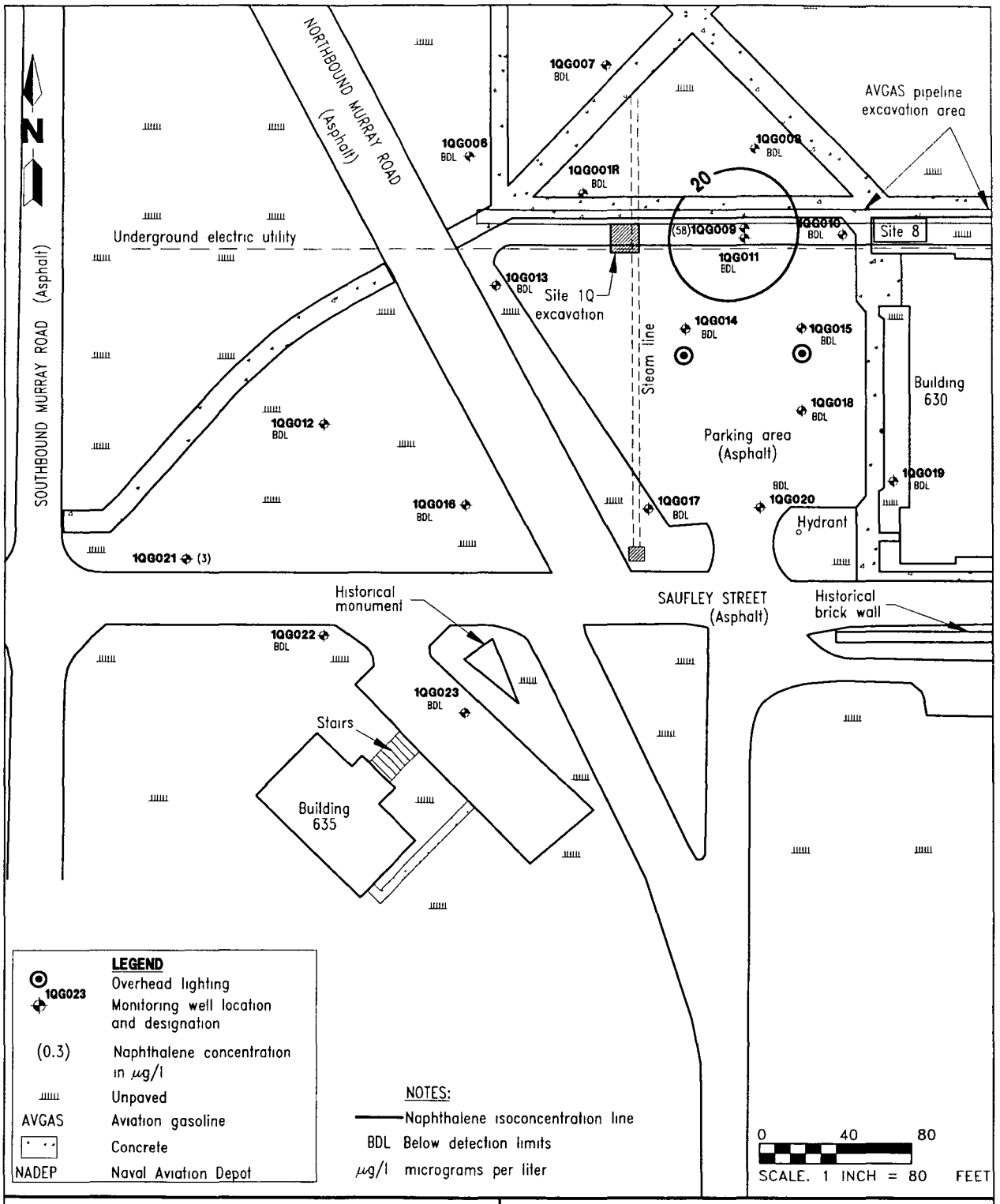


FIGURE 2-19
NAPHTHALENE ISOCONCENTRATION MAP, OCTOBER 1997

K \02502\02502-02\CAR\02502523 DWG NAB- 01/20/98 13 21 19 AutoCAD R12

CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 1Q

NADEP PENSACOLA
PENSACOLA, FLORIDA

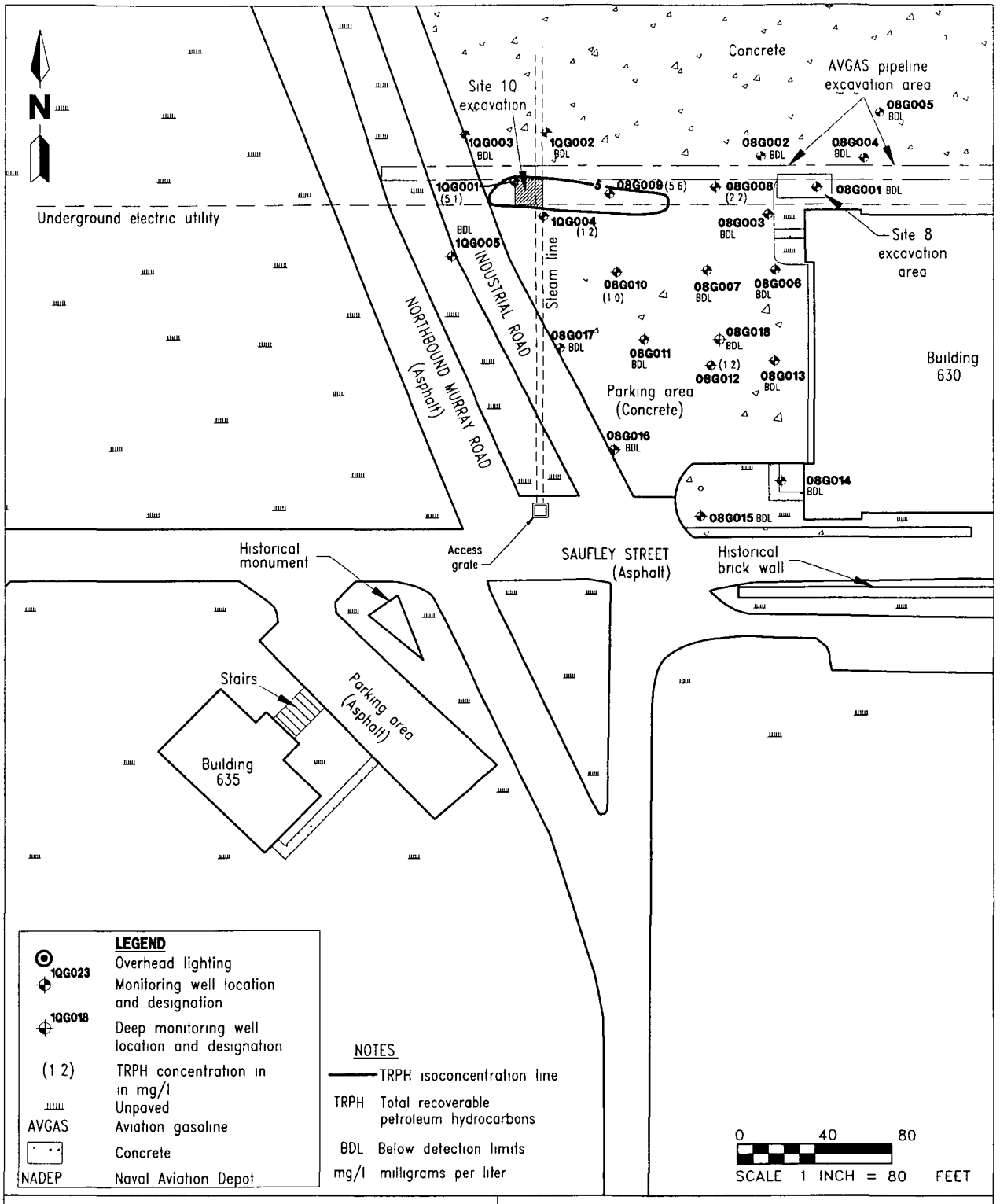


FIGURE 2-20
TRPH ISOCONCENTRATION MAP, JUNE 1995

K \02502\02502-02\CAR\02502524 DWG NAB- 01/20/98 13 25 47 AutoCAD R12

CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 1Q

NADEP PENSACOLA
PENSACOLA, FLORIDA

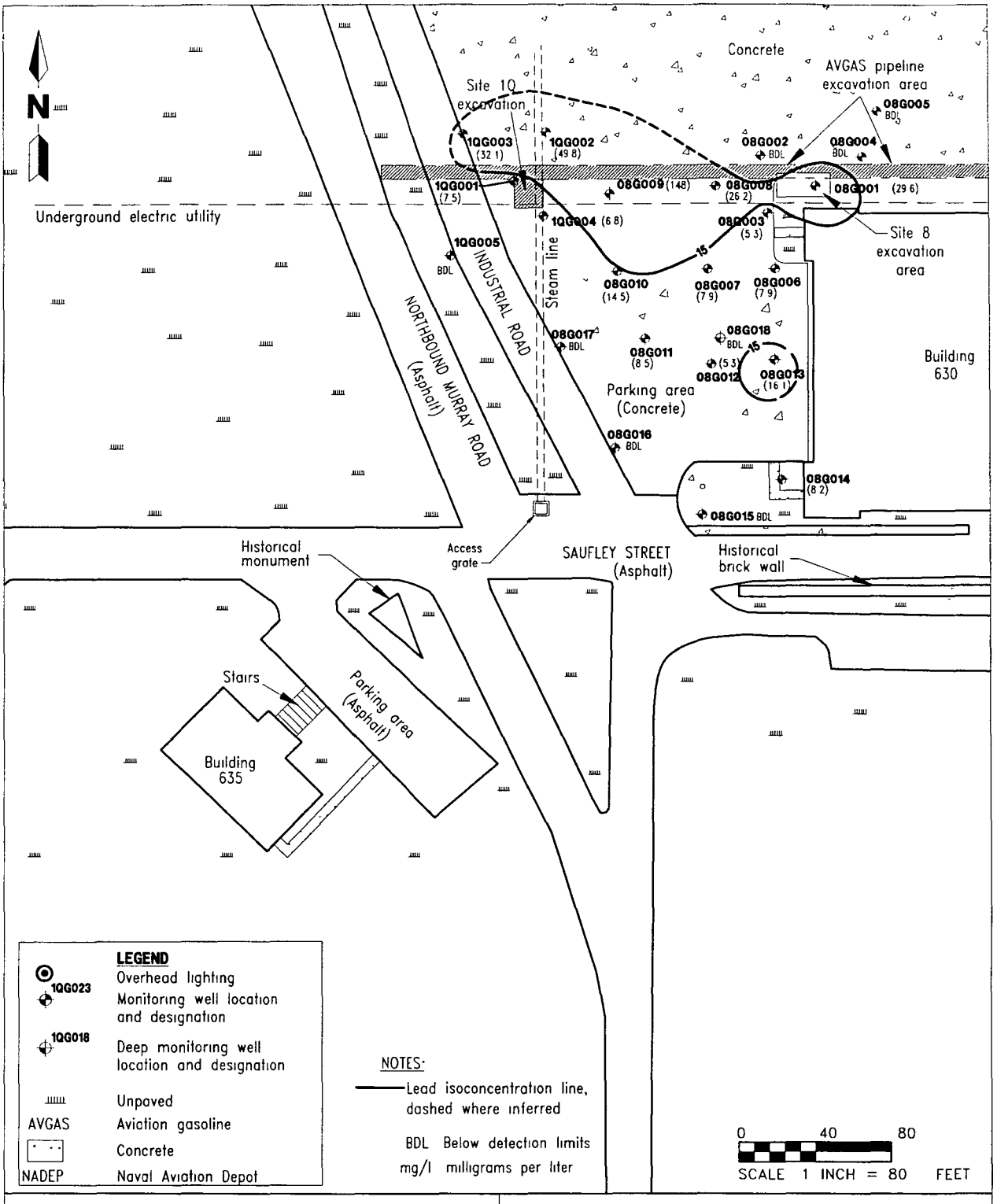


FIGURE 2-21
LEAD ISOCONCENTRATION MAP, JUNE 1995

K \02502\02502-02\CAR\02502525 DWG NAB- 01/20/98 13 34 41, AutoCAD R12

CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 1Q

NADEP PENSACOLA
PENSACOLA, FLORIDA

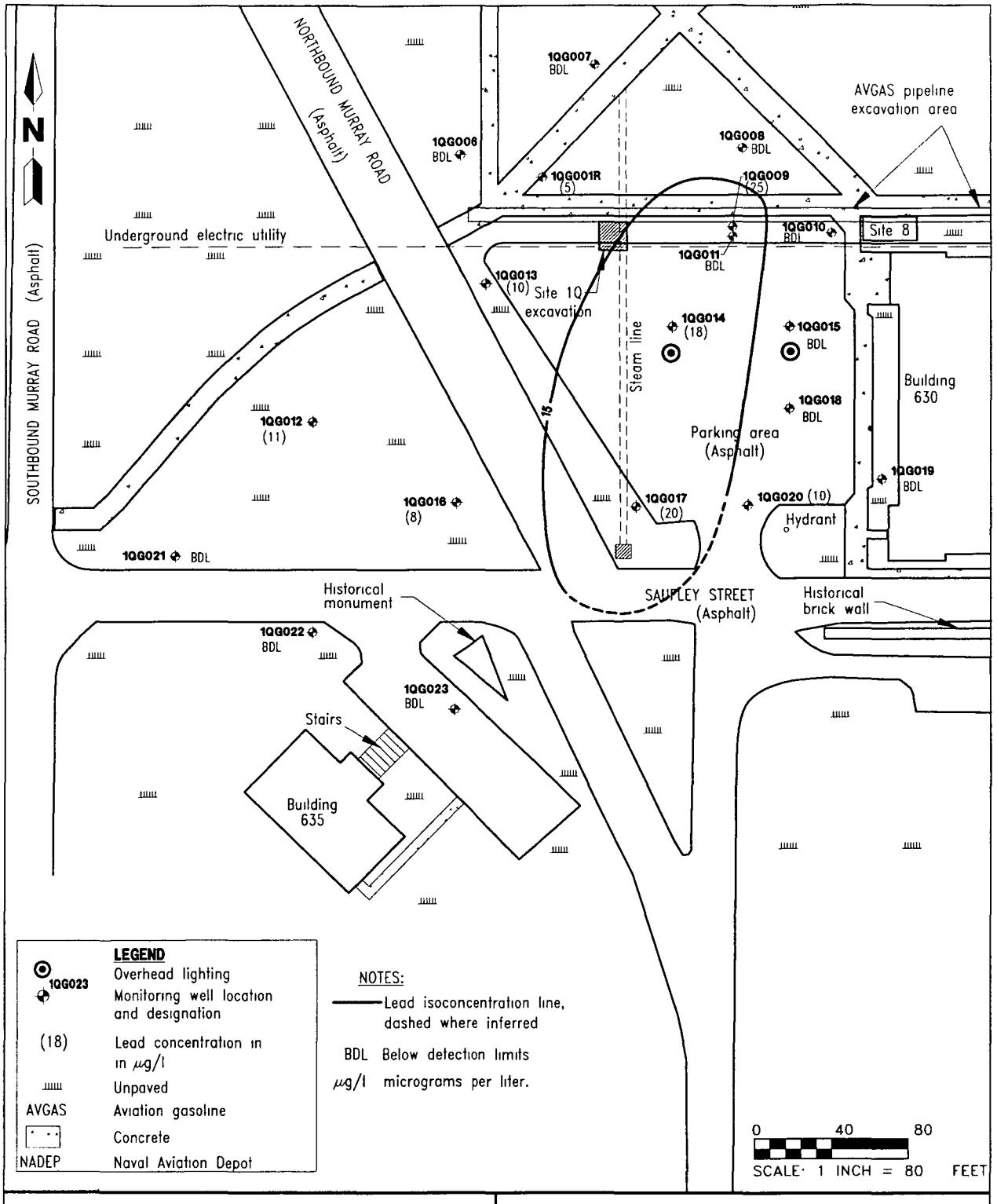


FIGURE 2-22
LEAD ISOCONCENTRATION MAP, OCTOBER 1997

CONTAMINATION ASSESSMENT REPORT ADDENDUM SITE 1Q

NADEP PENSACOLA PENSACOLA, FLORIDA

K:\02502\02502-02\CAR\02502528.DWG NAB- 01/16/98 16:09:36 AutoCAD R12

Analytical Group parameters, as defined in Rule 62-770.600(4)(A), FAC. The Used Oil Group includes volatile organics, base/neutral/acid extractables, TRPH, arsenic, cadmium, chromium, lead, and tentatively identified compounds, possible contaminants with only 50 percent accuracy level. The Gasoline Group includes volatile organics, ethylene dibromide, TRPH, and lead.

Monitoring wells 1QG002, 1QG003, and 1QG005 were sampled for volatile organics twice. The first set of groundwater samples (designated with the suffix "01") was collected using the quiescent sampling technique defined in Rule 620770.200-(20), FAC, a peristaltic pump, and Teflon™ tubing. The monitoring wells were both purged and sampled with this method. The second set of groundwater samples (designated with the suffix "02") were collected with a 2-foot long, 1.75-inch outside diameter Teflon™ bailer. The monitoring wells were both purged and sampled with the bailer. The highest detected contaminant concentration from these two sampling methods is discussed in the following text and figures. Both sets of data are presented in Table 2-6.

Benzene and ethylbenzene were detected in 9 of the 23 groundwater samples collected at Site 1Q and Site 8. Benzene concentrations ranged from 2.3 micrograms per liter ($\mu g/\ell$) detected in groundwater sample 08G01101 to 340 $\mu g/\ell$ detected in groundwater sample 08G00901. The groundwater cleanup target level (GCTL) for benzene is 1 $\mu g/\ell$. Ethylbenzene concentrations ranged from 1.5 $\mu g/\ell$ detected in groundwater sample 08G01301D to 32 $\mu g/\ell$ detected in groundwater sample 08G00801. The GCTL for ethylbenzene 40 $\mu g/\ell$.

Toluene was detected in the groundwater samples collected from three monitoring wells—1QG001, 1QG002, and 08G009—at concentrations ranging from 2.8 to 31 $\mu g/\ell$. The GCTL for toluene is 30 $\mu g/\ell$.

Total xylenes concentrations ranging from 7.9 $\mu g/\ell$ to 2,300 $\mu g/\ell$ were detected in 8 of the 23 groundwater samples collected. The GCTL for total xylenes is 20 $\mu g/\ell$.

Methylene chloride concentrations of 1.2 $\mu g/\ell$, 5.9 $\mu g/\ell$, 6.0 $\mu g/\ell$, and 2.0 $\mu g/\ell$ were detected in groundwater samples 08G00101, 08G01001, 08G01201, and 08G01801, respectively. The State guidance concentration for methylene chloride is 5 $\mu g/\ell$ (FDEP, June 1994).

Methyl tert-butyl ether (MTBE) was detected in 8 of 23 groundwater samples. MTBE concentrations ranged from 6.4 $\mu g/\ell$ detected in sample 08G00101 to 94 $\mu g/\ell$ detected in sample 1QG00101. The GCTL for MTBE is 35 $\mu g/\ell$ (Chapter 62-770.730, FAC).

Bromomethane concentrations of 6.0 $\mu g/\ell$ and 2.0 $\mu g/\ell$ were detected in samples 08G01201 and 1QG00502, respectively. A di-n-butyl phthalate concentration of 21 parts per billion was detected in groundwater sample 08G00101. There are no GCTLs or guidance concentrations for these compounds.

TRPH were detected in 6 of 23 groundwater samples. TRPH concentrations ranged from 1.0 milligrams per liter (mg/ℓ) detected in sample 08G01001 to 5.6 mg/ℓ detected in sample 08G00901. The GCTL for TRPH is 5 mg/ℓ (Chapter 62-770.730, FAC).

Lead was detected in 17 of 23 groundwater samples. Lead concentrations ranged from 5.3 μg/ℓ detected in samples 08G00301 and 08G01201 to 148 μg/ℓ detected in sample 08G00901. The GCTL for lead is 35 μg/ℓ.

October 1997. In October 1997, groundwater samples were collected from all Site 8 and Site 1Q monitoring wells. Each groundwater sample was analyzed for the Gasoline Analytical Group parameters for the suspected contaminant at Site 1Q–AVGAS. As specified in Table I of Chapter 62-770, FAC, groundwater samples were analyzed for volatile organics, PAHs, total lead, and TRPH.

Each monitoring well was purged using quiescent sampling methods and a peristaltic pump equipped with Teflon™ tubing. Groundwater samples collected for total lead analysis were collected through the precleaned Teflon™ tubing. All other samples were collected with a precleaned, disposable Teflon™ bailer. Water sampling logs recorded during monitoring well purging activities are included in Appendix D.

Ethylbenzene and total xylenes were the only volatile organic aromatic compounds detected in the Site 1Q groundwater sample during the October 1997 sampling event. Concentrations of these compounds greater than their respective GCTLs of 30 μg/ℓ and 20 μg/ℓ were detected in samples collected from three monitoring wells. Ethylbenzene concentrations of 330 μg/ℓ, 210 μg/ℓ, and 62 μg/ℓ were detected in samples collected from 1QG009, 1QG014, and 1QG017, respectively. Total xylene concentrations of 2,100 μg/ℓ, 290 μg/ℓ, and 300 μg/ℓ were detected in groundwater samples collected from the same three monitoring wells. Ethylbenzene and total xylene concentrations below the GCTLs were detected in the samples collected from 1QG011, 1QG013, and 1QG016.

Thirteen PAHs were detected in the groundwater samples collected from Site 1Q. Only six PAHs–benzo(a)anthracene (BaA), benzo(a)pyrene (BaP), benzo(b)fluoranthene (BbF), dibenzo(a,h)anthracene (DahA), indeno(1,2,3-cd)pyrene, and naphthalene–exceeded any State GCTLs. BaA concentrations greater than the GCTL of 0.2 μg/ℓ were detected in samples collected from monitoring wells 1QG007, 1QG008, 1QG009, 1QG010, 1QG015, 1QG017, and 1QG021. Concentrations of BaA ranged from 0.20 μg/ℓ to 0.35 μg/ℓ. BaP concentrations greater than the GCTL of 0.2 μg/ℓ were detected in the groundwater samples collected from 1QG006, 1QG007, 1QG009, and 1QG021. Concentrations of BaP ranged from 0.39 μg/ℓ to 0.51 μg/ℓ. BbF concentrations greater than the GCTL of 0.2 μg/ℓ were detected in samples collected from monitoring wells 1QG006, 1QG007, 1QG009, 1QG010, and 1QG017. Concentrations of BbF ranged from 0.20 μg/ℓ to 0.44 μg/ℓ. DahA concentrations greater than the GCTL of 0.2 μg/ℓ were detected in groundwater samples collected from 1QG009, 1QG012, and 1QG023. These DahA concentrations were 2 μg/ℓ, 0.27 μg/ℓ, and 0.58 μg/ℓ, respectively. Indeno(1,2,3-cd)pyrene concentrations greater than the GCTL of 0.2 μg/ℓ were detected in samples collected from monitoring wells 1QG006 through 1QG011, 1QG013, 1QG018, 1QG021, and 1QG022. Concentrations of indeno(1,2,3-cd)pyrene ranged from 0.23 μg/ℓ to 1 μg/ℓ. Naphthalene concentrations greater than the State GCTL of 20 were detected in the groundwater samples collected from 1QG009. The concentrations of naphthalene detected in 1QG00901 and its duplicate 1QG00901D were 58 μg/ℓ and 32 μg/ℓ, respectively.

TRPH concentrations detected in groundwater samples collected from Site 1Q did not exceed the State GCTL of 5 mg/ℓ.

Lead concentrations greater than the GCTL of 15 $\mu g/\ell$ were detected in groundwater samples collected from 1QG001R, 1QG009, 1QG014, and 1QG017. The detected lead concentrations in these samples were 28 $\mu g/\ell$, 25 $\mu g/\ell$, 18 $\mu g/\ell$, and 20 $\mu g/\ell$. Turbidity in each of these wells, with the exception of 1QG001R, was below 5 nephelometric turbidity units. Because quiescent sampling methods were not adequate to reduce the turbidity of 1QG001R, a filtered lead sample was also collected from that monitoring well. The resulting dissolved lead concentration was 5 $\mu g/\ell$.

3.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

3.1 SUMMARY. Based on the findings of the contamination assessment (CA) field investigations and laboratory analytical results, the following is a summary of existing conditions at the site.

- Site soil consists very fine- to fine-grained, moderately sorted sand. The color ranged from very pale orange to light gray.
- The source of contamination, the AVGAS pipeline, has been removed.
- One deep monitoring well and 22 shallow monitoring wells were installed to assess the groundwater contamination at Site 1Q and Site 8 in the spring of 1995. These wells were abandoned in September 1995 due to site construction activities.
- In October 1997, 1 deep monitoring well and 18 shallow monitoring wells were installed to complete the groundwater assessment of Site 1Q.
- The groundwater flow direction has varied over time. In 1995, the groundwater flow was predominantly southwest. In 1997, the groundwater flow varies from south to southeast.
- The K_{avg} across the sites is 9.3×10^{-4} ft/ft.
- The i_{avg} at the sites is 27.3 ft/day.
- The average pore water V is 1.02×10^{-1} ft/day.

3.1.1 Soil Contamination On February 7, 1995, approximately 29 yd^3 of contaminated soil were removed from the suspected Site 1Q source area. OVA screening of soil samples collected from the edges of the excavation as well as confirmatory analytical soil samples (discussed below) confirmed that the contaminated soil had been removed.

OVA soil screening techniques revealed VOC concentrations in the soil across the site ranged from less than 1 ppm to 7 ppm. Analytical results from soil samples collected in the two most likely areas of soil contamination—one from the edge of the excavation and one from the area of highest groundwater contamination—did not exceed any State SCTL for VOCs, PAHs, or TRPH.

3.1.2 Groundwater Contamination Groundwater sampling results from June 1995 indicated that benzene, ethylbenzene, xylenes, the PAH naphthalene, TRPH, and lead were contaminants of concern at Site 1Q. October 1997 groundwater sampling results indicate that the benzene and TRPH concentrations no longer exceed State GCTLs. Ethylbenzene, xylenes, naphthalene, and lead remain contaminants of concern, although overall concentrations of these chemicals have decreased since 1995. Additionally, the PAHs, BaA, BaP, BbF, DahA, and indeno(1,2,3-cd)pyrene concentrations also exceeded State GCTLs in October 1997.

3.2 CONCLUSIONS. Based on the findings of the CA and site conditions, the following can be concluded.

- All excessively contaminated soil has been removed from Site 1Q.

- Groundwater contamination exceeding State GCTLs is present at Site 1Q.

- Site 1Q meets natural attenuation criteria defined in Rule 62-770.690, FAC:

  - There is no free product present at Site 1Q.
  - There is no contaminated soil present at Site 1Q.
  - The results of the two sampling events performed at Site 1Q indicate an overall reduction in contaminant concentrations.

3.3 RECOMMENDATIONS. Based on the findings, conclusions, and interpretations of the CA, ABB-ES recommends a Monitoring Only Proposed for Natural Attenuation at Site 1Q. In accordance with Rule 62-770.690(4), FAC, the Navy will submit two copies of the *Monitoring Only Proposal for Natural Attenuation* under separate cover to the FDEP for approval.

4.0 PROFESSIONAL REVIEW CERTIFICATION

This CAR Addendum was prepared using sound hydrogeologic principles and professional judgment. This assessment is based on the geologic investigation and associated information detailed in the text and appended to this report or referenced in public literature. Recommendations are based upon interpretations of the applicable regulatory requirements, guidelines, and relevant issues discussed with regulatory personnel during the site investigation. If conditions that differ from those described are determined to exist, the undersigned geologist should be notified to evaluate the effects of any additional information on this assessment or the recommendations made in this report. This CAR Addendum was developed for the AVGAS Pipeline Site 1Q at NADEP, Naval Air Station Pensacola, Pensacola, Florida, and should not be construed to apply to any other site.

Michael J. Williams
Professional Geologist
P.G. No. 344

1/21/98
Date

REFERENCES

ABB Environmental Services, Inc. (ABB-ES). 1995a. *Contamination Assessment Report, AVGAS Pipeline Area, Naval Aviation Depot, Naval Air Station, Pensacola, Florida.* Prepared for Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM), North Charleston, South Carolina (August).

ABB-ES. 1995b. *Contamination Assessment Report Addendum, Site 8, Naval Aviation Depot, Naval Air Station, Pensacola, Florida.* Prepared for SOUTHNAVFACENGCOM, North Charleston, South Carolina (November).

ABB-ES. 1995c. *Initial Remedial Action, Naval Aviation Depot, Naval Air Station, Pensacola, Florida.* Prepared for SOUTHNAVFACENGCOM, North Charleston, South Carolina (December).

Bouwer, H., and R. Rice. 1976. "A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers with Completely or Partially Penetrating Wells." In *Water Resources Research*, vol. 12, p. 423-428.

Bouwer, H. 1989. "The Bouwer and Rice Slug Test, An Update." In *Groundwater*, vol. 127, p. 304-309.

Florida Department of Environmental Protection. 1994. Groundwater Guidance Concentrations. Bureau of Drinking Water and Ground Water Resources, 53 p.

APPENDIX A

FDEP CORRESPONDENCE

114-1521

Department of Environmental Protection

rec'd Jan 22, 1996

Lawton Chiles
Governor

Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

January 2, 1996

Mr. Byas Glover
Code 18410
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
P.O. Box 190010
North Charleston, South Carolina 29419-9010

RE: Contamination Assessment Report Addendum, AVGAS Pipeline Site 8, UST 130, Naval Air Station Depot, NAS Pensacola, Pensacola, Florida
DEP Facility #179202973

Dear Mr. Glover:

I have completed the technical review of the Contamination Assessment Report (CAR) Addendum and No Further Action Proposal (NFAP) dated November 1995 (received November 21, 1995), submitted for this site (AVGAS Site 8, UST 130). Based upon my review, the enclosed Site Rehabilitation Completion Order was signed by Mr. John M. Ruddell, Director of the Division of Waste Management. The No Further Action Proposal was incorporated by reference in the Site Rehabilitation Completion Order.

If you should have any questions concerning this review, please contact me at (904) 921-9989.

Sincerely,

John W. Mitchell
Remediation Project Manager

cc: Ron Joyner, NAS Pensacola
Dean Spencer, NAS Pensacola
Mark Diblin, ABB, Tallahassee
Tom Moody, FDEP Northwest District

APPENDIX B

MONITORING WELL LOGS

TITLE: NADEP Pensacola AVGAS Pipeline	LOG of WELL. NA	BORING NO. 08B002
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO. 7527 54
CONTRACTOR: Groundwater Protection, Inc	DATE STARTED. 3/18/95	COMPLTD: 3/18/95

METHOD: 4 25" ID HSA	CASE SIZE: NA	SCREEN INT.. NA	PROTECTION LEVEL. D
TOC ELEV.: NA FEET	MONITOR INST.: OVA	TOT DPTH: 34 FEET.	DPTH TO ▽ NA FEET
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: NA		SITE: 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE		SP		
5									
					SAND very fine-grained, well sorted, light gray, saturated				
10									
15									
20					SAND very fine- to fine-grained, moderately well sorted, light gray, saturated				
25									
30									
		▼			SAND fine- to medium-grained, moderately well sorted, ligth gray, saturated			4,6,5,2	
35					CLAYEY SAND 25% clay, 10% silt, very fine- to fine-grained sand, very poor sort, dark gray, saturated		SC		
40									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline	**LOG of WELL:** 08G001	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM		**PROJECT NO:** CTO 8
CONTRACTOR: Groundwater Protection, Inc	**DATE STARTED.** 2/15/95	**COMPLTD.** 2/15/95
METHOD: 4.25" ID HSA	**CASE SIZE.** 2-inch	**SCREEN INT..** 2 2-12 2 FT	**PROTECTION LEVEL:** D
TOC ELEV.: 100 00 FEET	**MONITOR INST.:** OVA	**TOT DPTH:** 12 20 FEET	**DPTH TO ▽** 2 29 FEET
LOGGED BY: P Wagner	**WELL DEVELOPMENT DATE:** 2/15/95	**SITE.** 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					FILL. red, clayey sand		FILL		
5							SP		
					SAND pale orange, very fine- to fine-grained, moderately sorted				
10									
15									

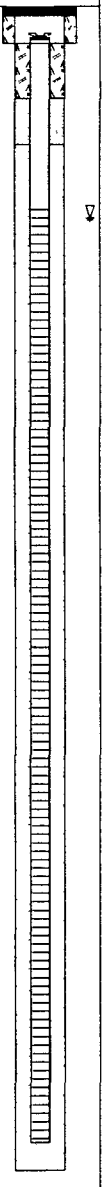


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline	**LOG of WELL:** 08G002	**BORING NO** NA
CLIENT: SOUTHNAVFACENGCOM		**PROJECT NO:** CTO 8
CONTRACTOR: Groundwater Protection, Inc	**DATE STARTED:** 3/14/95	**COMPLTD.** 3/14/95
METHOD. 4.25" ID HSA	**CASE SIZE:** 2-inch	**SCREEN INT.:** 17-117 FT	**PROTECTION LEVEL** D
TOC ELEV.: 99 68 FEET	**MONITOR INST.:** OVA	**TOT DPTH.** 1165 FEET	**DPTH TO ▽** 195 FEET
LOGGED BY: P Wagner	**WELL DEVELOPMENT DATE:** 3/14/95	**SITE:** 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE				
							SP		
				<1					
5					SAND pale orange, very fine-grained, well sorted				
10									
15									

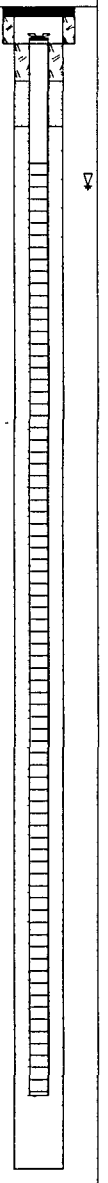


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline	**LOG of WELL:** 08G003	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM		**PROJECT NO:** CTO 8
CONTRACTOR: Groundwater Protection, Inc.	**DATE STARTED:** 3/14/95	**COMPLTD.** 3/14/95
METHOD. 4 25" ID HSA / **CASE SIZE:** 2-inch	**SCREEN INT..** 2 0-12 0 FT	**PROTECTION LEVEL:** D
TOC ELEV.: 100.01 FEET / **MONITOR INST.:** OVA	**TOT DPTH:** 11.98 FEET	**DPTH TO ▽** 2 33 FEET
LOGGED BY: P Wagner	**WELL DEVELOPMENT DATE:** 3/14/95	**SITE.** 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE		SP		
				<1					
5					SAND light gray, fine-grained, well sorted				
10									
15									

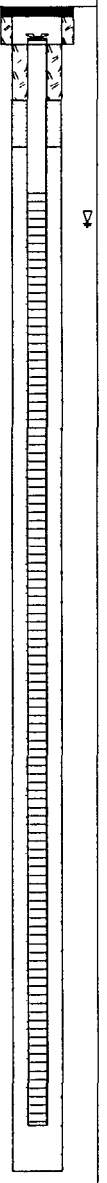


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline	LOG of WELL: 08G004	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO: CTO 8
CONTRACTOR. Groundwater Protection, Inc	DATE STARTED. 3/14/95	COMPLTD. 3/14/95
METHOD: 4 25" ID HSA	CASE SIZE. 2-inch	SCREEN INT.: 17-117 FT	PROTECTION LEVEL. D
TOC ELEV.: 99.61 FEET	MONITOR INST.: OVA	TOT DPTH: 1170 FEET	DPTH TO ▽ 186 FEET
LOGGED BY: P Wagner	WELL DEVELOPMENT DATE: 3/14/95	SITE. 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE				
							SP		
				<1					
5					SAND pale orange, very fine- to fine-grained, moderately to well sorted.				
10									
15									

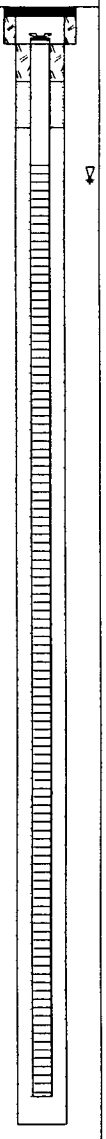


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE. NADEP Pensacola AVGAS Pipeline		**LOG of WELL:** 08G005	**BORING NO.** NA
CLIENT. SOUTHNAVFACENGCOM			**PROJECT NO.** CTO 8
CONTRACTOR: Groundwater Protection, Inc		**DATE STARTED.** 3/14/95	**COMPLTD.** 3/14/95
METHOD: 4 25" ID HSA	**CASE SIZE:** 2-inch	**SCREEN INT.:** 1 9-11 9 FT	**PROTECTION LEVEL.** D
TOC ELEV.: 99 72 FEET	**MONITOR INST.:** OVA	**TOT DPTH:** 11 93 FEET	**DPTH TO ▽** 1 95 FEET
LOGGED BY: P Wagner	**WELL DEVELOPMENT DATE.** 3/14/95		**SITE.** 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE				
							SP		
		<1							
5					SAND pale orange, very fine- to fine-grained, moderately to well sorted				
10									
15									

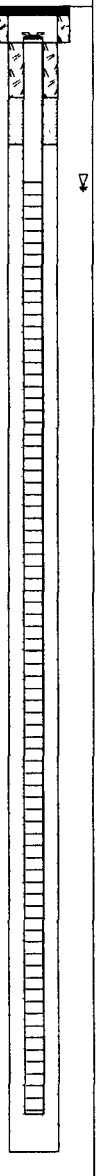


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline	**LOG of WELL:** 08G006	**BORING NO.** NA
CLIENT. SOUTHNAVFACENGCOM		**PROJECT NO:** CTO 8
CONTRACTOR: Groundwater Protection, Inc	**DATE STARTED.** 3/17/95	**COMPLTD.** 3/17/95
METHOD: 4 25" ID HSA	**CASE SIZE.** 2-inch	**SCREEN INT.:** 2 1-12 1 FT	**PROTECTION LEVEL.** D
TOC ELEV.: 100 47 FEET	**MONITOR INST.:** OVA	**TOT DPTH:** 12 10 FEET	**DPTH TO ▽** 2 82 FEET
LOGGED BY: P Wagner	**WELL DEVELOPMENT DATE:** 3/17/95	**SITE:** 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE				
							SP		
					SAND light gray, very fine- to fine-grained, moderately to well sorted				
5									
					SAND as above, medium gray				
10									
15									

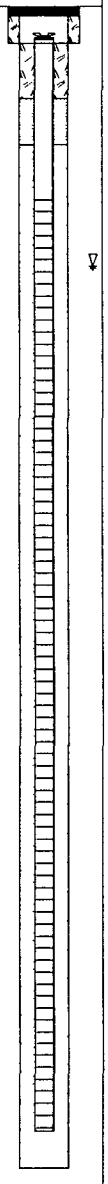


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE. NADEP Pensacola AVGAS Pipeline	**LOG of WELL:** 08G007	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM		**PROJECT NO.** CTO 8
CONTRACTOR. Groundwater Protection, Inc	**DATE STARTED.** 3/17/95	**COMPLTD** 3/17/95
METHOD: 4.25" ID HSA	**CASE SIZE:** 2-inch	**SCREEN INT..** 2 1-12 1 FT	**PROTECTION LEVEL.** D
TOC ELEV.: 100 17 FEET	**MONITOR INST.:** OVA	**TOT DPTH:** 12 10 FEET	**DPTH TO ∇** 2 54 FEET
LOGGED BY: P Wagner	**WELL DEVELOPMENT DATE:** 3/17/95	**SITE:** 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE		SP		
					SAND pinkish gray to light gray, fine-grained, well sorted				
5									
					SAND as above, pinkish gray				
10									
15									

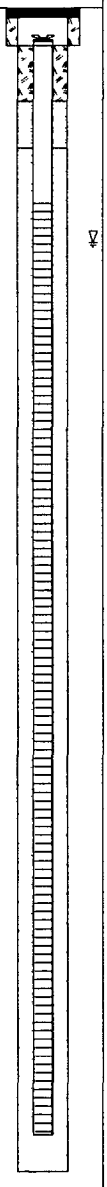


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline	**LOG of WELL:** 08G008	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM		**PROJECT NO.** CTO 8
CONTRACTOR. Groundwater Protection, Inc	**DATE STARTED.** 3/17/95	**COMPLTD:** 3/17/95
METHOD. 4 25" ID HSA / **CASE SIZE.** 2-inch	**SCREEN INT.:** 2 4-12 4 FT	**PROTECTION LEVEL.** D
TOC ELEV.: 99.65 FEET / **MONITOR INST.:** OVA	**TOT DPTH:** 12.43 FEET	**DPTH TO ▽** 1 97 FEET
LOGGED BY: P Wagner	**WELL DEVELOPMENT DATE:** 3/17/95	**SITE:** 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE		SP		
5					SAND light gray, very fine- to fine-grained, moderately to well sorted				
10									
15									

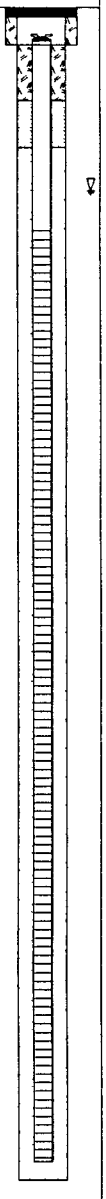


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline	**LOG of WELL:** 08G009	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM		**PROJECT NO:** CTO 8
CONTRACTOR. Groundwater Protection, Inc	**DATE STARTED:** 3/20/95	**COMPLTD.** 3/20/95
METHOD. 4.25" ID HSA	**CASE SIZE:** 2-inch	**SCREEN INT..** 2 3-12 3
PROTECTION LEVEL: D		
TOC ELEV.: 99 59 FEET	**MONITOR INST..** OVA	**TOT DPTH:** 12 34 FEET
DPTH TO ▽ 1 95 FEET		
LOGGED BY: P. Wagner	**WELL DEVELOPMENT DATE:** 3/20/95	**SITE:** 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE		SP		
				<1	SAND light gray, very fine- to fine-grained, moderately to well sorted				
5									
					SAND as above, petroleum odor				
10									
15									

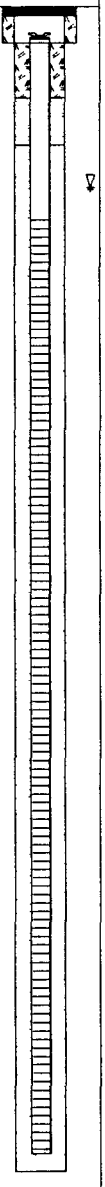


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE. NADEP Pensacola AVGAS Pipeline		LOG of WELL: 08G010	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO. CTO 8
CONTRACTOR: Groundwater Protection, Inc		DATE STARTED: 3/20/95	COMPLTD. 3/20/95
METHOD: 4.25" ID HSA	CASE SIZE: 2-inch	SCREEN INT.: 1 9-11 9 FT	PROTECTION LEVEL. D
TOC ELEV.: 100 01 FEET	MONITOR INST.: OVA	TOT DPTH: 11.93 FEET	DPTH TO ▽ 2 39 FEET
LOGGED BY. P Wagner	WELL DEVELOPMENT DATE: 3/20/95		SITE: 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE		SP		
				<1	SAND light gray, very fine- to fine-grained, moderately to well sorted.				
5									
					SAND. as above, slight petroleum odor.				
10									
15									

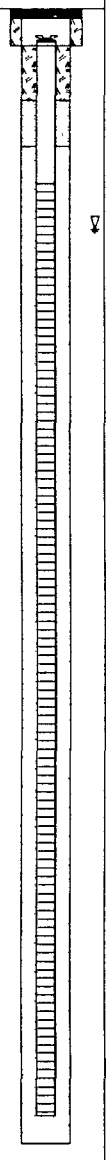


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline	**LOG of WELL.** 08G011	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM		**PROJECT NO:** CTO 8
CONTRACTOR: Groundwater Protection, Inc	**DATE STARTED.** 3/21/95	**COMPLTD.** 3/21/95
METHOD. 4 25" ID HSA / **CASE SIZE.** 2-inch	**SCREEN INT..** 2 0-12 0 FT	**PROTECTION LEVEL.** D
TOC ELEV.: 100 32 FEET / **MONITOR INST.:** OVA	**TOT DPTH:** 12 05 FEET	**DPTH TO ▽** 2 74 FEET
LOGGED BY: P Wagner	**WELL DEVELOPMENT DATE:** 3/21/95	**SITE.** 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE		SP		
		X		<1	SAND light gray to pale orange, very fine- to fine-grained, moderately sorted				
5									
					SAND as above, medium gray to brownish gray.				
10									
15									

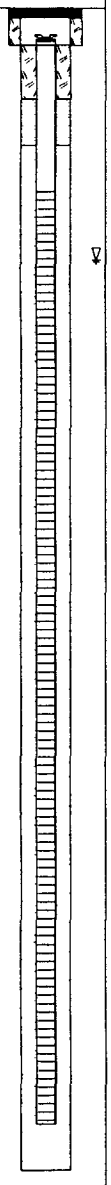


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline		**LOG of WELL:** 08G012	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO.** CTO 8
CONTRACTOR: Groundwater Protection, Inc		**DATE STARTED:** 3/20/95	**COMPLTD:** 3/20/95
METHOD. 4.25" ID HSA	**CASE SIZE:** 2-inch	**SCREEN INT.:** 2 4-12 4 FT	**PROTECTION LEVEL.** D
TOC ELEV.: 100 60 FEET	**MONITOR INST.:** OVA	**TOT DPTH:** 12.38 FEET	**DPTH TO ▽** 3 03 FEET
LOGGED BY. P Wagner	**WELL DEVELOPMENT DATE.** 3/20/95		**SITE.** 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE				
					SAND AND FILL very fine- to fine-grained sand mixed with bricks		FILL		
				<1					
							SP		
5									
					SAND light gray, very fine- to fine-grained, moderately to well sorted, metallic odor				
10									
15									

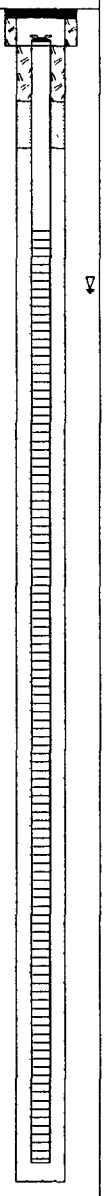


 ABB ENVIRONMENTAL SERVICES, INC.

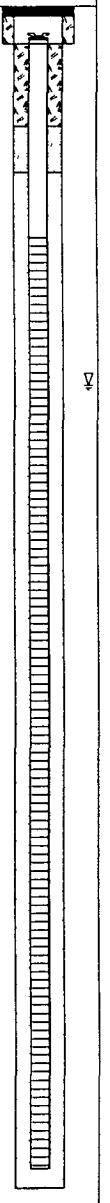
TITLE: NADEP Pensacola AVGAS Pipeline		**LOG of WELL:** 08G013	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO.** CTO 8
CONTRACTOR: Groundwater Protection, Inc		**DATE STARTED.** 3/20/95	**COMPLTD.** 3/20/95
METHOD. 4.25" ID HSA	**CASE SIZE:** 2-inch	**SCREEN INT..** 2 1-12 1	**PROTECTION LEVEL.** D
TOC ELEV.: 100 80 FEET	**MONITOR INST.:** OVA	**TOT DPTH:** 12 13 FEET	**DPTH TO ▽** 3 22 FEET
LOGGED BY: P Wagner	**WELL DEVELOPMENT DATE.** 3/20/95		**SITE:** 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE				
					SAND AND FILL fine sand mixed with bricks and concrete		FILL		
							SP		
5									
					SAND light gray, very fine- to fine-grained, moderately to well sorted				
10									
15									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline		LOG of WELL: 08G014	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: CTO 8
CONTRACTOR: Groundwater Protection, Inc		DATE STARTED: 3/27/95	COMPLTD. 3/27/95
METHOD: 4 25" ID HSA	CASE SIZE: 2-inch	SCREEN INT.: 2 5-12 5 FT	PROTECTION LEVEL. D
TOC ELEV.: 101 58 FEET	MONITOR INST.: OVA	TOT DPTH: 12.47 FEET	DPTH TO ▽ 4 09 FEET
LOGGED BY. P. Wagner	WELL DEVELOPMENT DATE: 3/27/95		SITE. 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					SILTY SAND. dark brown, very fine- to fine-grained, poorly sorted, 30% silt		SM		
				<1	SAND dark yellowish orange, very fine- to fine-grained, moderately to well sorted		SP		
					SAND medium gray, very fine to fine-grained, moderately sorted				
5									
					SAND as above, pale orange				
10									
15									



TITLE: NADEP Pensacola AVGAS Pipeline	**LOG of WELL:** 08G015	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM		**PROJECT NO:** CTO 8
CONTRACTOR: Groundwater Protection, Inc	**DATE STARTED.** 3/27/95	**COMPLTD:** 3/27/95
METHOD. 4.25" ID HSA	**CASE SIZE:** 2-inch	**SCREEN INT..** 2 0-12 0 FT	**PROTECTION LEVEL.** D
TOC ELEV.: 101 60 FEET	**MONITOR INST.:** OVA	**TOT DPTH:** 12.08 FEET	**DPTH TO ∇** 4 10 FEET
LOGGED BY: P Wagner	**WELL DEVELOPMENT DATE:** 3/27/95	**SITE.** 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				<1	SILTY SAND brownish gray, very fine- to fine-grained, poorly sorted, 30% silt		SM		
5					SAND light gray, very fine- to fine-grained, trace coarse-grained, moderately sorted, no odor		SP		
10									
15									

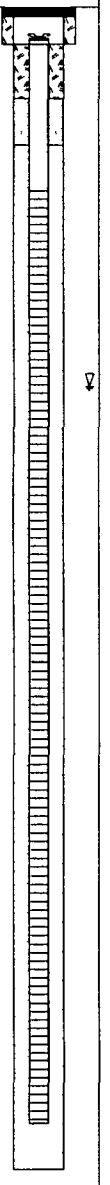


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE. NADEP Pensacola AVGAS Pipeline		**LOG of WELL:** 08G016	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO.** CTO 8
CONTRACTOR. Groundwater Protection, Inc		**DATE STARTED:** 3/27/95	**COMPLTD.** 3/27/95
METHOD: 4 25" ID HSA	**CASE SIZE:** 2-inch	**SCREEN INT.:** 2 2-12 2 FT	**PROTECTION LEVEL.** D
TOC ELEV.: 100 60 FEET.	**MONITOR INST.:** OVA	**TOT DPTH.** 12 18 FEET	**DPTH TO ▽** 3 10 FEET
LOGGED BY: P Wagner	**WELL DEVELOPMENT DATE.** 3/27/95		**SITE.** 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE		SP		
				<1	SAND light to medium gray, very fine-grained, well sorted				
5									
					SAND. light gray, very fine- to fine-grained, moderately to well sorted				
10									
15									

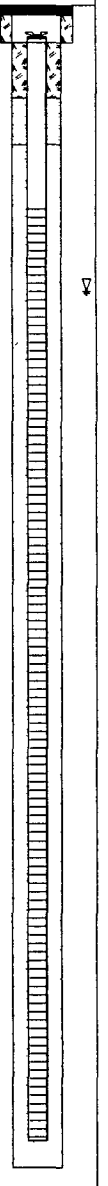


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline	**LOG of WELL:** 08G017	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM		**PROJECT NO:** CTO 8
CONTRACTOR: Groundwater Protection, Inc	**DATE STARTED.** 3/27/95	**COMPLTD:** 3/27/95
METHOD: 4.25" ID HSA	**CASE SIZE:** 2-inch	**SCREEN INT.:** 2 4-12 4 FT	**PROTECTION LEVEL:** D
TOC ELEV.: 100 17 FEET	**MONITOR INST.:** OVA	**TOT DPTH.** 12.37 FEET	**DPTH TO ▽** 2 64 FEET
LOGGED BY: P. Wagner	**WELL DEVELOPMENT DATE:** 3/27/95	**SITE.** 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE		SP		
					SAND light gray, very fine- to fine-grained, moderately to well sorted				
				<1					
					SAND black, very fine- to fine-grained, moderately to well sorted, slightly greasy texture, no odor				
5									
					SAND light gray to brownish gray, very fine- to fine-grained, moderately to well sorted, no odor				
10									
15									

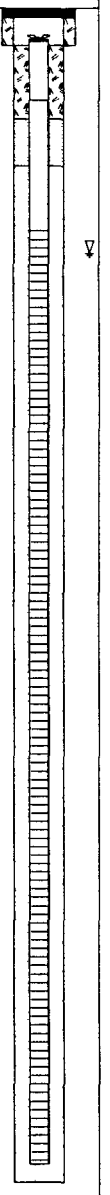


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline		LOG of WELL: 08G018	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO. CTO 8
CONTRACTOR: Groundwater Protection, Inc		DATE STARTED: 3/28/95	COMPLTD. 3/29/95
METHOD. Mud Rotary	CASE SIZE. 2- & 6-inch	SCREEN INT.: 30-35 FT	PROTECTION LEVEL. D
TOC ELEV.: 100 63 FEET	MONITOR INST.: OVA	TOT DPTH. 35 FEET	DPTH TO ▽ 3 04 FEET
LOGGED BY: P Wagner	WELL DEVELOPMENT DATE: 3/29/95		SITE: 8

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					3" layer of concrete				
					SAND dark gray to light gray, very fine- to fine-grained, moderately sorted		SP		
5									
10									
15					SAND very fine- to fine-grained, moderately sorted, broken shells, sulfur odor				
20									
25									
30									
35									
40									

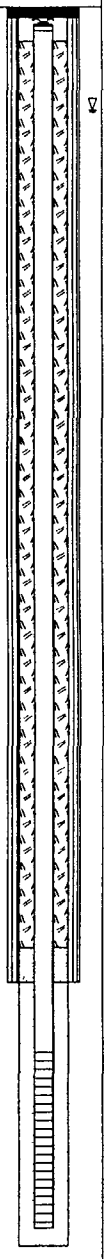


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline	LOG of WELL. 1QG001	BORING NO. NA
CLIENT. SOUTHNAVFACENGCOM		PROJECT NO. CTO 8
CONTRACTOR. Groundwater Protection, Inc	DATE STARTED. 3/15/95	COMPLTD. 3/15/95
METHOD: 4 25" ID HSA	CASE SIZE. 2-inch	SCREEN INT.. 2'-12'	PROTECTION LEVEL. D
TOC ELEV.: 99 53 FEET	MONITOR INST.: OVA	TOT DPTH: 12 FEET	DPTH TO ▽ 1 93 FEET
LOGGED BY: P Wagner	WELL DEVELOPMENT DATE: 3/15/95	SITE: 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					3" layer of concrete		CL		
					FILL. red sandy clay				
							ML		
5									
					SAND gray, fine-grained, well sorted, petroleum odor				
10									
15									
20									

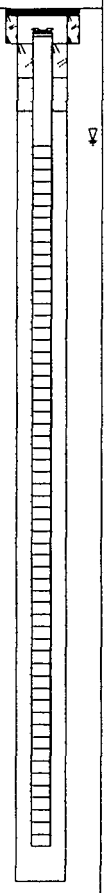


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE. NADEP Pensacola AVGAS Pipeline		**LOG of WELL:** 1QG002	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO:** CTO 8
CONTRACTOR: Groundwater Protection, Inc		**DATE STARTED:** 3/17/95	**COMPLTD.** 3/17/95
METHOD: 4 25" ID HSA	**CASE SIZE:** 2-inch	**SCREEN INT.:** 2'-12'	**PROTECTION LEVEL:** D
TOC ELEV.: 99.27 FEET.	**MONITOR INST.:** OVA	**TOT DPTH:** 12 FEET.	**DPTH TO ▽** 1 65 FEET
LOGGED BY: P Wagner	**WELL DEVELOPMENT DATE:** 3/17/95		**SITE.** 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					3" layer of concrete		SC		
					FILL reddish brown clayey sand		ML		
5					SAND light gray, fine-grained, well sorted				
10									
15									
20									

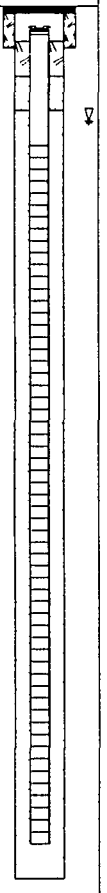


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline		**LOG of WELL:** 1QG003	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO:** CTO 8
CONTRACTOR: Groundwater Protection, Inc		**DATE STARTED:** 3/17/95	**COMPLTD.** 3/17/95
METHOD: 4 25" ID HSA	**CASE SIZE:** 2-inch	**SCREEN INT..** 2'-12'	**PROTECTION LEVEL.** D
TOC ELEV.: 99.23 FEET	**MONITOR INST.:** OVA	**TOT DPTH.** 12 FEET	**DPTH TO ▽** 1 67 FEET
LOGGED BY: P Wagner	**WELL DEVELOPMENT DATE:** 3/17/95		**SITE:** 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					3" layer of concrete				
					FILL reddish brown sandy clay		CL ML		
5					SAND light gray, very fine- to fine-grained, moderately sorted, petroleum odor				
10									
15									
20									

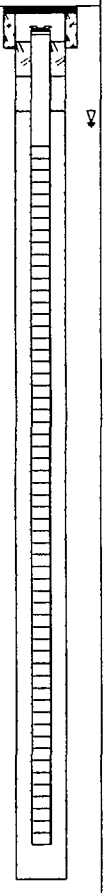


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE. NADEP Pensacola AVGAS Pipeline		**LOG of WELL.** 1QG004	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO:** CTO 8
CONTRACTOR: Groundwater Protection, Inc		**DATE STARTED:** 3/17/95	**COMPLTD:** 3/17/95
METHOD: 4 25" ID HSA	**CASE SIZE.** 2-inch	**SCREEN INT.:** 2'-12'	**PROTECTION LEVEL.** D
TOC ELEV.: 99.72 FEET.	**MONITOR INST.:** OVA	**TOT DPTH:** 12 FEET	**DPTH TO ▽** 2 12 FEET
LOGGED BY: P Wagner	**WELL DEVELOPMENT DATE.** 3/17/95		**SITE.** 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					3" layer of concrete.		CL		
					FILL reddish brown sandy clay.		ML		
5					SAND light gray, very fine- to fine-grained, moderately to well sorted				
10									
15									
20									

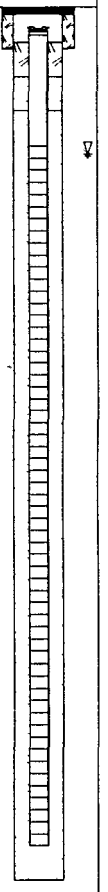


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline		LOG of WELL: 1QG005	BORING NO. NA
CLIENT. SOUTHNAVFACENGCOM			PROJECT NO: CTO 8
CONTRACTOR: Groundwater Protection, Inc.		DATE STARTED: 3/17/95	COMPLTD. 3/17/95
METHOD: 4 25" ID HSA	CASE SIZE: 2-inch	SCREEN INT.: 2'-12'	PROTECTION LEVEL: D
TOC ELEV.: 99.71 FEET	MONITOR INST.: OVA	TOT DPTH: 12 FEET	DPTH TO ▽ 2 18 FEET
LOGGED BY: P Wagner	WELL DEVELOPMENT DATE: 3/17/95		SITE. 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					3" layer of concrete		ML		
5					SAND light gray to pale orange, fine-grained, well sorted				
10									
15									
20									

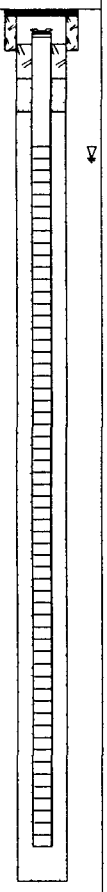


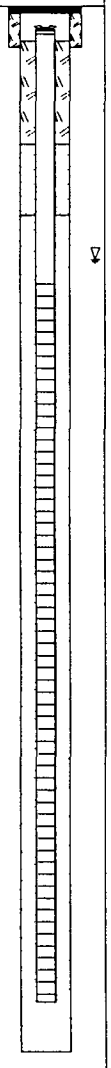
 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline	**LOG of WELL:** 1QG001R	**BORING NO.** NA
CLIENT. SOUTHNAVFACENGCOM		**PROJECT NO.** CTO 8
CONTRACTOR. Custom Drilling Services	**DATE STARTED:** 10/20/97	**COMPLTD:** 10/20/97
METHOD. 4 25" ID HSA	**CASE SIZE:** 2-inch	**SCREEN INT.:** 4'-14 16'	**PROTECTION LEVEL.** D
TOC ELEV.. 100 00 FT	**MONITOR INST.:** OVA	**TOT DPTH.** 14 16FT	**DPTH TO ▽** 4 09 FT
LOGGED BY: B Svendsen	**WELL DEVELOPMENT DATE:** 10/21/97	**SITE·** 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		FILL		
1					Grass				
2				<1	FILL sand, clay, concrete and asphalt gravel		SP		
3									
4					SAND light gray to orange-brown, fine- to medium-grained, some organic material, dry				▽
5									
6									
7									
					SAND light gray, fine- to medium-grained, saturated, petroluem-like odor				
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

TITLE: NADEP Pensacola AVGAS Pipeline	LOG of WELL. 1QG006	BORING NO. NA
CLIENT. SOUTHNAVFACENGCOM		PROJECT NO. CTO 8
CONTRACTOR Custom Drilling Services	DATE STARTED. 10/20/97	COMPLTD 10/20/97
METHOD. 4 25" ID HSA	CASE SIZE: 2-inch	SCREEN INT.. 4'-14 29'	PROTECTION LEVEL. D
TOC ELEV.. 99 54 FT	MONITOR INST.: OVA	TOT DPTH. 14 29FT	DPTH TO ∇ 3 65 FT
LOGGED BY. B Svendsen	WELL DEVELOPMENT DATE: 10/21/97	SITE. 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		FILL		
1					Grass				
2				<1	FILL fine-grained sand, clay, asphalt and concrete gravel, dry		SP		
3									
4									
5									
6									
7									
8					SAND light gray, fine- to medium-grained, saturated				
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									



TITLE. NADEP Pensacola AVGAS Pipeline	LOG of WELL. 1QG007	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO. CTO 8
CONTRACTOR: Custom Drilling Services	DATE STARTED: 10/20/97	COMPLTD. 10/20/97
METHOD. 4 25" ID HSA	CASE SIZE. 2-inch	SCREEN INT.: 4'-13 96'	PROTECTION LEVEL. D
TOC ELEV.. 100 84 FT	MONITOR INST.: OVA	TOT DPTH. 13 96FT	DPTH TO ▽ 4 89 FT
LOGGED BY: B Svendsen	WELL DEVELOPMENT DATE: 10/21/97	SITE. 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		SP		
1					Grass				
2				<1	SAND reddish brown, fine- to medium-grained, dry				
3									
4									
5									
6									
7									
8					SAND very pale orange to reddish brown, fine- to medium-grained, petroleum-like odor, moist to saturated				
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

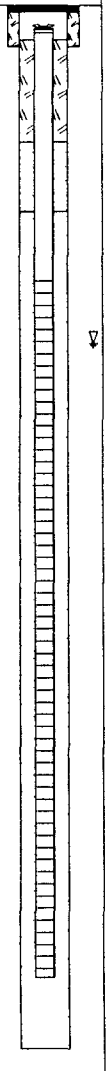


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE. NADEP Pensacola AVGAS Pipeline		**LOG of WELL:** 1QG008	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO:** CTO 8
CONTRACTOR: Custom Drilling Services		**DATE STARTED.** 10/20/97	**COMPLTD:** 10/20/97
METHOD: 4 25" ID HSA	**CASE SIZE:** 2-inch	**SCREEN INT.:** 5'-14 99'	**PROTECTION LEVEL:** D
TOC ELEV.: 100 01 FT	**MONITOR INST.:** OVA	**TOT DPTH:** 14 99FT	**DPTH TO ▽** 4 09 FT
LOGGED BY: B Svendsen	**WELL DEVELOPMENT DATE:** 10/21/97		**SITE.** 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		FILL		
					Grass				
1									
					FILL: fine-grained sand, clay, concrete gravel and cobbles, dry				
2				<1			SP		
3									
4									▽
5									
6									
7									
					SAND light gray, fine- to medium-grained, saturated				
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE. NADEP Pensacola AVGAS Pipeline		LOG of WELL. 1QG009	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO. CTO 8
CONTRACTOR: Custom Drilling Services		DATE STARTED. 10/20/97	COMPLTD. 10/20/97
METHOD: 4 25" ID HSA	CASE SIZE. 2-inch	SCREEN INT.. 4'-14 23'	PROTECTION LEVEL: D
TOC ELEV.. 100 02 FT.	MONITOR INST.: OVA	TOT DPTH. 14 23FT	DPTH TO ▽ 4 14 FT
LOGGED BY: B Svendsen	WELL DEVELOPMENT DATE: 10/23/97		SITE: 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		FILL		
1					Grass				
2				<1	FILL: fine-grained sand, clay, asphalt gravel, concrete cobbles, dry		SP		
3					SAND light gray, very fine- to medium-grained, dry				
4									
5									
6									
7									
8					SAND: light gray, very fine- to medium-grained, saturated, strong petroleum-like odor				
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline	LOG of WELL. 1QG010		BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO. CTO 8
CONTRACTOR. Custom Drilling Services		DATE STARTED. 10/20/97	COMPLTD. 10/20/97
METHOD: 4 25" ID HSA	CASE SIZE. 2-inch	SCREEN INT.. 4'-14 36'	PROTECTION LEVEL: D
TOC ELEV.: 100 45 FT	MONITOR INST.: OVA	TOT DPTH. 14 36FT	DPTH TO ⊽ 4 59 FT
LOGGED BY. B Svendsen	WELL DEVELOPMENT DATE: 10/21/97		SITE. 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		FILL		
1					Grass				
2				<1	FILL fine-grained sand, clay, 1- to 2-inch layer of asphalt at 2 feet, bricks, concrete gravel, dry		SP		
3					SAND light gray, very fine- to medium-grained, dry				
4									
5									
6									
7									
8					SAND light gray, very fine- to medium-grained, saturated				
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline	LOG of WELL. 1QG011D		BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: CTO 8
CONTRACTOR: Custom Drilling Services		DATE STARTED. 10/21/97	COMPLTD. 10/22/97
METHOD. 4 25" HSA/Mud Rotary	CASE SIZE: 2- & 6-inch	SCREEN INT.: 22-27 FT	PROTECTION LEVEL. D
TOC ELEV.: 100 26 FT	MONITOR INST.. OVA	TOT DPTH. 27 42FT	DPTH TO ▽ 4 39 FT
LOGGED BY: P Wagner	WELL DEVELOPMENT DATE. 10/23/97		SITE· 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN
					Grass		FILL	
1								
2				<1	FILL clayey red sand, some gravel and concrete, dry			
3					SAND· fine-grained, well sorted, dry, light gray		SP	
4								
5					SAND fine-grained, well sorted, light gray to grayish orange, dry			10,12,10,11
6								
7					SAND fine-grained, well sorted, saturated, light gray, petroleum- like odor			14,18,20,22
8								
9					SAND fine-grained, well sorted, saturated, medium to light gray with trace black grains			16,17,15,17
10								
11					SAND fine-grained, well sorted, saturated, light gray, petroleum- like odor			9,18,19,16
12								
13					SAND same as previous spoon.			17,22,23,30
14								
15					SAND same as previous spoons			14,19,14,22
16								
17					SAND fine-grained, well sorted, medium gray, saturated, no petroleum odor			12,13,18,15
18								
19					SAND same as previous spoon			11,12,10,17
20								
21								
22					SAND· fine- to medium-grained, moderately well sorted, saturated, medium gray			5,5,7,7
23								
24					SAND same as previous spoon			4,7,18,24
25								
26								
27								
28								
29								
30								

WELL DATA

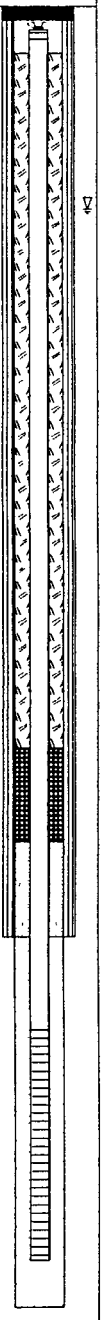


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline	LOG of WELL. 1QG012	BORING NO. NA
CLIENT. SOUTHNAVFACENGCOM		PROJECT NO. CTO 8
CONTRACTOR: Custom Drilling Services	DATE STARTED: 10/21/97	COMPLTD. 10/21/97
METHOD: 4 25" ID HSA	CASE SIZE: 2-inch	SCREEN INT.: 4'-13 91'	PROTECTION LEVEL: D
TOC ELEV.: 100 45 FT	MONITOR INST.. OVA	TOT DPTH. 13 91FT	DPTH TO ∇ 4 59 FT
LOGGED BY. P Wagner	WELL DEVELOPMENT DATE: 10/22/97	SITE: 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		SM		
1					Grass				
							SP		
2				<1	SILTY SAND 70% very fine- to fine-grained sand, ~20% silt, ~10% organic material, reddish brown, dry				
3									
4									
5									
6									
7									
8					SAND fine- to medium-grained, moderately sorted, dry to saturated, light gray				
9									
10									
11									
12									
13									
14									
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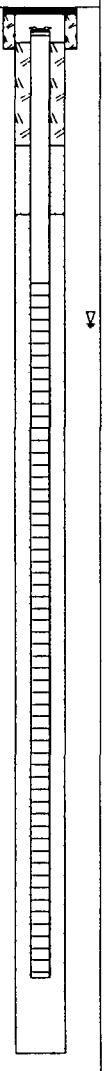
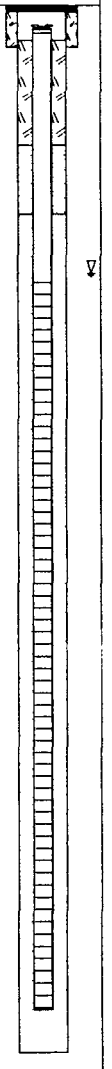
16									
17									
18									
19									
20									



TITLE. NADEP Pensacola AVGAS Pipeline		LOG of WELL. 1QG013	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO. CTO 8
CONTRACTOR: Custom Drilling Services		DATE STARTED 10/22/97	COMPLTD. 10/22/97
METHOD: 4 25" ID HSA	CASE SIZE. 2-inch	SCREEN INT.: 4'-14 38'	PROTECTION LEVEL. D
TOC ELEV.: 99 73 FT	MONITOR INST.: OVA	TOT DPTH. 14 38FT	DPTH TO ▽ 3 86 FT
LOGGED BY: P Wagner	WELL DEVELOPMENT DATE. 10/23/97		SITE: 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		SM		
					Grass		SP		
1					SILTY SAND 70% very fine- to fine-grained sand, ~20% silt, ~10% organic material, grayish brown, dry				
2				<1					
3									
4									
5									
6									
7									
					SAND fine-grained, well sorted, dry to saturated, very light gray				
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									



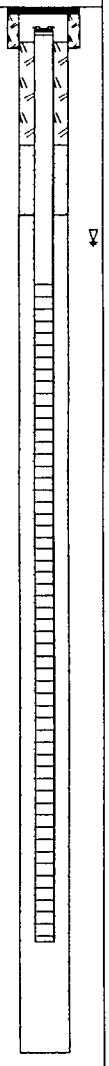
TITLE: NADEP Pensacola AVGAS Pipeline	LOG of WELL: 1QG014	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO. CTO 8
CONTRACTOR: Custom Drilling Services	DATE STARTED. 10/22/97	COMPLTD. 10/22/97
METHOD. 4 25" ID HSA	CASE SIZE: 2-inch	SCREEN INT.: 3'-13.56'	PROTECTION LEVEL. D
TOC ELEV.: 99.00 FT	MONITOR INST.: OVA	TOT DPTH: 13.56FT	DPTH TO ▽ 3 24 FT
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 10/23/97	SITE: 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		FILL		
1					ASPHALT				
					FILL: sand, gravel, clay				
2				<1			SP		
3									▽
4									
5									
6									
7									
8					SAND very fine- to fine-grained, moderately sorted, dry, light brown to light gray, swampy odor				
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

 ABB ENVIRONMENTAL SERVICES, INC.

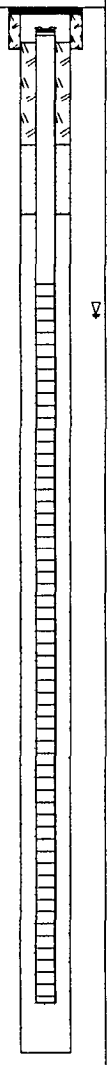
TITLE. NADEP Pensacola AVGAS Pipeline	LOG of WELL: 1QG015	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO. CTO 8
CONTRACTOR: Custom Drilling Services	DATE STARTED: 10/21/97	COMPLTD: 10/21/97
METHOD: 4 25" ID HSA	CASE SIZE: 2-inch	SCREEN INT.. 3'-13 40'	PROTECTION LEVEL. D
TOC ELEV.: 99 23 FT.	MONITOR INST.: OVA	TOT DPTH. 13 40FT.	DPTH TO ▽ 3 40 FT
LOGGED BY: B Svendsen	WELL DEVELOPMENT DATE: 10/22/97	SITE. 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		FILL		
1					ASPHALT				
2				<1	FILL 10% clay, 90% sand, mottled light gray and reddish brown				
3									
4							SP		
5									
6									
7									
8					SAND fine- to medium-grained, moderately sorted, moist to saturated, light gray				
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									



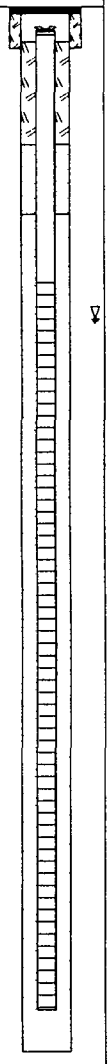
TITLE: NADEP Pensacola AVGAS Pipeline		LOG of WELL: 1QG016	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: CTO 8
CONTRACTOR. Custom Drilling Services		DATE STARTED. 10/21/97	COMPLTD. 10/21/97
METHOD. 4 25" ID HSA	CASE SIZE. 2-inch	SCREEN INT.. 4'-14 27'	PROTECTION LEVEL. D
TOC ELEV.: 100 25 FT	MONITOR INST.. OVA	TOT DPTH. 14 27FT	DPTH TO ▽ 4 43 FT
LOGGED BY: P Wagner	WELL DEVELOPMENT DATE: 10/22/97		SITE: 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		SM		
1					Grass				
2				<1	SILTY SAND 70% fine- to medium-grained sand, ~20% silt, ~10% organic material, light gray, dry		SP		
3									
4									
5									
6									
7									
8					SAND fine- to medium-grained, moderately well sorted, dry to saturated, light gray				
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									



TITLE. NADEP Pensacola AVGAS Pipeline	LOG of WELL: 1QG017	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO: CTO 8
CONTRACTOR. Custom Drilling Services	DATE STARTED. 10/20/97	COMPLTD 10/20/97
METHOD: 4 25" ID HSA	CASE SIZE. 2-inch	SCREEN INT.. 4'-14 39'	PROTECTION LEVEL. D
TOC ELEV.: 100 35 FT	MONITOR INST.: OVA	TOT DPTH: 14 39FT	DPTH TO ∇ 4 53 FT
LOGGED BY: B Svendsen	WELL DEVELOPMENT DATE. 10/23/97	SITE: 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		FILL		
1					Grass				
2				<1	FILL: sand, clay, asphalt and concrete gravel, dry		SP		
3									
4									
5									
6									
7									
8					SAND very fine- to medium-grained, poor to moderate sort, dry to saturated, light to medium gray				
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									



TITLE: NADEP Pensacola AVGAS Pipeline	LOG of WELL: 1QG018	BORING NO NA
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO: CTO 8
CONTRACTOR: Custom Drilling Services	DATE STARTED: 10/23/97	COMPLTD· 10/23/97
METHOD: 4.25" ID HSA	CASE SIZE: 2-inch	SCREEN INT.. 4'-14 36'	PROTECTION LEVEL. D
TOC ELEV.: 99 41 FT	MONITOR INST.: OVA	TOT DPTH. 14 36FT	DPTH TO ∇ 3 59 FT
LOGGED BY. P Wagner	WELL DEVELOPMENT DATE: 10/23/97	SITE. 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		FILL		
1					ASPHALT				
2				<1	FILL· clayey sand, gravel, dry		SP		
3					SAND fine-grained, well sorted, dry, brown becoming light gray				∇
4									
5									
6									
7									
8					SAND fine-grained, well sorted, saturated, very light gray				
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline	**LOG of WELL:** 1QG019	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM		**PROJECT NO.** CTO 8
CONTRACTOR: Custom Drilling Services	**DATE STARTED:** 10/21/97	**COMPLTD** 10/21/97
METHOD. 4 25" ID HSA	**CASE SIZE:** 2-inch	**SCREEN INT.:** 4'-14 59'	**PROTECTION LEVEL.** D
TOC ELEV.: FT	**MONITOR INST.:** OVA	**TOT DPTH:** 14 59FT	**DPTH TO ▽** 4 78 FT
LOGGED BY: B Svendsen	**WELL DEVELOPMENT DATE:** 10/22/97	**SITE.** 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		FILL		
					Grass				
1					FILL asphalt and concrete gravel, sand, clay, dry		SP		
2				<1					
3									
4									
5									
6									
7									
8					SAND fine- to medium-grained, moist to saturated, light gray to pale oragne to reddish brown.				
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

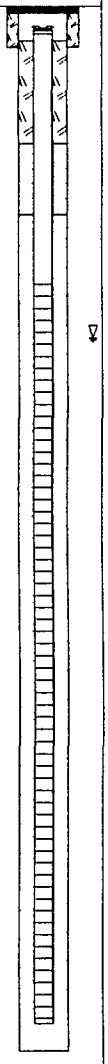


 ABB ENVIRONMENTAL SERVICES, INC.

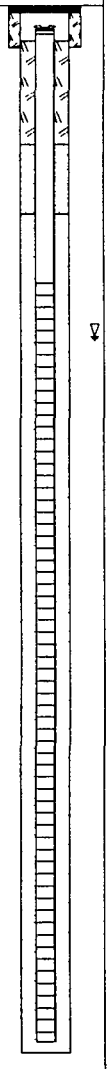
TITLE: NADEP Pensacola AVGAS Pipeline	LOG of WELL. 1GG020	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO. CTO 8
CONTRACTOR: Custom Drilling Services	DATE STARTED. 10/21/97	COMPLTD 10/21/97
METHOD. 4 25" ID HSA	CASE SIZE: 2-inch	SCREEN INT.: 4'-14.29'	PROTECTION LEVEL: D
TOC ELEV.: 99.79 FT	MONITOR INST.: OVA	TOT DPTH: 14 29FT	DPTH TO ▽ 3 97 FT
LOGGED BY: B Svendsen	WELL DEVELOPMENT DATE. 10/22/97	SITE: 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		FILL		
					Grass				
1					FILL asphalt gravel, sand, clay, dry		SP		
2				<1					
3					SAND light gray to reddish brown, fine- to medium-grained, dry				
4									▽
5									
6									
7									
8					SAND fine-grained, well sorted, moist to saturated, light gray				
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE. NADEP Pensacola AVGAS Pipeline	**LOG of WELL.** 1QG021	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM		**PROJECT NO:** CTO 8
CONTRACTOR: Custom Drilling Services	**DATE STARTED.** 10/28/97	**COMPLTD:** 10/28/97
METHOD. 4.25" ID HSA	**CASE SIZE.** 2-inch	**SCREEN INT.:** 4'-14 83'	**PROTECTION LEVEL.** D
TOC ELEV.: 100 63 FT	**MONITOR INST.:** OVA	**TOT DPTH:** 14 83FT	**DPTH TO ▽** 4 78 FT
LOGGED BY. P Wagner	**WELL DEVELOPMENT DATE.** 10/28/97	**SITE.** 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		SM		
1					Grass				
					SILTY SAND 30% silt, 70% fine-grained sand, organic, reddish brown, dry				
2				<1	ASPHALT		SP		
3									
4									
5									
6									
7									
8					SAND fine-grained, well sorted, dry to saturated, medium gray				
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									



TITLE. NADEP Pensacola AVGAS Pipeline	LOG of WELL: 1QG022	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO. CTO 8
CONTRACTOR. Custom Drilling Services	DATE STARTED. 10/28/97	COMPLTD. 10/28/97
METHOD. 4 25" ID HSA	CASE SIZE: 2-inch	SCREEN INT.. 4'-14'	PROTECTION LEVEL: D
TOC ELEV.: 100 39 FT	MONITOR INST.: OVA	TOT DPTH: 14 15FT	DPTH TO ▽ 4.56 FT
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 10/28/97	SITE. 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		SM		
1					Grass				
					SILTY SAND 50% silt, 50% fine-grained sand, organic, dark brown, dry		SP		
2				<1	ASPHALT				
3									
4									
5									
6									
7									
					SAND: fine-grained, well sorted, dry to saturated, light gray				
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

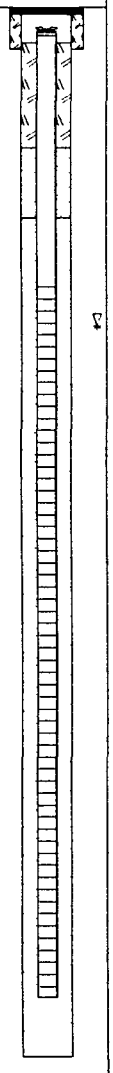
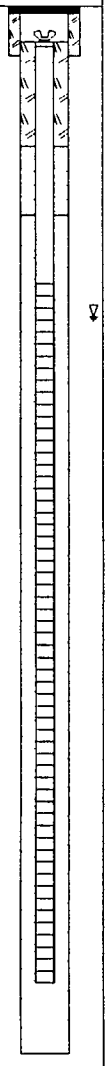


 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola AVGAS Pipeline	**LOG of WELL:** 1QG023	**BORING NO.** NA
CLIENT: SOUTHNAVFACENGCOM		**PROJECT NO:** CTO 8
CONTRACTOR: Custom Drilling Services	**DATE STARTED:** 10/28/97	**COMPLTD:** 10/28/97
METHOD: 4 25" ID HSA	**CASE SIZE:** 2-inch	**SCREEN INT.:** 4'-14'	**PROTECTION LEVEL:** D
TOC ELEV.: 100.27 FT	**MONITOR INST.:** OVA	**TOT DPTH.** 14 22FT	**DPTH TO ▽** 4 48 FT
LOGGED BY: P Wagner	**WELL DEVELOPMENT DATE.** 10/28/97	**SITE.** 1Q

DEPTH FT	LABORATORY SAMPLE ID	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					POSTHOLE		FILL		
1					ASPHALT				
2				<1	FILL 60% clay, 40% sand and asphalt gravel, red, dry		SP		
3									
4									
5									
6									
7					SAND fine-grained, well sorted, dry to saturated, very light gray				
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									



APPENDIX C

AQUIFER PARAMETER CALCULATIONS

Slug Test Procedures

The slug test developed by Bouwer and Rice (1976) measures the saturated hydraulic conductivity (K) using a single well. The test method used is termed a "rising head" test and is performed by quickly withdrawing a volume of water (slug) from the well and measuring the subsequent rate of the rising water level in the well. Bouwer (1989) recommends the rising-head slug test for wells with screened intervals that are only partially submerged or partially penetrate unconfined aquifers.

The slug was constructed of 1.25-inch outside diameter solid stainless-steel cylinder, 2 feet in length. The water-level changes in the monitoring wells were recorded using a data logger and pressure transducer. The pressure transducer was suspended less than 1 foot above the bottom of the well, and an initial water level was recorded prior to beginning the test. The slug was then lowered into the well to a depth below the original water table. Water levels were then observed until they stabilized at the original level. Following stabilization, the slug was quickly removed and water-level measurements were recorded over time until the water level returned to the original level. Three rising head tests were conducted for each well in order to obtain an average recovery response. Due to operator error, however, data collected from Run #1 for monitoring well 08G011 was incomplete.

Hydraulic gradient

Water table elevations were plotted on a map of the site. A water table contour map was drawn with flow lines (depicting groundwater flow direction) perpendicular to the groundwater elevation contours. The average groundwater hydraulic gradient was calculated by subtracting the differences in groundwater elevation (in feet) between two points on the map and dividing the elevation difference by the distance between the two points to obtain a resulting gradient in feet per foot. Water elevation data collected on May 16, 1995, were used to calculate hydraulic gradients at the site. For each date, three traverses were made perpendicular to equipotential contour lines to calculate an average site hydraulic gradient. For each traverse, the hydraulic gradient was calculated as follows:

$$i = \frac{(h_1 - h_2)}{d} \qquad (1)$$

where

- i = hydraulic gradient (feet per foot [ft/ft]),
- h_1 = water table elevation, upgradient (feet),
- h_2 = water table elevation, downgradient (feet), and
- d = horizontal distance (feet) between h_1 and h_2 along a flow line.

Hydraulic gradients calculated in this manner varied from 1.3×10^{-3} ft/ft to 1.8×10^{-3} ft/ft in May 1995, from 2.5×10^{-4} ft/ft to 6.2×10^{-4} ft/ft in October 1997, and from 6.2×10^{-4} ft/ft to 1.2×10^{-3} ft/ft in November 1997. The average hydraulic gradient at the site was calculated to be 9.3×10^{-4} ft/ft.

Hydraulic conductivity

Hydraulic conductivity from slug test data was calculated following the methods of Bouwer and Rice (1976) and Bouwer (1989) for partially penetrating wells screened in unconfined aquifers. The following well information is needed to assess the hydraulic conductivity.

- radius of well casing (r_c);
- r_w = radius of borehole (r_c plus radius of the sand pack surrounding the well screen);
- length of screened interval below the water table (L_e);
- effective well radius (r_e);
- depth of well below the water table (L_w);
- depth to confining unit or bottom of aquifer below the static water table (H); and
- plot of time versus the logarithm of y, where y is the difference between the static water level outside the well and the water level inside the well.

Figure C-1 is a well diagram depicting most of the aquifer and well parameters. Calculations were made assuming that $L_w < H$. Hydraulic conductivity, K, was calculated as follows:

$$K = [R_c^2 \ln(\frac{r_e}{r_w}) - 2L_e] \; [\frac{1}{t} \ln(\frac{y_o}{y_t})] \qquad (2)$$

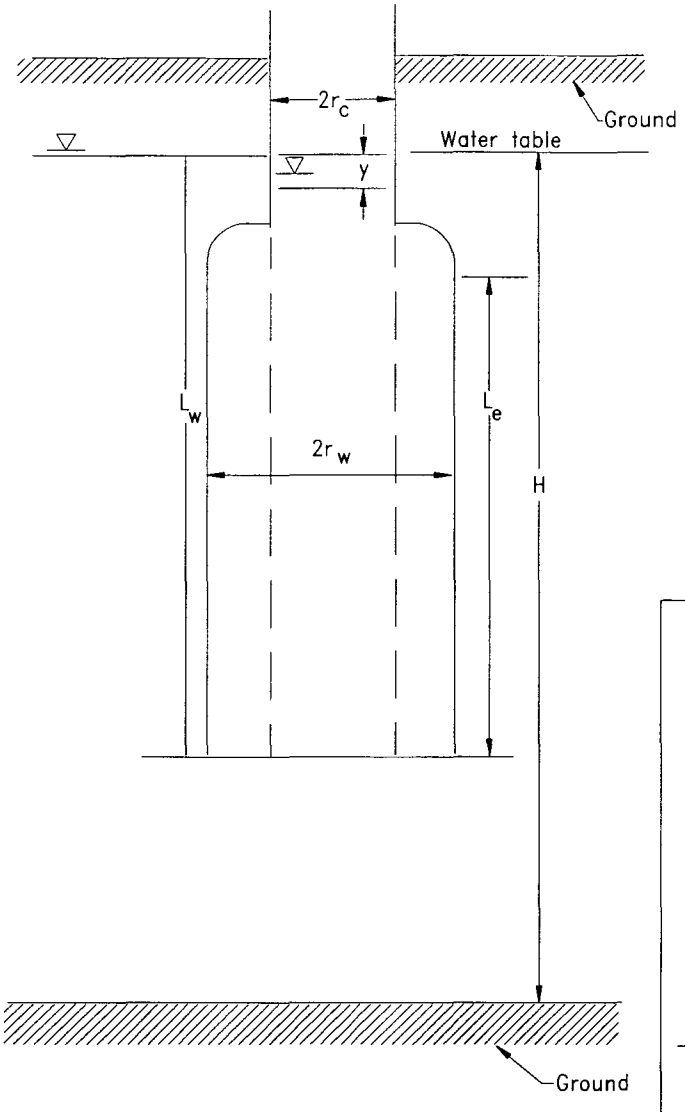
where

y_0 = y at time zero, and
y_t = y at time t.

The effective well radius, r_e, and the term $[(1/t)\ln(y_0/y_t)]$ were derived by using the computer program AQTESOLV™ (Geraghty & Miller, Inc., 1989). This computer program follows procedures and assumptions outlined by Bouwer (1989).

Slug test graphs are attached at the end of this appendix. Values of y were calculated for a particular time, t, and plotted on the graph. The computer program selects a "best-fit" line through the data points by linear regression along a "straight-line" portion of the graph. The slope of the "best-fit" line is used to calculate the hydraulic conductivity, K.

Three slug tests each were performed inside monitoring wells 08G009 and 08G011. Hydraulic conductivity, K, is reported in feet per minute (ft/min) on the slug test graphs, and was recalculated to feet per day (ft/day). K was found to vary from 26.4 ft/day to 28.2 ft/day with an average K of 27.3 ft/day.



LEGEND

r_c	Radius of well
r_w	Radius of well + total thickness of the sand/gravel pack.
L_e	Length of screened interval below the water table.
H	Depth to confining unit below the water table
y	Difference between static water level outside well and water level inside well.
▽	Water table
NADEP	Naval aviation depot
UST	Underground storage tank

Not to scale

FIGURE C-1
DEFINITIONS OF SLUG TEST PARAMETERS

02502532.DWG NAB- 01/20/98 17 09 04 AutoCAD R12

CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 1Q

NADEP PENSACOLA
PENSACOLA, FLORIDA

Average pore water velocity

Estimates of average pore water velocity were obtained using the following formula:

$$V = \frac{(K*i)}{n} \tag{3}$$

where

V = seepage velocity in ft/day,
K = hydraulic conductivity in ft/day,
i = hydraulic gradient, and
n = estimated porosity.

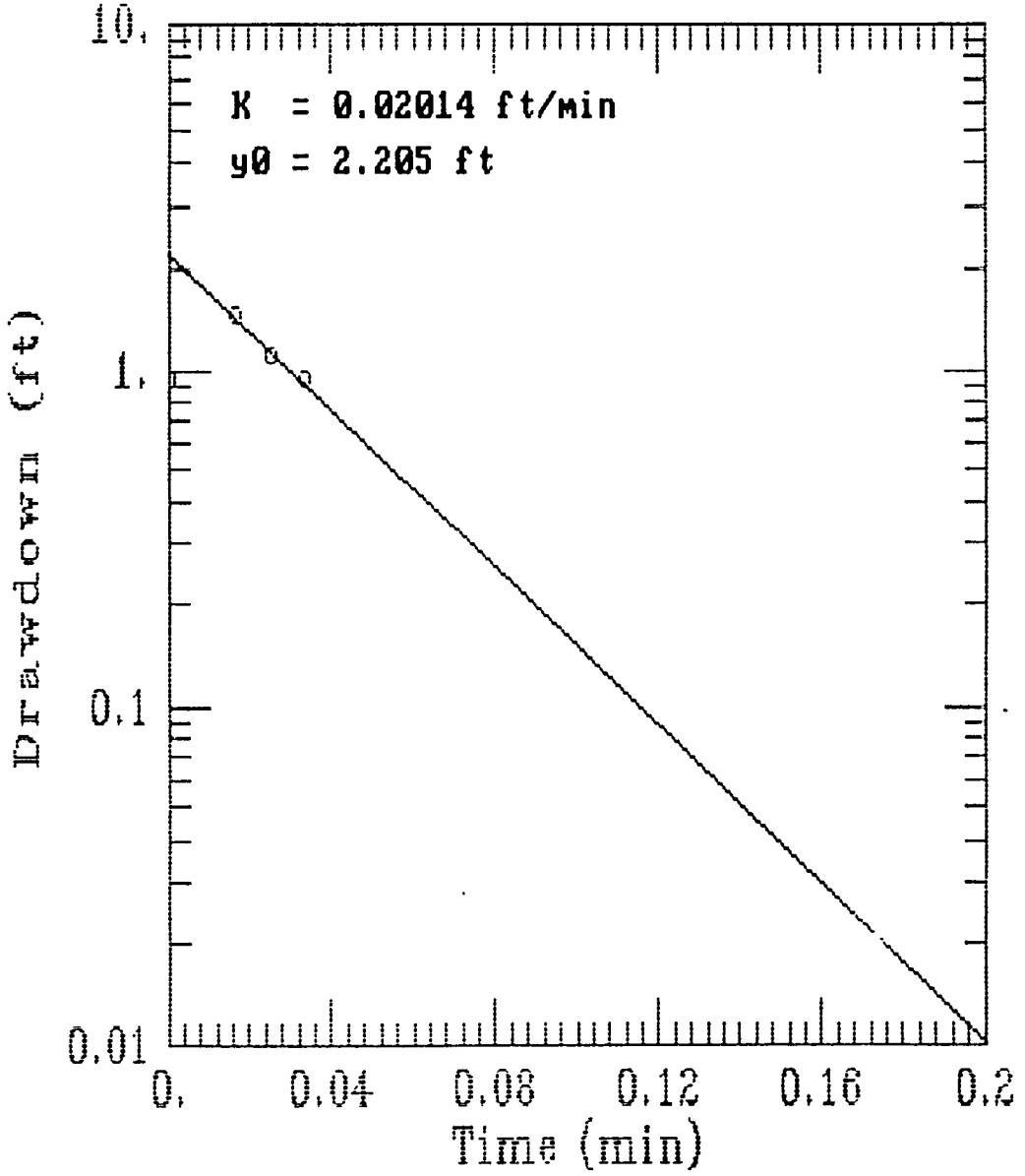
Porosities of unconsolidated sands range from 25 to 50 percent (Freeze and Cherry, 1979). Using an estimated porosity (n) of 25 percent, an average hydraulic gradient of 9.3×10^{-4} ft/ft, and an average hydraulic conductivity of 27.3 ft/day, the average pore water velocity is calculated as follows:

$$V = \frac{(5.20\times10^{1}\ ft/day)\ (0.0062\ ft/ft)}{0.25} \tag{4}$$

$$V = 1.28\ ft/day \tag{5}$$

SLUG TEST PLOTS

Site 8, 08G009 Run #1



AQTESOLV

GERAGHTY & MILLER, INC.

Modeling Group

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A Q T E S O L V   R E S U L T S
Version 1.10

08/22/95 12:30:20

==

TEST DESCRIPTION

Data set........... a:8g09r2.set
Data set title..... Site 8, 08G009 Run #2

Knowns and Constants:
No. of data points.................. 3
Radius of well casing............... 0.08
Radius of well...................... 0.33
Aquifer saturated thickness......... 10
Well screen length.................. 10
Static height of water in well...... 9
Log(Re/Rw).......................... 2.335
A, B, C............................. 2.453, 0.399, 0.000

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.5486E-002
y0 =	1.0551E-279

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

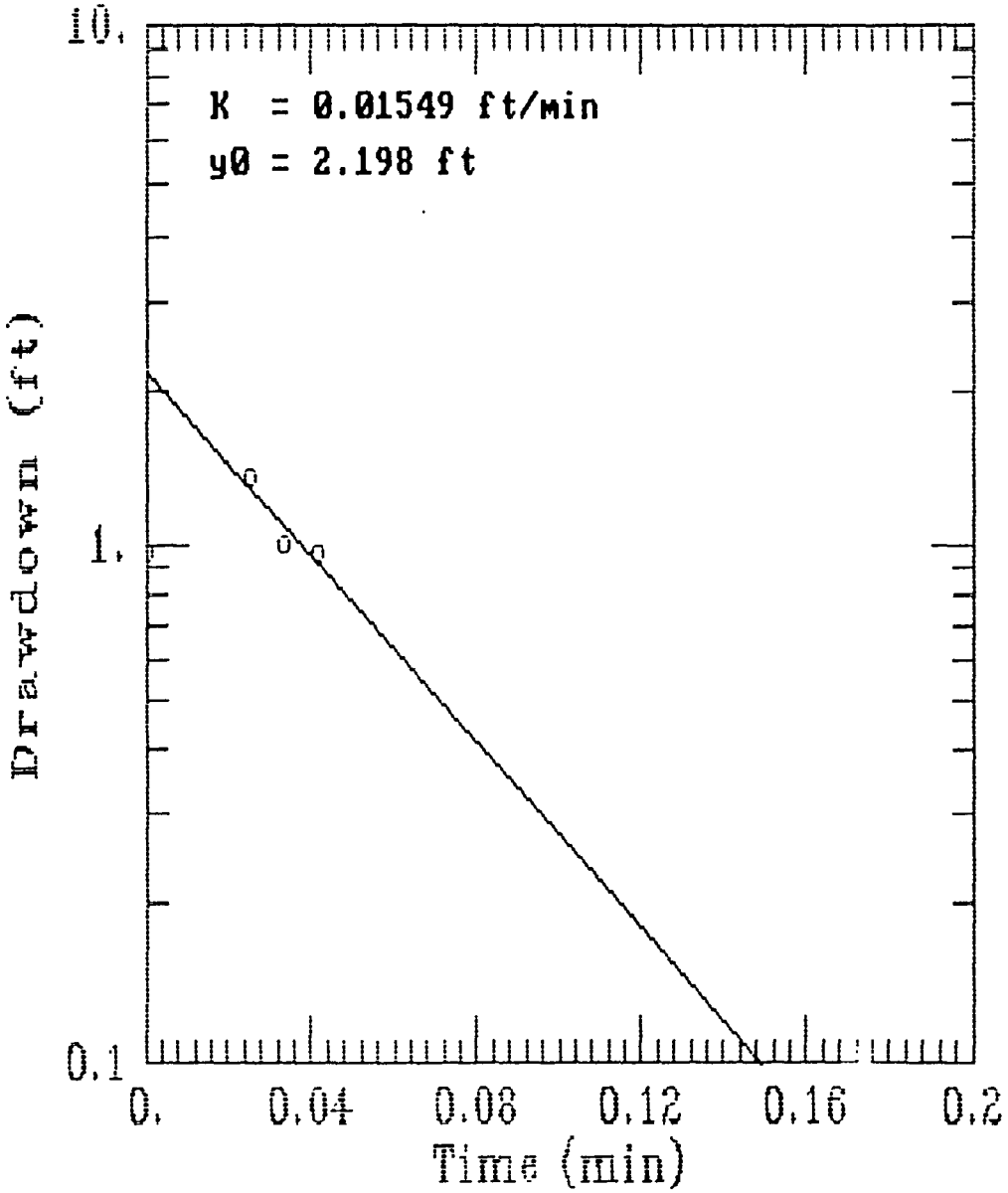
K = 1.54860E-002
y0 = 2.19754E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	2.198E+000	2.000E-001	3.480E-002		

TYPE CURVE DATA

K = 1.54860E-002
y0 = 2.197

Site 8, 08G009 Run #2



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Version 1.10

08/22/95 12:57:41

==

TEST DESCRIPTION

Data set........... A:8g09r3.set
Data set title..... Site 8, 08G009 Run #3

Knowns and Constants:
No. of data points.................. 3
Radius of well casing............... 0.08
Radius of well...................... 0.33
Aquifer saturated thickness......... 10
Well screen length.................. 10
Static height of water in well...... 9
Log(Re/Rw).......................... 2.335
A, B, C............................. 2.453, 0.399, 0.000

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	2.3674E-002
y0 =	1.0551E-279

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

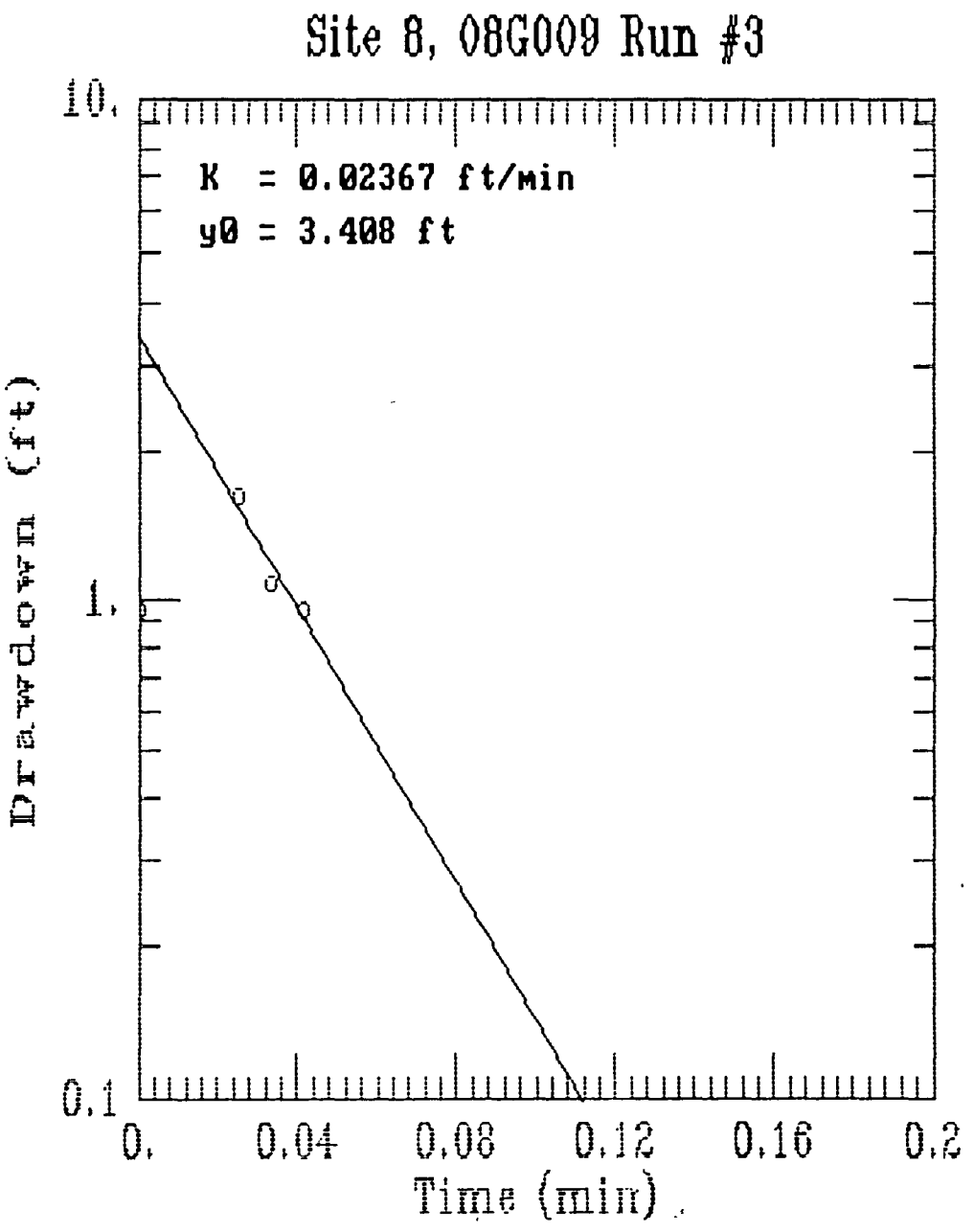
TYPE CURVE DATA

K = 2.36743E-002
y0 = 3.40782E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	3.408E+000	2.000E-001	6.029E-003		

TYPE CURVE DATA

K = 2.36743E-002
y0 = 3.407



AQTESOLV

GERAGHTY & MILLER, INC.

Modeling Group

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A Q T E S O L V   R E S U L T S
Version 1.10

08/22/95 09:36:29

==

TEST DESCRIPTION

Data set........... A:8g11r2.set
Data set title..... Site 8, 08G011 Run #2

Knowns and Constants:
No. of data points.................. 3
Radius of well casing............... 0.08
Radius of well...................... 0.33
Aquifer saturated thickness......... 10
Well screen length.................. 10
Static height of water in well...... 7.834
Log(Re/Rw).......................... 2.207
A, B, C............................. 2.453, 0.399, 0.000

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	2.0361E-002
y0 =	1.0551E-279

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

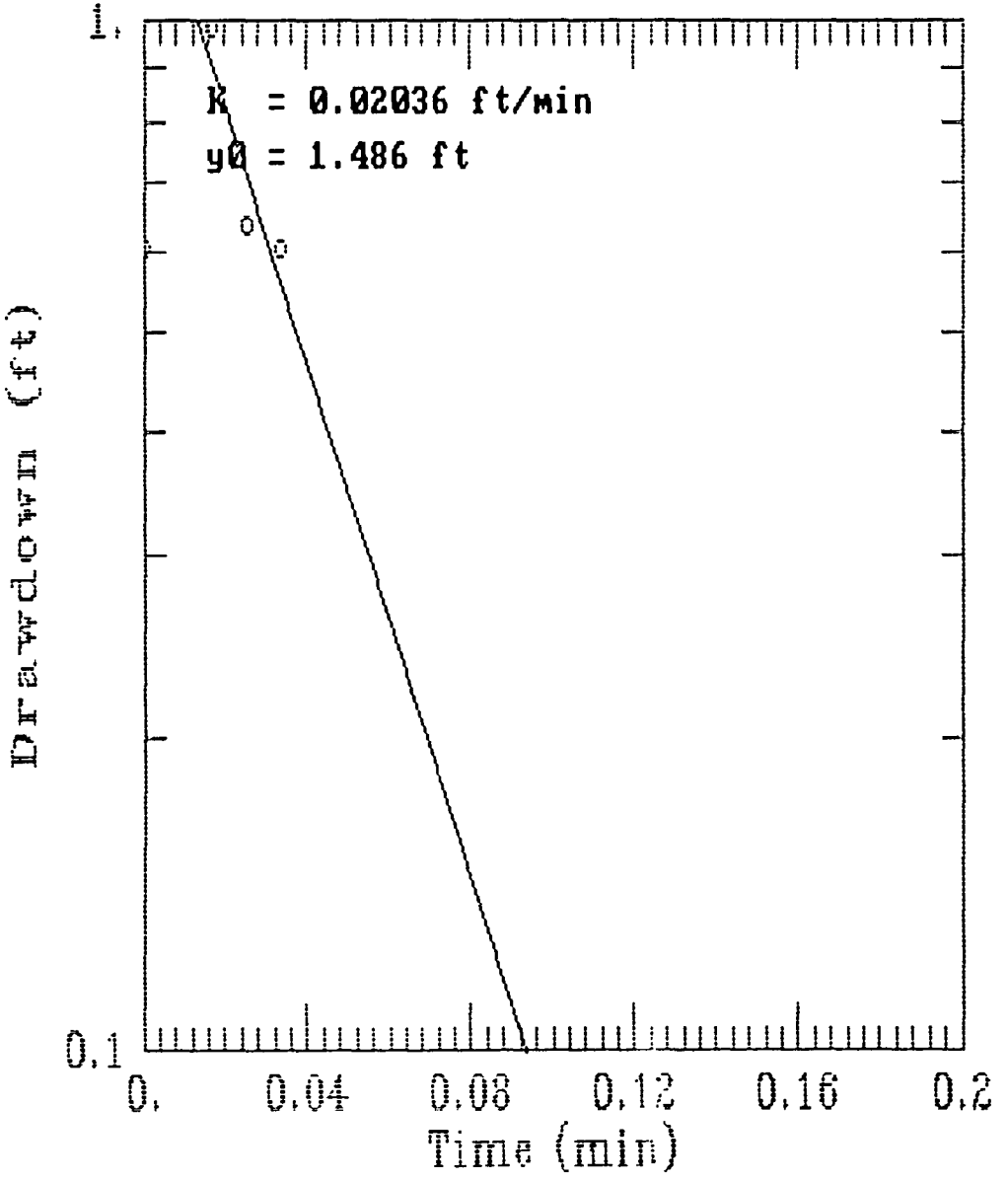
K = 2.03614E-002
y0 = 1.48621E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.486E+000	2.000E-001	4.657E-003		

TYPE CURVE DATA

K = 2.03614E-002
y0 = 1.486

Site 8, 08G011 Run #2



AQTESOLV

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A Q T E S O L V   R E S U L T S
Version 1.10

08/22/95 10:09:30

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TEST DESCRIPTION

Data set........... a:8g11r3.set
Data set title..... Site 8, 08G011 Run #3

Knowns and Constants:
No. of data points.................. 4
Radius of well casing............... 0.08
Radius of well...................... 0.33
Aquifer saturated thickness......... 10
Well screen length.................. 10
Static height of water in well...... 7.834
Log(Re/Rw).......................... 2.207
A, B, C............................. 2.453, 0.399, 0.000

==

ANALYTICAL METHOD

Bouwer-Rice (Unconfined Aquifer Slug Test)

==

RESULTS FROM VISUAL CURVE MATCHING

VISUAL MATCH PARAMETER ESTIMATES

	Estimate
K =	1.9803E-002
y0 =	1.0551E-279

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<>>

TYPE CURVE DATA

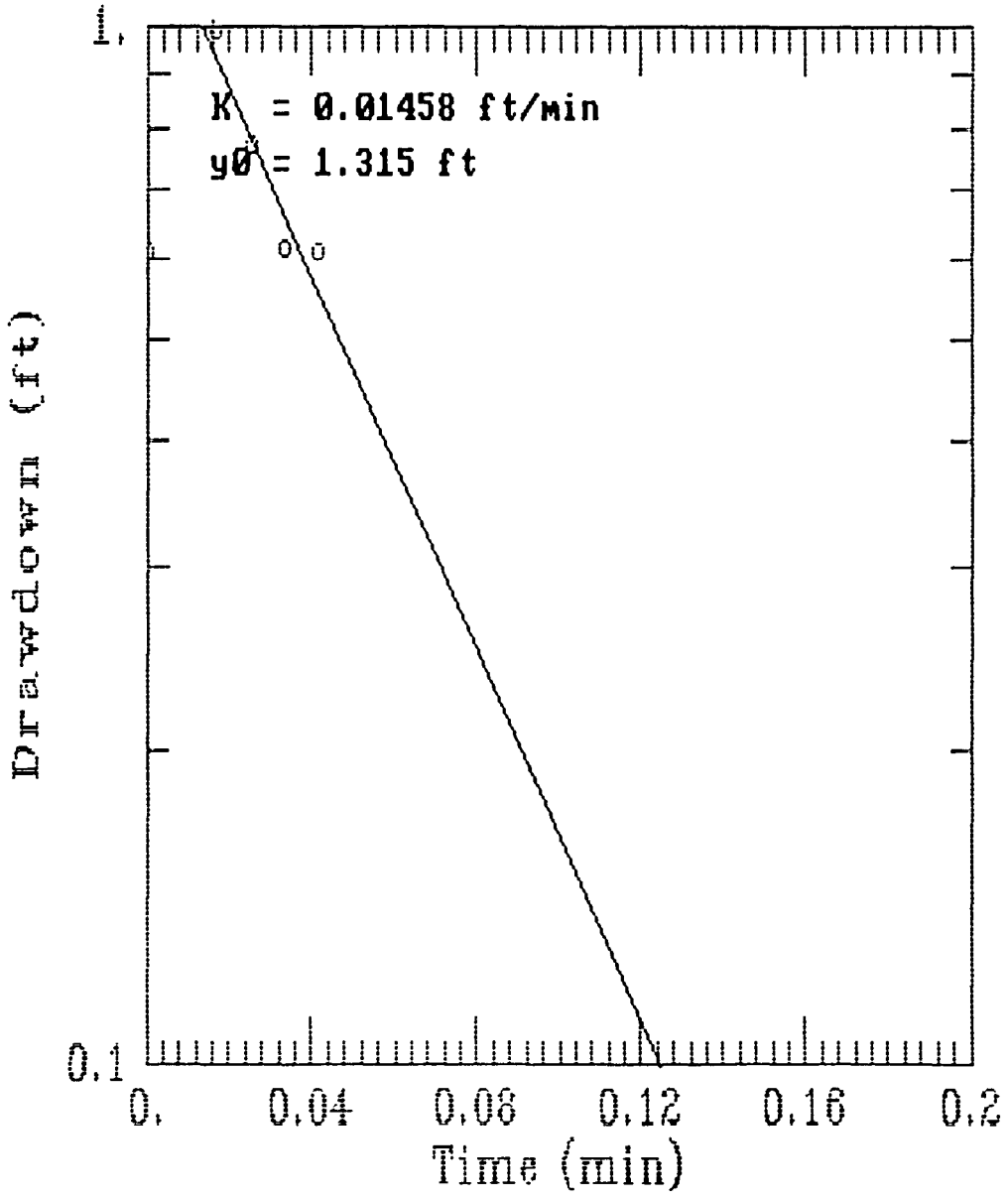
K = 1.45844E-002
y0 = 1.31488E+000

Time	Drawdown	Time	Drawdown	Time	Drawdown
0.000E+000	1.315E+000	2.000E-001	2.115E-002		

TYPE CURVE DATA

K = 1.45844E-002
y0 = 1.314

Site 8, 08G011 Run #3



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Modeling Group

APPENDIX D

WATER SAMPLING LOGS

DEP Form # 62-770 900(3)
Form Title Petroleum or Petroleum Products Water Sampling Log
Effective Date

Petroleum or Petroleum Products Water Sampling Log

DEP FACILITY NO.:	WELL NO.: 1QG001R	SAMPLE ID: 1QG001R01	DATE: 10/28/97
SITE NAME: Site 1Q		SITE LOCATION: NAS Pensacola	

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 14.16	DEPTH TO WATER (ft): 4.03	WELL CAPACITY (gal/ft): 0.163

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (–) x =

PURGE METHOD: Low Flow/Peristaltic Pump	PURGING INITIATED AT: 1010		PURGING ENDED AT: 1040
	PURGE RATE (gpm):		TOTAL VOLUME PURGED (gal): 7

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	~~OTHER~~ Turbidity
0	0	6.83	23	500	~~Clear~~ Metallic Tint/Black			
	4	6.83	23	500	Same			
	7	6.77	22	500	Same			54.7
					Note: Due to turbidity, an unpreserved lab filtered Lead sample will be collected in addition to an unfiltered preserved Lead.			

SAMPLING DATA

SAMPLED BY / AFFILIATION: B Sandgren		SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): Low Flow (Lead), Teflon bailer		SAMPLING INITIATED AT: 1450	SAMPLING ENDED AT: 1505
FIELD DECONTAMINATION: Y X	FIELD-FILTERED: Y X		DUPLICATE: Y X

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
	HDP	~~240 ml~~ 8 oz	HNO_3	240 ml or 8 oz		Lead unfiltered
	HDP	~~240 ml~~ 8 oz	None	240 ml or 8 oz		Lead (lab) filtered
	AG	2 40 ml	HCL	2, 40 ml		EDB
	AG	2, 40 ml	HCL	2, 40 ml		601/602
	AG	1 L	none	~~1 L~~ 1000 ml		610
	AG	1 L	HCL	~~1 L~~ 1000 ml		FL-Pro

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

FLORIDA

DEP Form # 62-770.900(3)
Form Title Petroleum or Petroleum Products Water Sampling Log
Effective Date

Petroleum or Petroleum Products Water Sampling Log

DEP FACILITY NO.:	WELL NO.: IQG006	SAMPLE ID: IQG00601	DATE: 10 29 97
SITE NAME: Site 1Q		SITE LOCATION: NAS Pensacola	

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 14.29	DEPTH TO WATER (ft): 3.60	WELL CAPACITY (gal/ft): 0.163

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (–) x =

PURGE METHOD: Low Flow/peristaltic	PURGING INITIATED AT: 1140	PURGING ENDED AT: 1208
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal):

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	~~OTHER~~ Turbidity
0	0	6.97	21	485				11.00
	3	6.97	22	485				1.10
	5	6.99	22	485				1.20

SAMPLING DATA

SAMPLED BY / AFFILIATION	SAMPLER(S) SIGNATURE(S)	
SAMPLING METHOD(S):	SAMPLING INITIATED AT: ~~1214~~ 1208	SAMPLING ENDED AT: 1218
FIELD DECONTAMINATION: Y N	FIELD-FILTERED: Y N	DUPLICATE: Y N

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

DEP Form # 62-770.900(3)
Form Title Petroleum or Petroleum Products Water Sampling Log
Effective Date _____

Petroleum or Petroleum Products Water Sampling Log

DEP FACILITY NO.:	WELL NO.: 1QG007	SAMPLE ID: 1QG007 01	DATE: 10/29/97
SITE NAME:	SITE LOCATION: NAS Pensacola		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 13.96	DEPTH TO WATER (ft): 4.80	WELL CAPACITY (gal/ft): 0.163

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (–) x =

PURGE METHOD: Low Flow/Peristaltic Pump	PURGING INITIATED AT: 0849	PURGING ENDED AT: 911
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal):

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	~~OTHER~~ Turbidity
0	0	7.70	17	450	Clear			11.92
	2	7.06	20	475	Clear			4.34
	4	7.00	20	480	Clear			2.81
	6	6.97	20	475	Clear			2.10

SAMPLING DATA

SAMPLED BY / AFFILIATION	SAMPLER(S) SIGNATURE(S)	
SAMPLING METHOD(S):	SAMPLING INITIATED AT: 0912	SAMPLING ENDED AT: 0930

FIELD DECONTAMINATION: Y N	FIELD-FILTERED: Y N	DUPLICATE: Y N

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

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DEP Form # 62-770 900(3)
Form Title Petroleum or Petroleum Products Water Sampling Log
Effective Date

Petroleum or Petroleum Products Water Sampling Log

DEP FACILITY NO.:	WELL NO.: 1Q6PMF	SAMPLE ID: 1Q6PMF01	DATE: 10/29/97
SITE NAME: Site 1Q	SITE LOCATION: NAS Pensacola		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 14.99	DEPTH TO WATER (ft): 3.89	WELL CAPACITY (gal/ft): 0.163

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (–) x =

PURGE METHOD: low flow/Peristaltic Pump	PURGING INITIATED AT: 745	PURGING ENDED AT: 0825	
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal): 7	

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	OTHER
0	0	7.19	21	400				turbidity 18.0
1.8	2.5	7.40	21	380				1.35
2.3	4.0	7.39	21	380				1.12
3.5	7.0	7.32	21	410				1.07

SAMPLING DATA

SAMPLED BY / AFFILIATION: B. Brandon	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): Low Flow (Lead), Teflon bailer	SAMPLING INITIATED AT: 0825	SAMPLING ENDED AT: 0834
FIELD DECONTAMINATION: Y N	FIELD-FILTERED: Y N	DUPLICATE: Y N

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

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DEP Form # 62 770 900(3)
Form Title Petroleum or Petroleum Products Water Sampling Log
Effective Date

Petroleum or Petroleum Products Water Sampling Log

DEP FACILITY NO.:	WELL NO.: IQG009	SAMPLE ID: IQG00901	DATE: 10/27/97
SITE NAME: Site IQ, Bldg 630	SITE LOCATION: NAS Pensacola		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 14.23	DEPTH TO WATER (ft): 4.08	WELL CAPACITY (gal/ft): 0.163

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (14.23 - 4.08) x 0.163 = 1.65 gallons

PURGE METHOD: Low Flow/Peristaltic Pump	PURGING INITIATED AT: 1320	PURGING ENDED AT: 1410
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal): ~~5.5~~ 9

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	OTHER Turbidity
2.5	5	6.62	24	400				2.42
3.5	7	6.78	24	380				1.50
4.5	9	6.73	24	360				1.42

SAMPLING DATA

SAMPLED BY / AFFILIATION: B. Svendsen	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): Low Flowpermetals/Teflon Bailer	SAMPLING INITIATED AT: ~~1040~~ 1410 BSB	SAMPLING ENDED AT: ~~1100~~ 1430 BSB
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
	AG	2,40 mL	HCL	80 mL		601/602
	AG	2,40 mL	HCL	80 mL		EDB
	AG	2000 mL	none	2000 mL		610
068	~~AG~~ HDP	240 mL	HNO_3	240 mL		Lead
	AG	1000 mL	HCL	1000 mL		FL-Pro

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

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Effective Date _____

Petroleum or Petroleum Products Water Sampling Log

DEP FACILITY NO.:	WELL NO.: IQG009	SAMPLE ID: IQG009 01	DATE: 10/29/97
SITE NAME: Site IQ		SITE LOCATION: NAS Pensacola	

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 14.23	DEPTH TO WATER (ft): 4.08	WELL CAPACITY (gal/ft): 0.163

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (14.23 – 4.08) x 0.163 = 1.7

PURGE METHOD:	PURGING INITIATED AT: 630	PURGING ENDED AT: 705
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal):

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	OTHER
0	0	6.84	22	400	gray	H_2S		turbidity 102.5
1.5	2.0	7.03	24	385				6.14
2.1	3.5	6.99	23	410				2.10
3.2	6.0	7.00	23	390				1.24

SAMPLING DATA

SAMPLED BY / AFFILIATION	SAMPLER(S) SIGNATURE(S)	
SAMPLING METHOD(S):	SAMPLING INITIATED AT: 705	SAMPLING ENDED AT: 720
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N)	DUPLICATE: (Y) N

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

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Petroleum or Petroleum Products
Water Sampling Log

DEP FACILITY NO.:	WELL NO.: 1Q6Φ1Φ	SAMPLE ID: 1Q6Φ1ΦΦ1	DATE: 10/29/97
SITE NAME: Site 1Q	SITE LOCATION: NAS Pensacola		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 14.36	DEPTH TO WATER (ft): 4.52	WELL CAPACITY (gal/ft): 0.163

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (–) x =

PURGE METHOD: low flow/Peristaltic Pump	PURGING INITIATED AT: 745	PURGING ENDED AT: 0835
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal): 6

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	OTHER
0	0	7.05	22	320				42.7 NTU
1.2	2.0	6.95	22	310				4.00
2.3	4.0	6.94	21	330				1.51
3.2	6.0	6.92	22	330				1.10
								~~1.07~~

SAMPLING DATA

SAMPLED BY / AFFILIATION: B. Svendsen	SAMPLER(S) SIGNATURE(S): Blake S. Svendsen	
SAMPLING METHOD(S):	SAMPLING INITIATED AT: 0835	SAMPLING ENDED AT: 0845
FIELD DECONTAMINATION: Y ✗	FIELD-FILTERED: Y ✗	DUPLICATE: Y ✗

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

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Petroleum or Petroleum Products Water Sampling Log

DEP FACILITY NO.:	WELL NO.: 1QG011D	SAMPLE ID: 1QG011D01	DATE: 10/29/97
SITE NAME: Site 1B	SITE LOCATION: NAS Pensacola		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft):	DEPTH TO WATER (ft):	WELL CAPACITY (gal/ft): 0.163

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (–) x =

PURGE METHOD:	PURGING INITIATED AT: 0635	PURGING ENDED AT: 715
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal):

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	OTHER
0	0	12.03	22	550				turbidity 10.12
1.7	2.5	11.60	22	1900				1.90
2.5	4.0	11.47	22	1300				1.95
4.0	7.5	11.39	22	1300				1.52
6.2	10.0	11.35	22	1150				1.60

SAMPLING DATA

SAMPLED BY / AFFILIATION	SAMPLER(S) SIGNATURE(S)	
SAMPLING METHOD(S):	SAMPLING INITIATED AT: 715	SAMPLING ENDED AT: 730
FIELD DECONTAMINATION: Y N	FIELD-FILTERED: Y N	DUPLICATE: (Y) N

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

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Effective Date _____

Petroleum or Petroleum Products Water Sampling Log

DEP FACILITY NO.:	WELL NO.: 1QG012	SAMPLE ID: 1QG01201	DATE: 10/29/97
SITE NAME: Site 1 (B)	SITE LOCATION: NAS Pensacola		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft):	DEPTH TO WATER (ft):	WELL CAPACITY (gal/ft):

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (–) x =

PURGE METHOD: Low Flow/Peristaltic Pump	PURGING INITIATED AT: 1405	PURGING ENDED AT: 1445
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal):

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	~~OTHER~~ Turbidity
0	0	7.19	21	310	Clear			4.20
	3	7.54	20	315	Clear			1.34
	5	7.55	20	315	Clear			0.70

SAMPLING DATA

SAMPLED BY / AFFILIATION	SAMPLER(S) SIGNATURE(S)	
SAMPLING METHOD(S):	SAMPLING INITIATED AT: 1445	SAMPLING ENDED AT: 1505

FIELD DECONTAMINATION: Y N | FIELD-FILTERED: Y N | DUPLICATE: (Y) N

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

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Petroleum or Petroleum Products
Water Sampling Log

DEP FACILITY NO.:	WELL NO.: 1QG013	SAMPLE ID: 1QG01301	DATE: 10/29/97
SITE NAME: Site 1Q	SITE LOCATION: NAS Pensacola		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 14.38	DEPTH TO WATER (ft): 3.83	WELL CAPACITY (gal/ft): 0.163

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (–) x =

PURGE METHOD: Low flow/Peristaltic	PURGING INITIATED AT: 1140	PURGING ENDED AT: 1219
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal): 10

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	~~OTHER~~ Turbidity
0	0	6.94	23	260		H_2S like		16.42
	3	6.90	22	235				1.22
	5	6.90	22	230				1.13

SAMPLING DATA

SAMPLED BY / AFFILIATION	SAMPLER(S) SIGNATURE(S)	
SAMPLING METHOD(S):	SAMPLING INITIATED AT: 1219	SAMPLING ENDED AT: 1229
FIELD DECONTAMINATION: Y N	FIELD-FILTERED: Y N	DUPLICATE: Y N

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

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Petroleum or Petroleum Products Water Sampling Log

DEP FACILITY NO.:	WELL NO.: 1QG014	SAMPLE ID: 1QG01401	DATE: 10/28/97
SITE NAME: Site 1Q	SITE LOCATION: NAS Pensacola		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 13.56	DEPTH TO WATER (ft): 3.23	WELL CAPACITY (gal/ft): 0.163

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY = 1.6

= (–) x =

PURGE METHOD: Peristaltic Pump/Low flow	PURGING INITIATED AT: 0853	PURGING ENDED AT: 0930
	PURGE RATE (gpm): 0.14	TOTAL VOLUME PURGED (gal): 5

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	OTHER
0	0	6.81	23	210	Clear			
	2	6.72	23	220	Clear			
	4	6.73	22	218	Clear			
				Note: Turbidity meter has a low battery				

SAMPLING DATA

SAMPLED BY / AFFILIATION: B Swanson	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): Low flow (Lead), Teflon bailer	SAMPLING INITIATED AT: 0930	SAMPLING ENDED AT: 0950
FIELD DECONTAMINATION: Y X	FIELD-FILTERED: Y N X	DUPLICATE: Y N X

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
	AG	2,40mL	HCL	80mL		601/602
	AG	2,40mL	HCL	80mL		EDB
	AG	2000mL	None	2000mL		610
	HDP	240mL	HNO3	240mL		Lead
	AG	1000mL	HCL	1000mL		FL-Pro

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

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Petroleum or Petroleum Products Water Sampling Log

DEP FACILITY NO.:	WELL NO.: 1Q015	SAMPLE ID: 1Q601501	DATE: 10/28/
SITE NAME: Site 1Q		SITE LOCATION: NAS Pensacola	

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 13.4	DEPTH TO WATER (ft): 3.37	WELL CAPACITY (gal/ft): 0.163

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (–) x =

PURGE METHOD: Peristaltic Pump/Low Flow	PURGING INITIATED AT: 0855	PURGING ENDED AT: 0930	
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal): 6	

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	OTHER
0	0	6.92	23	370	Clear			
1	2	7.07	23	310	Clear			
	4	7.07	23	265	Clear			
	6	6.98	23	265	Clear			
					*Note: Turbidity meter has a low battery			

SAMPLING DATA

SAMPLED BY / AFFILIATION: B. Swandson	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): Low flow (Lead), Teflon bailer	SAMPLING INITIATED AT: 0930	SAMPLING ENDED AT: 1000
FIELD DECONTAMINATION: Y ~~N~~	FIELD-FILTERED: Y ~~N~~	DUPLICATE: Y ~~N~~

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
	AG	2,40 mL	HCL	80 mL		601/602
	AG	2,40 mL	HCL	80 mL		EDB
	AG	2000 mL	None	2000 mL		610
	HDP	240 mL	HNO_3	240 mL		Lead
	AG	1000 mL	HCL	1000 mL		FL-Pro

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

DEP Form # 62-770 900(3)
Form Title Petroleum or Petroleum Products Water Sampling Log
Effective Date _____

Petroleum or Petroleum Products Water Sampling Log

DEP FACILITY NO.:	WELL NO.: IBG016	SAMPLE ID: IBG01601	DATE: 10/29/97
SITE NAME: SIGIB	SITE LOCATION: Nas Pensa Cola		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft):	DEPTH TO WATER (ft):	WELL CAPACITY (gal/ft):

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (–) x =

PURGE METHOD:	PURGING INITIATED AT: 1245	PURGING ENDED AT: 1320
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal):

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	OTHER
0	0	6.94	21	340				15.7 NTU
1.8	3.0	6.91	21	335				0.93
2.5	5.0	6.90	22	340				0.73
3.8	7.5	6.89	22	340				0.67

SAMPLING DATA

SAMPLED BY / AFFILIATION	SAMPLER(S) SIGNATURE(S)	
SAMPLING METHOD(S):	SAMPLING INITIATED AT: 1320	SAMPLING ENDED AT: 1329

FIELD DECONTAMINATION: Y X	FIELD-FILTERED: Y X	DUPLICATE: Y X

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

DEP Form # 62-770.900(3)
Form Title Petroleum or Petroleum Products Water Sampling Log
Effective Date _____

Petroleum or Petroleum Products Water Sampling Log

DEP FACILITY NO.:	WELL NO.: 1QG017	SAMPLE ID: 1QG01701	DATE: 10/29/97
SITE NAME: Site 10	SITE LOCATION: NAS Pensacola		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft):	DEPTH TO WATER (ft):	WELL CAPACITY (gal/ft):

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (–) x =

PURGE METHOD:	PURGING INITIATED AT: 1245	PURGING ENDED AT: 1330
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal):

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	OTHER
0	0	6.77	22	260				21.7 NTU
1.8	2.0	6.76	21	265				1.66
2.4	5.0	6.76	22	265				0.73
3.2	6.0	6.74	22	265				~~0.67~~ 0.92

SAMPLING DATA

SAMPLED BY / AFFILIATION	SAMPLER(S) SIGNATURE(S)	
SAMPLING METHOD(S):	SAMPLING INITIATED AT: 1330	SAMPLING ENDED AT: 1340

FIELD DECONTAMINATION: Y ✗	FIELD-FILTERED: Y ✗	DUPLICATE: Y ✗

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

DEP Form # 62-770.900(3)
Form Title Petroleum or Petroleum Products Water Sampling Log
Effective Date

Petroleum or Petroleum Products Water Sampling Log

DEP FACILITY NO.:	WELL NO.: 1Q6Ø8	SAMPLE ID: 1Q6Ø18Ø1	DATE: 10/28/97
SITE NAME: Site 1Q		SITE LOCATION: NAS Pensacola	

PURGE DATA

WELL DIAMETER (in): 2.0	TOTAL WELL DEPTH (ft): 14.36	DEPTH TO WATER (ft): 3.59	WELL CAPACITY (gal/ft): 0.163

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (14.36 – 3.59) x 0.163 = 1.8

PURGE METHOD: Peristaltic pump/Low Flow	PURGING INITIATED AT: 0735	PURGING ENDED AT: 805	
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal): 7.5	

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	OTHER
0	0	6.54	15	135				
2.5	5 gal	6.53	24°C	160	Clear	H_2S like Odor		
	7.5	6.59	23°C	175	Clear			
					Note: Turbidity meter has a low battery			

SAMPLING DATA

SAMPLED BY / AFFILIATION: R. Trendson	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): Low Flow (Lead) Teflon bailer	SAMPLING INITIATED AT: 0805	SAMPLING ENDED AT: 0845
FIELD DECONTAMINATION: Y N	FIELD-FILTERED: Y N	DUPLICATE: Y N

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
	AG	2,40mL	HCL	80mL		601/602
	AG	2,40mL	HCL	80mL		EDB
	AG	2000mL	None	2000mL		610
	HDP	240mL	HNO_3	240mL		Lead
	AG	1000mL	HCL	1000mL		FL-Pro

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

FLORIDA

DEP Form # 62-770.900(3)
Form Title Petroleum or Petroleum Products Water Sampling Log
Effective Date

Petroleum or Petroleum Products
Water Sampling Log

DEP FACILITY NO.:	WELL NO.: 1QG019	SAMPLE ID: 1QG01901	DATE: 10/28/97
SITE NAME: Site 1Q		SITE LOCATION: NAS Pensacola	

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 14.59	DEPTH TO WATER (ft): 4.77	WELL CAPACITY (gal/ft): 0.163

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (–) x =

PURGE METHOD: Low Flow/peristaltic Pump	PURGING INITIATED AT: 1010	PURGING ENDED AT: 1040	
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal): 10	

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	OTHER
0	0	6.84	22	400	Clear			
	5	6.90	23	370	Clear			
	10	6.87	23	360	Clear			
				*Note: Turbidity meter has a low battery				

SAMPLING DATA

SAMPLED BY / AFFILIATION: B. Svendsen	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): Low Flow (Head) Teflon Bailer	SAMPLING INITIATED AT: 1040	SAMPLING ENDED AT: 1100
FIELD DECONTAMINATION: Y N	FIELD-FILTERED: Y N	DUPLICATE: Y N

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
	AG	2,40 mL	HCL	80 mL		601/602
	AG	2,40 mL	HCL	80 mL		EDB
	AG	2000 mL	none	2000 mL		610
	HDP	240 mL	HNO_3	240 mL		Lead
	AG	1000 mL	HCL	1000 mL		FL-Pro

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

DEP Form # 62-770.900(3)
Form Title Petroleum or Petroleum Products Water Sampling Log
Effective Date

Petroleum or Petroleum Products Water Sampling Log

DEP FACILITY NO.:	WELL NO.: 10G02Ø	SAMPLE ID: 10G02ØØ1	DATE: 10/28/97
SITE NAME: Site 10		SITE LOCATION: NAS Pensacola	

PURGE DATA

WELL DIAMETER (in): 2.0	TOTAL WELL DEPTH (ft): 14.29	DEPTH TO WATER (ft): 3.97	WELL CAPACITY (gal/ft): 0.163

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (14.29 – 3.97) x 0.163 = 1.7

PURGE METHOD: Peristaltic Pump/Low Flow	PURGING INITIATED AT: 7:35	PURGING ENDED AT: 8:05	
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal): 7.0	

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	OTHER
1.0	2.0	6.64	16	180				
2.5	5.0	6.55	22	230	Clear	H_2S like Odor		
	7.0	6.60	23°	240	Clear			
				*Note: Turbidity meter has a low battery				

SAMPLING DATA

SAMPLED BY / AFFILIATION: B Svendsen	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): Low Flow for lead, Teflon bailer	SAMPLING INITIATED AT: 805	SAMPLING ENDED AT: 0830
FIELD DECONTAMINATION: Y *	FIELD-FILTERED: Y *	DUPLICATE: Y *

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
	AG	2, 40mL	HCL	80 mL		601/602
	AG	2, 40mL	HCL	80 mL		EDB
	AG	2000 mL	None.	2000 mL		610
	HDP	240 mL	HNO_3	240 mL		Lead
	AG	1000 mL	HCL	1000 mL		FL-Pro

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

FLORIDA

DEP Form # 62-770.900(3)
Form Title Petroleum or Petroleum Products Water Sampling Log
Effective Date

Petroleum or Petroleum Products Water Sampling Log

DEP FACILITY NO.:	WELL NO.: 106021	SAMPLE ID: 106021A	DATE: 10/28/97
SITE NAME: Site 10	SITE LOCATION: NAS Pensacola		

PURGE DATA

WELL DIAMETER (in): 2.0	TOTAL WELL DEPTH (ft): 14.83	DEPTH TO WATER (ft): 4.80	WELL CAPACITY (gal/ft): 0.163

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (14.83 – 4.80) x 0.163 = 1.7

PURGE METHOD: Peristaltic Pump/Low Flow	PURGING INITIATED AT: 1545	PURGING ENDED AT: 1620
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal): 7.0

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	~~OTHER~~ Turbidity
0	0	6.76	25	270				
2.0	4.0	6.65	27	250	Clear			8.86
	7.0	6.57	24	230				3.37

SAMPLING DATA

SAMPLED BY / AFFILIATION: B. Svendsen	SAMPLER(S) SIGNATURE(S): Blake F. Svendsen	
SAMPLING METHOD(S): Low flow (Lead), Teflon Bailer	SAMPLING INITIATED AT: 1620	SAMPLING ENDED AT: 1635
FIELD DECONTAMINATION: Y ~~N~~	FIELD-FILTERED: Y ~~N~~	DUPLICATE: Y ~~N~~

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
	AG	2,40 mL	HCL	80 mL		601/602
	AG	2,40 mL	HCL	~~2 BTB~~ 80 mL		EDB
	AG	1000 mL	None	1000 mL		610
	HDP	240 mL	HNO_3	240 mL		Lead
	AG	1000 mL	HCL	1000 mL		FL-Pro

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

DEP Form # 62-770.900(3)
Form Title Petroleum or Petroleum Products Water Sampling Log
Effective Date

Petroleum or Petroleum Products
Water Sampling Log

DEP FACILITY NO.:	WELL NO.: 196022	SAMPLE ID: 196022 01	DATE: 10/28/97
SITE NAME: Site 10		SITE LOCATION: NAS Pensacola	

PURGE DATA

WELL DIAMETER (in): 2.0	TOTAL WELL DEPTH (ft): ~~4.56~~ 14.15	DEPTH TO WATER (ft): ~~14~~ 4.56	WELL CAPACITY (gal/ft): 0.163

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (14.15 – 4.56) x 0.163 = 1.6

PURGE METHOD: Peristaltic pump/Low Flow	PURGING INITIATED AT: 1550	PURGING ENDED AT: 1625
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal): 6

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	~~OTHER~~ Turbidity
0	0	6.87	25	300				
1	1.6	6.85	26	300				
	3.5	6.75	25	300				
	6.0	6.86	27	300				1.0

SAMPLING DATA

SAMPLED BY / AFFILIATION: B. Svendsen		SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): Low flow (Lead), Teflon Bailer		SAMPLING INITIATED AT: 1625	SAMPLING ENDED AT: 1649
FIELD DECONTAMINATION: Y ~~N~~	FIELD-FILTERED: Y ~~N~~		DUPLICATE: Y ~~N~~

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
	HDP	240 mL	HNO_3	240 mL		Lead
	AG	1000 mL	None	1000 mL		610
	AG	2, 40 mL	HCL	80 mL		601/602
	AG	2, 40 mL	HCL	80 mL		EDB
	AG	1000 mL	HCL	1000 mL		FL-Pro

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

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FLORIDA

DEP Form # 62-770.900(3)
Form Title Petroleum or Petroleum Products Water Sampling Log
Effective Date _____

Petroleum or Petroleum Products
Water Sampling Log

DEP FACILITY NO.:	WELL NO.: 1QG023	SAMPLE ID: 1QG02301	DATE: 10/29/97
SITE NAME: Site 1Q		SITE LOCATION: NAS Pensacola	

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft):	DEPTH TO WATER (ft):	WELL CAPACITY (gal/ft):

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (–) x =

PURGE METHOD: Low Flow/Per	PURGING INITIATED AT: 1400	PURGING ENDED AT: 1435
	PURGE RATE (gpm):	TOTAL VOLUME PURGED (gal):

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	~~OTHER~~ Turbidity
0	0	7.10	21	350	Clear			3.44
	4	7.06	21	335	Clear			0.70
	5	7.04	21	325	Clear			0.65

SAMPLING DATA

SAMPLED BY / AFFILIATION	SAMPLER(S) SIGNATURE(S)	
SAMPLING METHOD(S):	SAMPLING INITIATED AT: ~~1445~~ 1435	SAMPLING ENDED AT: 1445

FIELD DECONTAMINATION: Y N	FIELD-FILTERED: Y N	DUPLICATE: Y N

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

APPENDIX E

LABORATORY ANALYTICAL DATA SHEETS

Lab Sample Number:	B5D0500720				B5F1401100				B5F1401100				B5F1401100			
Site	NADEP				NADEP-8				NADEP-8				NADEP-8			
Locator	08G00901				08G00101				08G00201				08G00301			
Collect Date:	02-APR-95				13-JUN-95				13-JUN-95				13-JUN-95			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Volatile Organics (601/602)																
1,1,1-Trichloroethane	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2,2-Tetrachloroethane	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2-Trichloroethane	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethane	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethene	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichlorobenzene	25	U	ug/l	25	10	U	ug/l	10	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloroethane	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloropropane	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,3-Dichlorobenzene	25	U	ug/l	25	10	U	ug/l	10	1	U	ug/l	1	1	U	ug/l	1
1,4-Dichlorobenzene	25	U	ug/l	25	10	U	ug/l	10	1	U	ug/l	1	1	U	ug/l	1
2-Chloroethylvinyl ether	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromodichloromethane	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromoform	60.76		perce		1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromomethane	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Carbon tetrachloride	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chlorobenzene	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chloroethane	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chloroform	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chloromethane	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Dibromochloromethane	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Dichlorodifluoromethane	25	U	ug/l	25	-				1	U	ug/l	1	1	U	ug/l	1
Methylene chloride	25	U	ug/l	25	1.2		ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Tetrachloroethene	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Trichloroethene	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Trichlorofluoromethane	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Vinyl chloride	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
cis-1,3-Dichloropropene	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
trans-1,2-Dichloroethene	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
trans-1,3-Dichloropropene	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Benzene	25	U	ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Ethylbenzene	340		ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Toluene	29		ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Xylenes (total)	2300		ug/l	25	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Methyl tert-butyl ether	25	U	ug/l	25	-				1	U	ug/l	1	1	U	ug/l	1
Lead	148		ug/l	5	29.6		ug/l	5	5	U	ug/l	5	5.3		ug/l	5
TRPH																
Total petroleum hydrocarbons	5.6		m/L	1	1	U	mg/l	1	1	U	mg/l	1	1	U	mg/l	1

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

Lab Sample Number:	B5F1401100
Site	NADEP-8
Locator	08G00101
Collect Date:	13-JUN-95

	VALUE	QUAL	UNITS	DL
Di-n-butylphthalate	21		ug/l	10

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

Lab Sample Number:	B5F1401100				B5F1401100				B5F1401100				B5F1401100			
Site	NADEP-8				NADEP-8				NADEP-8				NADEP-8			
Locator	08G00401				08G00501				08G00601				08G00601D			
Collect Date:	13-JUN-95				13-JUN-95				13-JUN-95				13-JUN-95			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Volatile Organics (601/602)																
1,1,1-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2,2-Tetrachloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichlorobenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloropropane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,3-Dichlorobenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,4-Dichlorobenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
2-Chloroethylvinyl ether	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromodichloromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromoform	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromomethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Carbon tetrachloride	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chlorobenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chloroform	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chloromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Dibromochloromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Dichlorodifluoromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Methylene chloride	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Tetrachloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Trichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Trichlorofluoromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Vinyl chloride	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
cis-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
trans-1,2-Dichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
trans-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Benzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Ethylbenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Toluene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Xylenes (total)	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Methyl tert-butyl ether	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Lead	5	U	ug/l	5	5	U	ug/l	5	7.1		ug/l	5	7.9		ug/l	5
TRPH																
Total petroleum hydrocarbons	1	U	mg/l	1	1	U	mg/l	1	1	U	mg/l	1	1	U	mg/l	1

U = NOT DETECTED J = ESTIMATED VALUE

12/30/97 NADEP-PENSACOLA -- SITE Q and SITE 8 10:53:31
1995 DATA -- REPORT NO. 9554

Lab Sample Number:	B5F1501110				B5F1401100				B5F1501110				B5F1501110			
Site	NADEP-8				NADEP-8				NADEP-8				NADEP-8			
Locator	08G00701				08G00801				08G01001				08G01101			
Collect Date:	14-JUN-95				13-JUN-95				14-JUN-95				14-JUN-95			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Volatile Organics (601/602)																
1,1,1-Trichloroethane	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
1,1,2,2-Tetrachloroethane	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
1,1,2-Trichloroethane	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
1,1-Dichloroethane	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
1,1-Dichloroethene	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
1,2-Dichlorobenzene	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
1,2-Dichloroethane	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
1,2-Dichloropropane	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
1,3-Dichlorobenzene	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
1,4-Dichlorobenzene	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
2-Chloroethylvinyl ether	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
Bromodichloromethane	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
Bromoform	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
Bromomethane	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
Carbon tetrachloride	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
Chlorobenzene	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
Chloroethane	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
Chloroform	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
Chloromethane	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
Dibromochloromethane	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
Dichlorodifluoromethane	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
Methylene chloride	2	U	ug/l	2	20	U	ug/l	20	5.9		ug/l		1	U	ug/l	1
Tetrachloroethene	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
Trichloroethene	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
Trichlorofluoromethane	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
Vinyl chloride	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
cis-1,3-Dichloropropene	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
trans-1,2-Dichloroethene	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
trans-1,3-Dichloropropene	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
Benzene	2	U	ug/l	2	20	U	ug/l	20	5.9		ug/l		2.3		ug/l	
Ethylbenzene	2	U	ug/l	2	32		ug/l	20	5	U	ug/l	5	6.9		ug/l	
Toluene	2	U	ug/l	2	20	U	ug/l	20	5	U	ug/l	5	1	U	ug/l	1
Xylenes (total)	2	U	ug/l	2	120		ug/l	20	65		ug/l		68		ug/l	
Methyl tert-butyl ether	2	U	ug/l	2	34		ug/l	20	17		ug/l		6.4		ug/l	
Lead	7.9		ug/l		26.2		ug/l	5	14.5		ug/l		8.5		ug/l	
TRPH																
Total petroleum hydrocarbons	1	U	mg/l	1	2.2		mg/l	1	1		mg/l		1	U	mg/l	1

U = NOT DETECTED J = ESTIMATED VALUE

Lab Sample Number:	B5F1501110			B5E1901170			B5E1901170			B5E1901170		
Site	NADEP-8			NADEP-8			NADEP-8			NADEP-8		
Locator	08G01201			08G01301			08G01301D			08G01401		
Collect Date:	14-JUN-95			16-MAY-95			16-MAY-95			17-MAY-95		
	VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL
Volatile Organics (601/602)												
1,1,1-Trichloroethane	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
1,1,2,2-Tetrachloroethane	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
1,1,2-Trichloroethane	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
1,1-Dichloroethane	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
1,1-Dichloroethene	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
1,2-Dichlorobenzene	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
1,2-Dichloroethane	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
1,2-Dichloropropane	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
1,3-Dichlorobenzene	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
1,4-Dichlorobenzene	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
2-Chloroethylvinyl ether	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Bromodichloromethane	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Bromoform	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Bromomethane	6	ug/l		1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Carbon tetrachloride	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Chlorobenzene	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Chloroethane	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Chloroform	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Chloromethane	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Dibromochloromethane	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Dichlorodifluoromethane	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Methylene chloride	6	ug/l		1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Tetrachloroethene	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Trichloroethene	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Trichlorofluoromethane	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Vinyl chloride	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
cis-1,3-Dichloropropene	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
trans-1,2-Dichloroethene	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
trans-1,3-Dichloropropene	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Benzene	9	ug/l		1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Ethylbenzene	24	ug/l		1 U	ug/l	1	1.5	ug/l	1	1 U	ug/l	1
Toluene	5 U	ug/l	5	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Xylenes (total)	16	ug/l		1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Methyl tert-butyl ether	34	ug/l		1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1
Lead	5.3	ug/l		16.1	ug/l	5	15.1	ug/l	5	8.2	ug/l	5
TRPH												
Total petroleum hydrocarbons	1.2	mg/l		1 U	mg/l	1	1 U	mg/l	1	1 U	mg/l	1

U = NOT DETECTED J = ESTIMATED VALUE

12/30/97 NADEP-PENSACOLA -- SITE Q and SITE 8 10:53:31
1995 DATA -- REPORT NO. 9554

Lab Sample Number:	B5E1901170				B5E1901170				B5E1901170				B5F1501110			
Site	NADEP-8				NADEP-8				NADEP-8				NADEP-8			
Locator	08G01501				08G01601				08G01701				08G01801			
Collect Date:	17-MAY-95				16-MAY-95				17-MAY-95				14-JUN-95			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Volatile Organics (601/602)																
1,1,1-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2,2-Tetrachloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichlorobenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloropropane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,3-Dichlorobenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,4-Dichlorobenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
2-Chloroethylvinyl ether	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromodichloromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromoform	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromomethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Carbon tetrachloride	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chlorobenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chloroform	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chloromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Dibromochloromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Dichlorodifluoromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Methylene chloride	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	2		ug/l	
Tetrachloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Trichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Trichlorofluoromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Vinyl chloride	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
cis-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
trans-1,2-Dichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
trans-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Benzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Ethylbenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Toluene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Xylenes (total)	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Methyl tert-butyl ether	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Lead	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
TRPH																
Total petroleum hydrocarbons	1	U	mg/l	1	1	U	mg/l	1	1	U	mg/l	1	1	U	mg/l	1

U = NOT DETECTED J = ESTIMATED VALUE

Lab Sample Number:	B5E1901170				B5F1501110				B5F1401100				B5E1901170			
Site	NADEP-8				NADEP-8				NADEP-8				NADEP-8			
Locator	08G0EB01				08G0EB02				1QG00101				1QG00201			
Collect Date:	16-MAY-95				14-JUN-95				13-JUN-95				17-MAY-95			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Volatile Organics (601/602)																
1,1,1-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
1,1,2,2-Tetrachloroethane	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
1,1,2-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
1,1-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
1,1-Dichloroethene	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
1,2-Dichlorobenzene	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
1,2-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
1,2-Dichloropropane	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
1,3-Dichlorobenzene	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
1,4-Dichlorobenzene	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
2-Chloroethylvinyl ether	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Bromodichloromethane	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Bromoform	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Bromomethane	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Carbon tetrachloride	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Chlorobenzene	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Chloroethane	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Chloroform	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Chloromethane	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Dibromochloromethane	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Dichlorodifluoromethane	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Methylene chloride	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Tetrachloroethene	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Trichloroethene	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Trichlorofluoromethane	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Vinyl chloride	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
cis-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
trans-1,2-Dichloroethene	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
trans-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
Benzene	1	U	ug/l	1	1	U	ug/l	1	35		ug/l	10	1	U	ug/l	1
Ethylbenzene	1	U	ug/l	1	1	U	ug/l	1	25		ug/l	10	1.9		ug/l	1
Toluene	1	U	ug/l	1	1	U	ug/l	1	31		ug/l	10	2.8		ug/l	1
Xylenes (total)	1	U	ug/l	1	1	U	ug/l	1	13		ug/l	10	1	U	ug/l	1
Methyl tert-butyl ether	1	U	ug/l	1	1	U	ug/l	1	94		ug/l	10	1	U	ug/l	1
Lead	5	U	ug/l	5	5	U	ug/l	5	7.5		ug/l	5	49.8		ug/l	5
TRPH																
Total petroleum hydrocarbons	1	U	mg/l	1	1	U	mg/l	1	5.1		mg/l	1	1	U	mg/l	1

U = NOT DETECTED J = ESTIMATED VALUE

Lab Sample Number:	B5F1401100			B5E1901170			B5F1401100			B5F1401100		
Site	NADEP-8			NADEP-8			NADEP-8			NADEP-8		
Locator	1QG00202			1QG00301			1QG00302			1QG00401		
Collect Date:	13-JUN-95			17-MAY-95			13-JUN-95			13-JUN-95		
	VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL
Volatile Organics (601/602)												
1,1,1-Trichloroethane	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
1,1,2,2-Tetrachloroethane	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
1,1,2-Trichloroethane	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
1,1-Dichloroethane	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
1,1-Dichloroethene	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
1,2-Dichlorobenzene	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
1,2-Dichloroethane	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
1,2-Dichloropropane	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
1,3-Dichlorobenzene	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
1,4-Dichlorobenzene	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
2-Chloroethylvinyl ether	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
Bromodichloromethane	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
Bromoform	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
Bromomethane	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
Carbon tetrachloride	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
Chlorobenzene	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
Chloroethane	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
Chloroform	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
Chloromethane	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
Dibromochloromethane	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
Dichlorodifluoromethane	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
Methylene chloride	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
Tetrachloroethene	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
Trichloroethene	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
Trichlorofluoromethane	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
Vinyl chloride	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
cis-1,3-Dichloropropene	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
trans-1,2-Dichloroethene	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
trans-1,3-Dichloropropene	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
Benzene	11	ug/l	10	4.1	ug/l	1	26	ug/l	10	4.6	ug/l	2
Ethylbenzene	10 U	ug/l	10	2.5	ug/l	1	20	ug/l	10	7.5	ug/l	2
Toluene	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	2 U	ug/l	2
Xylenes (total)	10 U	ug/l	10	1 U	ug/l	1	10 U	ug/l	10	12	ug/l	2
Methyl tert-butyl ether	36	ug/l	10	1 U	ug/l	1	53	ug/l	10	6.6	ug/l	2
Lead	-			32.1	ug/l	5	-			6.8	ug/l	5
TRPH												
Total petroleum hydrocarbons	-			1 U	mg/l	1	-			1.2	mg/l	1

U = NOT DETECTED J = ESTIMATED VALUE

Lab Sample Number:	B5E1901170				B5F1501110			
Site	NADEP-8				NADEP-8			
Locator	1QG00501				1QG00502			
Collect Date:	16-MAY-95				14-JUN-95			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Volatile Organics (601/602)								
1,1,1-Trichloroethane	1	U	ug/l	1	2	U	ug/l	2
1,1,2,2-Tetrachloroethane	1	U	ug/l	1	2	U	ug/l	2
1,1,2-Trichloroethane	1	U	ug/l	1	2	U	ug/l	2
1,1-Dichloroethane	1	U	ug/l	1	2	U	ug/l	2
1,1-Dichloroethene	1	U	ug/l	1	2	U	ug/l	2
1,2-Dichlorobenzene	1	U	ug/l	1	2	U	ug/l	2
1,2-Dichloroethane	1	U	ug/l	1	2	U	ug/l	2
1,2-Dichloropropane	1	U	ug/l	1	2	U	ug/l	2
1,3-Dichlorobenzene	1	U	ug/l	1	2	U	ug/l	2
1,4-Dichlorobenzene	1	U	ug/l	1	2	U	ug/l	2
2-Chloroethylvinyl ether	1	U	ug/l	1	2	U	ug/l	2
Bromodichloromethane	1	U	ug/l	1	2	U	ug/l	2
Bromoform	1	U	ug/l	1	2	U	ug/l	2
Bromomethane	1	U	ug/l	1	2		ug/l	
Carbon tetrachloride	1	U	ug/l	1	2	U	ug/l	2
Chlorobenzene	1	U	ug/l	1	2	U	ug/l	2
Chloroethane	1	U	ug/l	1	2	U	ug/l	2
Chloroform	1	U	ug/l	1	2	U	ug/l	2
Chloromethane	1	U	ug/l	1	2	U	ug/l	2
Dibromochloromethane	1	U	ug/l	1	2	U	ug/l	2
Dichlorodifluoromethane	1	U	ug/l	1	2	U	ug/l	2
Methylene chloride	1	U	ug/l	1	2	U	ug/l	2
Tetrachloroethene	1	U	ug/l	1	2	U	ug/l	2
Trichloroethene	1	U	ug/l	1	2	U	ug/l	2
Trichlorofluoromethane	1	U	ug/l	1	2	U	ug/l	2
Vinyl chloride	1	U	ug/l	1	2	U	ug/l	2
cis-1,3-Dichloropropene	1	U	ug/l	1	2	U	ug/l	2
trans-1,2-Dichloroethene	1	U	ug/l	1	2	U	ug/l	2
trans-1,3-Dichloropropene	1	U	ug/l	1	2	U	ug/l	2
Benzene	4.1		ug/l	1	12		ug/l	
Ethylbenzene	6		ug/l	1	17		ug/l	
Toluene	1	U	ug/l	1	2	U	ug/l	2
Xylenes (total)	1	U	ug/l	1	7.9		ug/l	
Methyl tert-butyl ether	1	U	ug/l	1	2	U	ug/l	2
Lead	5	U	ug/l	5	-			
TRPH								
Total petroleum hydrocarbons	1	U	mg/l	1	-			

U = NOT DETECTED J = ESTIMATED VALUE

01/20/98 NADEP-PENSACOLA -- SITE 1Q 09:04:48
1997 ANALYTICAL DATA -- REPORT NO. 9578

Lab Sample Number:	710500001				710523007				710523006				710523004			
Site	NADEP-1				NADEP-1				NADEP-1				NADEP-1			
Locator	1QG001R01				1QG00601				1QG00701				1QG00801			
Collect Date:	28-OCT-97				29-OCT-97				29-OCT-97				29-OCT-97			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Volatile Organics (601/602)																
1,1,1-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2,2-Tetrachloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2-Trichloroethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
1,1-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichlorobenzene	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
1,2-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloropropane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,3-Dichlorobenzene	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
1,4-Dichlorobenzene	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
2-Chloroethylvinyl ether	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Bromodichloromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromoform	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Bromomethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Carbon tetrachloride	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chlorobenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chloroethane	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Chloroform	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Chloromethane	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Dibromochloromethane	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Dichlorodifluoromethane	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Methylene chloride	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Tetrachloroethene	3	U	ug/l	3	3	U	ug/l	3	3	U	ug/l	3	3	U	ug/l	3
Trichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Trichlorofluoromethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Vinyl chloride	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
cis-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
trans-1,2-Dichloroethene	-				-				-				-			
trans-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Benzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Ethylbenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Toluene	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Xylenes (total)	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Methyl tert-butyl ether	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Lead	.028		mg/l	.003	.003	U	mg/l	.003	.003	U	mg/l	.003	.003	U	mg/l	.003
TRPH																
Total petroleum hydrocarbons	1700		ug/l	100	100	U	ug/l	100	130		ug/l	100	230		ug/l	100

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

Lab Sample Number:	710523001				710523002				710523005				710523003			
Site	NADEP-1				NADEP-1				NADEP-1				NADEP-1			
Locator	1QG00901				1QG00901D				1QG01001				1QG011D01			
Collect Date:	29-OCT-97				29-OCT-97				29-OCT-97				29-OCT-97			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Volatile Organics (601/602)																
1,1,1-Trichloroethane	10	U	ug/l	10	10	U	ug/l	10	1	U	ug/l	1	1	U	ug/l	1
1,1,2,2-Tetrachloroethane	10	U	ug/l	10	10	U	ug/l	10	1	U	ug/l	1	1	U	ug/l	1
1,1,2-Trichloroethane	20	U	ug/l	20	20	U	ug/l	20	2	U	ug/l	2	2	U	ug/l	2
1,1-Dichloroethane	10	U	ug/l	10	10	U	ug/l	10	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethene	10	U	ug/l	10	10	U	ug/l	10	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichlorobenzene	20	U	ug/l	20	20	U	ug/l	20	2	U	ug/l	2	2	U	ug/l	2
1,2-Dichloroethane	10	U	ug/l	10	10	U	ug/l	10	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloropropane	10	U	ug/l	10	10	U	ug/l	10	1	U	ug/l	1	1	U	ug/l	1
1,3-Dichlorobenzene	20	U	ug/l	20	20	U	ug/l	20	2	U	ug/l	2	2	U	ug/l	2
1,4-Dichlorobenzene	20	U	ug/l	20	20	U	ug/l	20	2	U	ug/l	2	2	U	ug/l	2
2-Chloroethylvinyl ether	50	U	ug/l	50	50	U	ug/l	50	5	U	ug/l	5	5	U	ug/l	5
Bromodichloromethane	10	U	ug/l	10	10	U	ug/l	10	1	U	ug/l	1	1	U	ug/l	1
Bromoform	20	U	ug/l	20	20	U	ug/l	20	2	U	ug/l	2	2	U	ug/l	2
Bromomethane	20	U	ug/l	20	20	U	ug/l	20	2	U	ug/l	2	2	U	ug/l	2
Carbon tetrachloride	10	U	ug/l	10	10	U	ug/l	10	1	U	ug/l	1	1	U	ug/l	1
Chlorobenzene	10	U	ug/l	10	10	U	ug/l	10	1	U	ug/l	1	1	U	ug/l	1
Chloroethane	50	U	ug/l	50	50	U	ug/l	50	5	U	ug/l	5	5	U	ug/l	5
Chloroform	20	U	ug/l	20	20	U	ug/l	20	2	U	ug/l	2	2	U	ug/l	2
Chloromethane	50	U	ug/l	50	50	U	ug/l	50	5	U	ug/l	5	5	U	ug/l	5
Dibromochloromethane	50	U	ug/l	50	50	U	ug/l	50	5	U	ug/l	5	5	U	ug/l	5
Dichlorodifluoromethane	50	U	ug/l	50	50	U	ug/l	50	5	U	ug/l	5	5	U	ug/l	5
Methylene chloride	50	U	ug/l	50	50	U	ug/l	50	5	U	ug/l	5	5	U	ug/l	5
Tetrachloroethene	30	U	ug/l	30	30	U	ug/l	30	3	U	ug/l	3	3	U	ug/l	3
Trichloroethene	10	U	ug/l	10	10	U	ug/l	10	1	U	ug/l	1	1	U	ug/l	1
Trichlorofluoromethane	20	U	ug/l	20	20	U	ug/l	20	2	U	ug/l	2	2	U	ug/l	2
Vinyl chloride	10	U	ug/l	10	10	U	ug/l	10	1	U	ug/l	1	1	U	ug/l	1
cis-1,3-Dichloropropene	10	U	ug/l	10	10	U	ug/l	10	1	U	ug/l	1	1	U	ug/l	1
trans-1,2-Dichloroethene	-				-				-				-			
trans-1,3-Dichloropropene	10	U	ug/l	10	10	U	ug/l	10	1	U	ug/l	1	1	U	ug/l	1
Benzene	10	U	ug/l	10	10	U	ug/l	10	1	U	ug/l	1	1	U	ug/l	1
Ethylbenzene	330		ug/l	10	200		ug/l	10	1	U	ug/l	1	16		ug/l	1
Toluene	50	U	ug/l	50	50	U	ug/l	50	5	U	ug/l	5	5	U	ug/l	5
Xylenes (total)	2100		ug/l	20	1300		ug/l	20	2	U	ug/l	2	8		ug/l	2
Methyl tert-butyl ether	50	U	ug/l	50	50	U	ug/l	50	5	U	ug/l	5	5	U	ug/l	5
Lead	.025		mg/l	.003	.025		mg/l	.003	.003	U	mg/l	.003	.003	U	mg/l	.003
TRPH																
Total petroleum hydrocarbons	3300		ug/l	100	4000		ug/l	100	240		ug/l	100	1200		ug/l	100

U = NOT DETECTED J = ESTIMATED VALUE

01/20/98 NADEP-PENSACOLA -- SITE 1Q 09:04:48
1997 ANALYTICAL DATA -- REPORT NO. 9578

Lab Sample Number:	710523012				710523013				710523008				710484004			
Site	NADEP-1				NADEP-1				NADEP-1				NADEP-1			
Locator	1QG01201				1QG01201D				1QG01301				1QG01401			
Collect Date:	29-OCT-97				29-OCT-97				29-OCT-97				28-OCT-97			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Volatile Organics (601/602)																
1,1,1-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2,2-Tetrachloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2-Trichloroethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
1,1-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichlorobenzene	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
1,2-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloropropane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,3-Dichlorobenzene	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
1,4-Dichlorobenzene	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
2-Chloroethylvinyl ether	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Bromodichloromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromoform	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Bromomethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Carbon tetrachloride	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U,	1,	
Chlorobenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chloroethane	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Chloroform	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Chloromethane	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Dibromochloromethane	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Dichlorodifluoromethane	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Methylene chloride	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Tetrachloroethene	3	U	ug/l	3	3	U	ug/l	3	3	U	ug/l	3	3	U	ug/l	3
Trichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Trichlorofluoromethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Vinyl chloride	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
cis-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
trans-1,2-Dichloroethene	-				-				-				-			
trans-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Benzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Ethylbenzene	1	U	ug/l	1	1	U	ug/l	1	3		ug/l	1	210		ug/l	1
Toluene	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Xylenes (total)	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	290		ug/l	2
Methyl tert-butyl ether	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Lead	.011		mg/l	.003	.011		mg/l	.003	.01		mg/l	.003	.018		mg/l	.003
TRPH																
Total petroleum hydrocarbons	110		ug/l	100	200		ug/l	100	140		ug/l	100	1500		ug/l	100

U = NOT DETECTED J = ESTIMATED VALUE

Lab Sample Number:	710484003				710523009				710523010				710484002			
Site	NADEP-1				NADEP-1				NADEP-1				NADEP-1			
Locator	1QG01501				1QG01601				1QG01701				1QG01801			
Collect Date:	28-OCT-97				29-OCT-97				29-OCT-97				28-OCT-97			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Volatile Organics (601/602)																
1,1,1-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2,2-Tetrachloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2-Trichloroethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
1,1-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichlorobenzene	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
1,2-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloropropane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,3-Dichlorobenzene	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
1,4-Dichlorobenzene	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
2-Chloroethylvinyl ether	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Bromodichloromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromoform	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Bromomethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Carbon tetrachloride	1	U,	1,		1	U	ug/l	1	1	U	ug/l	1	1	U,	1,	
Chlorobenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chloroethane	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Chloroform	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Chloromethane	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Dibromochloromethane	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Dichlorodifluoromethane	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Methylene chloride	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Tetrachloroethene	3	U	ug/l	3	3	U	ug/l	3	3	U	ug/l	3	3	U	ug/l	3
Trichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Trichlorofluoromethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Vinyl chloride	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
cis-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
trans-1,2-Dichloroethene	-				-				-				-			
trans-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Benzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Ethylbenzene	1	U	ug/l	1	4		ug/l	1	62		ug/l	1	1	U	ug/l	1
Toluene	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Xylenes (total)	2	U	ug/l	2	2	U	ug/l	2	300		ug/l	2	2	U	ug/l	2
Methyl tert-butyl ether	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Lead	.003	U	mg/l	.003	.008		mg/l	.003	.02		mg/l	.003	.003	U	mg/l	.003
TRPH																
Total petroleum hydrocarbons	280		ug/l	100	120		ug/l	100	500		ug/l	100	390		ug/l	100

U = NOT DETECTED J = ESTIMATED VALUE

Lab Sample Number:	710484005				710484001				710500002				710500003			
Site	NADEP-1				NADEP-1				NADEP-1				NADEP-1			
Locator	1QG01901				1QG02001				1QG02101				1QG02201			
Collect Date:	28-OCT-97				28-OCT-97				28-OCT-97				28-OCT-97			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Volatile Organics (601/602)																
1,1,1-Trichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2,2-Tetrachloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,2-Trichloroethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
1,1-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1-Dichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichlorobenzene	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
1,2-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,2-Dichloropropane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,3-Dichlorobenzene	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
1,4-Dichlorobenzene	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
2-Chloroethylvinyl ether	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Bromodichloromethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Bromoform	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Bromomethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Carbon tetrachloride	1	U,	1,		1	U,	1,		1	U	ug/l	1	1	U	ug/l	1
Chlorobenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Chloroethane	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Chloroform	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Chloromethane	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Dibromochloromethane	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Dichlorodifluoromethane	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Methylene chloride	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Tetrachloroethene	3	U	ug/l	3	3	U	ug/l	3	3	U	ug/l	3	3	U	ug/l	3
Trichloroethene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Trichlorofluoromethane	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Vinyl chloride	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
cis-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
trans-1,2-Dichloroethene	-				-				-				-			
trans-1,3-Dichloropropene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Benzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Ethylbenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Toluene	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Xylenes (total)	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2	2	U	ug/l	2
Methyl tert-butyl ether	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5	5	U	ug/l	5
Lead	.003	U	mg/l	.003	.01		mg/l	.003	.003	U	mg/l	.003	.003	U	mg/l	.003
TRPH																
Total petroleum hydrocarbons	320		ug/l	100	400		ug/l	100	190		ug/l	100	100	U	ug/l	100

U = NOT DETECTED J = ESTIMATED VALUE

Lab Sample Number: 710523011
Site NADEP-1
Locator 1QG02301
Collect Date: 29-OCT-97

	VALUE	QUAL	UNITS	DL
Volatile Organics (601/602)				
1,1,1-Trichloroethane	1	U	ug/l	1
1,1,2,2-Tetrachloroethane	1	U	ug/l	1
1,1,2-Trichloroethane	2	U	ug/l	2
1,1-Dichloroethane	1	U	ug/l	1
1,1-Dichloroethene	1	U	ug/l	1
1,2-Dichlorobenzene	2	U	ug/l	2
1,2-Dichloroethane	1	U	ug/l	1
1,2-Dichloropropane	1	U	ug/l	1
1,3-Dichlorobenzene	2	U	ug/l	2
1,4-Dichlorobenzene	2	U	ug/l	2
2-Chloroethylvinyl ether	5	U	ug/l	5
Bromodichloromethane	1	U	ug/l	1
Bromoform	2	U	ug/l	2
Bromomethane	2	U	ug/l	2
Carbon tetrachloride	1	U	ug/l	1
Chlorobenzene	1	U	ug/l	1
Chloroethane	5	U	ug/l	5
Chloroform	2	U	ug/l	2
Chloromethane	5	U	ug/l	5
Dibromochloromethane	5	U	ug/l	5
Dichlorodifluoromethane	5	U	ug/l	5
Methylene chloride	5	U	ug/l	5
Tetrachloroethene	3	U	ug/l	3
Trichloroethene	1	U	ug/l	1
Trichlorofluoromethane	2	U	ug/l	2
Vinyl chloride	1	U	ug/l	1
cis-1,3-Dichloropropene	1	U	ug/l	1
trans-1,2-Dichloroethene	-			
trans-1,3-Dichloropropene	1	U	ug/l	1
Benzene	1	U	ug/l	1
Ethylbenzene	1	U	ug/l	1
Toluene	5	U	ug/l	5
Xylenes (total)	2	U	ug/l	2
Methyl tert-butyl ether	5	U	ug/l	5
Lead	.003	U	mg/l	.003
TRPH				
Total petroleum hydrocarbons	170		ug/l	100

U = NOT DETECTED J = ESTIMATED VALUE

01/20/98 NADEP-PENSACOLA -- SITE 1Q 09:08:46
1997 ANALYTICAL DATA -- REPORT NO. 9579

Lab Sample Number:	711181001				710386001				710342002				710342001			
Site	NADEP-1				NADEP-1				NADEP-1				NADEP-1			
Locator	1QB00002				1QB00902				1QG012SC				1QG016SC			
Collect Date:	10-NOV-97				23-OCT-97				21-OCT-97				21-OCT-97			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Benzene	1	U	ug/kg	1	1	U	ug/kg	1	2		ug/l	1	1		ug/l	1
Ethylbenzene	1	U	ug/kg	1	1	U	ug/kg	1	3		ug/l	1	14		ug/l	1
Toluene	5	U	ug/kg	5	5	U	ug/kg	5	5	U	ug/l	5	5	U	ug/l	5
Xylenes (total)	2	U	ug/kg	2	2		ug/kg	2	2	U	ug/l	2	15		ug/l	2
Total petroleum hydrocarbons	2.6	U	mg/kg	2.6	24		mg/kg	2.6	-				-			

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE