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CONTAMINATION ASSESSMENT REPORT ADDENDUM SITE 2 UNDERGROUND STORAGE TANK 104 (UST 104) NAVAL AVIATION DEPOT NAS PENSACOLA FL

11/1/1995

ABB ENVIRONMENTAL SERVICES INC.

CONTAMINATION ASSESSMENT REPORT ADDENDUM

SITE 2, UST 104
NAVAL AVIATION DEPOT

NAVAL AIR STATION
PENSACOLA, FLORIDA

UNIT IDENTIFICATION CODE: N00204
CONTRACT NO.: N62467-89-D-0317/008

NOVEMBER 1995

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

CONTAMINATION ASSESSMENT REPORT ADDENDUM

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NAVAL AIR STATION
PENSACOLA, FLORIDA

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

Prepared by:

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

Prepared for:

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

Byas Glover, Code 18410, Engineer-in-Charge

November 1995

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: November 16, 1995

NAME AND TITLE OF CERTIFYING OFFICIAL: Mark Diblin, P.G.
Task Order Manager

NAME AND TITLE OF CERTIFYING OFFICIAL: Michael J. Williams, P.G.
Project Technical Lead

(DFAR 252.227-7036)

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, 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

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.

EXECUTIVE SUMMARY

The following report is an addendum to the Aviation Gasoline (AVGAS) Pipeline Area Contamination Assessment Report (CAR) submitted by ABB Environmental Services, Inc. (ABB-ES), in August 1995. Information such as regional and local physiography, regional hydrology, investigative methodologies and procedures, and supplemental reports and memoranda are included in the August 1995 AVGAS Pipeline Area CAR.

Site 2 is the former location of a 500-gallon underground storage tank (UST), located on the northwest boundary of Chevalier Field, Naval Aviation Depot (NADEP) Pensacola. The tank, designated UST 104, was located next to Industrial Road, approximately 50 feet south of the Building 3450 access road. UST 104 was constructed of unprotected steel and contained a lubricating oil. It was installed next to a steel containment area referred to by site personnel as an "oil pit." The purpose of the pit is uncertain, although its suspected use was to dispense lubrication oil and air during aircraft maintenance.

During the UST 104 removal in September 1994, visual observation of soil and groundwater contamination was reported. Site 2, UST 104, was transferred to ABB-ES in late September 1994 for closure and investigation.

Findings.

- Site soil consists of fine-grained, well-sorted sand. The color of the soil ranges from very light gray to dark gray.
- The source of contamination, UST 104, has been removed.
- Excessively contaminated soil from the tank excavation area was removed. No visual evidence of soil contamination was observed on the excavation walls. The excavation was backfilled with clean soil. Contaminated soil was removed from the site and thermally treated.
- Five confirmatory soil samples were collected from outside the excavation. No contaminant concentrations detected in the confirmatory soil samples exceeded State maximum contaminant levels.
- Twelve shallow monitoring wells and one deep monitoring well were installed to assess the impact of soil contamination on the groundwater at Site 2.
- No groundwater contaminant concentration detected in the Site 2 groundwater samples exceeded any State target level except lead. A lead concentration of 54.8 parts per billion was detected in the groundwater sample collected from monitoring well 02G010. The monitoring well was resampled using low-flow sampling techniques. The lead concentration detected in the second groundwater sample collected from 02G010 was below method detection limits.

Conclusions. Based on the findings of the contamination assessment (CA) and site conditions, the following can be concluded.

- All excessively contaminated soil was removed from Site 2.
- The groundwater at Site 2 has not been impacted by the soil contamination detected during this investigation.

Recommendations. Based on the findings, conclusions, and interpretations of the CA, ABB-ES recommends a No Further Action proposal for Site 2.

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GLOSSARY

ABB-ES	ABB Environmental Services, Inc.
AVGAS	aviation gasoline
BEI	Bechtel Environmental, Inc.
bls	below land surface
BRAC	base realignment and closure
CA	contamination assessment
CAR	Contamination Assessment Report
CompQAP	Comprehensive Quality Assurance Plan
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
GTES	GT Environmental Services
NADEP	Naval Aviation Depot
OVA	organic vapor analyzer
PAH	polynuclear aromatic hydrocarbons
ppb	parts per billion
ppm	parts per million
SOUTHNAV-FACENGCOM	Southern Division, Naval Facilities Engineering Command
TIC	tentatively identified compound
TRPH	total recoverable petroleum hydrocarbons
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
VOA	volatile organic aromatics
VOC	volatile organic compound
VOH	volatile organic halocarbons

1.0 SITE BACKGROUND AND DESCRIPTION

Site 2 is located on the northwest boundary of Chevalier Field, Naval Aviation Depot (NADEP), Pensacola, Florida (Figure 1-1). It is the former location of a 500-gallon underground storage tank (UST) associated with the aviation gasoline (AVGAS) pipeline (Figure 1-2). The tank, designated UST 104, was located next to Industrial Road, approximately 50 feet south of the Building 3450 access road. UST 104 was constructed of unprotected steel and installed next to a steel containment area referred to by site personnel as an "oil pit." At the time of removal, the pit contained a variety of piping, valves, and a rubber hose on a steel reel and was covered with a concrete cap. The purpose of the pit is uncertain, although the suspected usage was to dispense lubrication oil and air during aircraft maintenance.

UST 104 was removed on September 13, 1994, by Phoenix Construction Company and their subcontractor, GT Environmental Services, Inc. (GTES). During the tank removal operations, a visual observation of soil and groundwater contamination was reported by GTES personnel. ABB Environmental Services, Inc. (ABB-ES) personnel confirmed this visual observation: the excavated soil was heavily stained, and free-floating product was present in the excavation. No confirmatory samples were collected by GTES. Subsequent to UST 104 removal, all excavated soil was returned to the excavation.

Site 2, UST 104, was transferred to ABB-ES in late September 1994 for closure. The closure report and discharge reporting form for UST 104 are presented in Appendix A of the AVGAS Pipeline Area Contamination Assessment Report (CAR) submitted by ABB-ES in August 1995.

In January 1995, the demolition of Chevalier Field commenced. The airfield and many of its associated facilities are being demolished as part of the Base Realignment and Closure (BRAC) program. A Naval Technical Training Center is being constructed on the former airfield.

As a result of BRAC construction, Site 2 underwent drastic changes during the course of this investigation. The maps included in this report present the Site 2 area as it was prior to demolition and construction. Changes that occurred in the site area which affected the investigation are discussed in the text of this report.

The following report summarizes the data gathered during the Site 2, UST 104, closure and subsequent contamination assessment (CA). General information such as regional and local physiography, regional hydrology, investigative methodologies, and procedures are included in the August 1995 AVGAS Pipeline Area CAR.

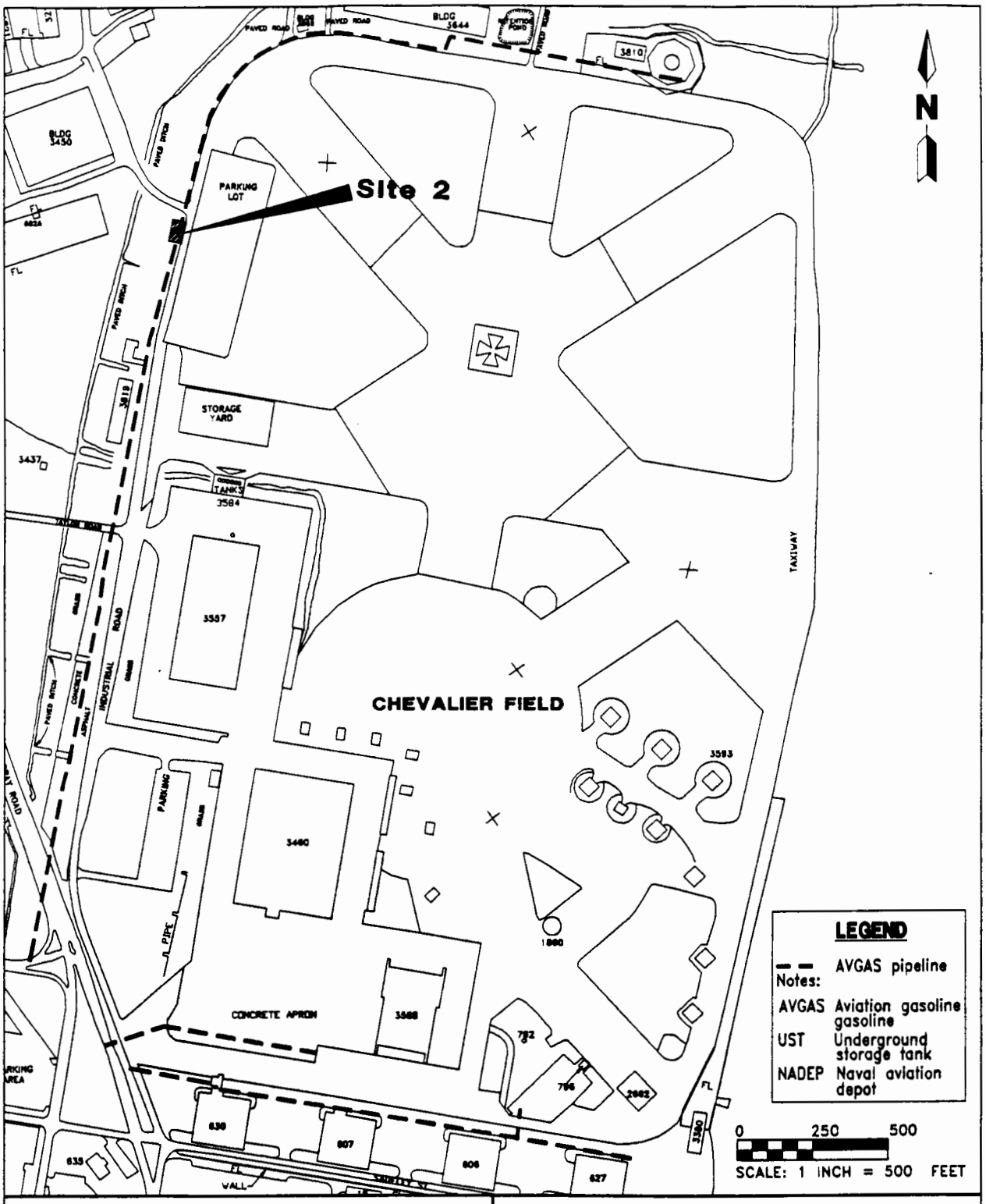

FIGURE 1-1
SITE LOCATION MAP

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CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 2, UST 104

NADEP PENSACOLA
PENSACOLA, FLORIDA

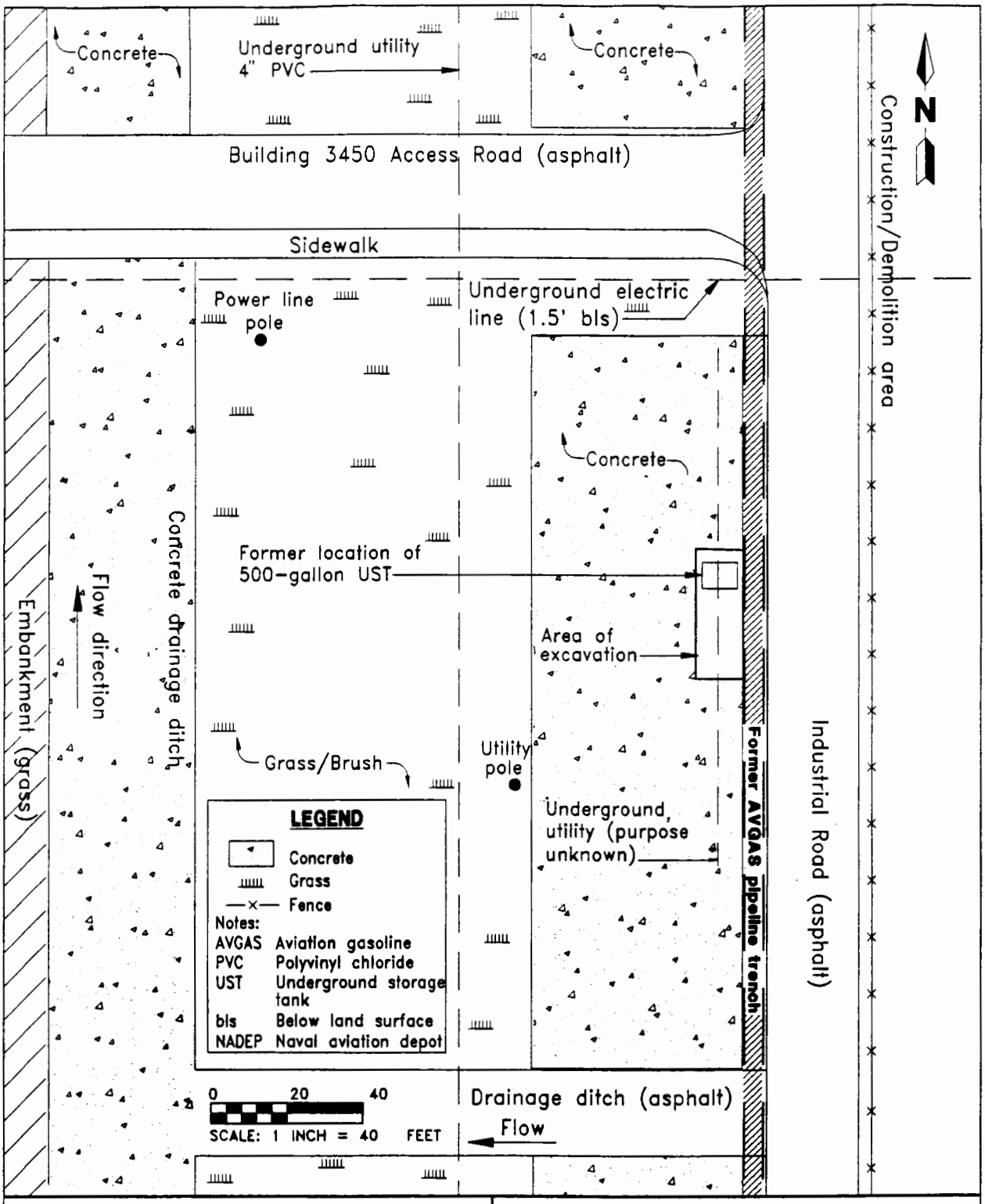

FIGURE 1-2
SITE PLAN, JANUARY 1995

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2.0 CONTAMINATION ASSESSMENT RESULTS

2.1 SOIL ASSESSMENT RESULTS. All laboratory analytical soil samples were collected in accordance with ABB-ES's approved Comprehensive Quality Assurance Plan (CompQAP) using a hand-operated auger. 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.

2.1.1 Initial Soil Assessment On September 22, 1994, ABB-ES personnel advanced five soil borings (02B001 through 02B005) around the perimeter of the UST excavation area with a stainless-steel hand-operated auger. Three data points, APA-SB106 through APA-SB108, from the AVGAS pipeline abandonment project were also used for this investigation. Table 2-1 summarizes the data collected from these borings. Figure 2-1 presents the lithologic soil boring locations and organic vapor analyzer (OVA) screening results. Lithologic logs are presented in Appendix B of this report.

Table 2-1
Summary of Lithologic Soil Boring Data,
September 1994

Contamination Assessment Report Addendum
Site 2, UST 104, Naval Aviation Depot
Pensacola, Florida

Soil Boring Designation	Sample Depth (feet bls)	Unfiltered OVA Reading[1] (ppm)	Visual Observations
02B001	1.0 to 3.0	<1	No staining, no petroleum odor
02B002	1.0 to 3.0	<1	No staining, no petroleum odor
02B003	1.0 to 3.0	<1	No staining, no petroleum odor
02B004	2.5 to 3.0	<1	No staining, no petroleum odor
02B005	2.0 to 2.5	<1	No staining, no petroleum odor
APA-SB106	2.0 to 3.0	<1	No staining, no petroleum odor
APA-SB107	2.0 to 3.0	<1	No staining, no petroleum odor
APA-SB108	2.0 to 3.0	<1	No staining, no petroleum odor

[1]Filtered readings were not taken due to the very low volatile concentrations encountered at the sites.

Notes: UST = underground storage tank.
OVA = organic vapor analyzer.
bls = below land surface.
ppm = parts per million.
< = less than.

The purpose of these borings was to gather lithologic information and visually inspect the soil around the UST 104 removal excavation for contamination. OVA headspace measurements were also collected from these borings. Visual inspection did not reveal staining around the former excavation area and volatile organic compound (VOC) concentrations were less than the OVA detection limit of 1 part per million (ppm).

On October 26, 1994, a composite soil sample, 02B00601, was collected from the soil that had been returned to the Site 2 excavation area. This sample was composited from soil collected at each corner and the center of the UST excavation area from 2.5 to 3 feet below land surface (bls). The sample was analyzed for the used oil analytical group described in Chapter 62-770.600(8),

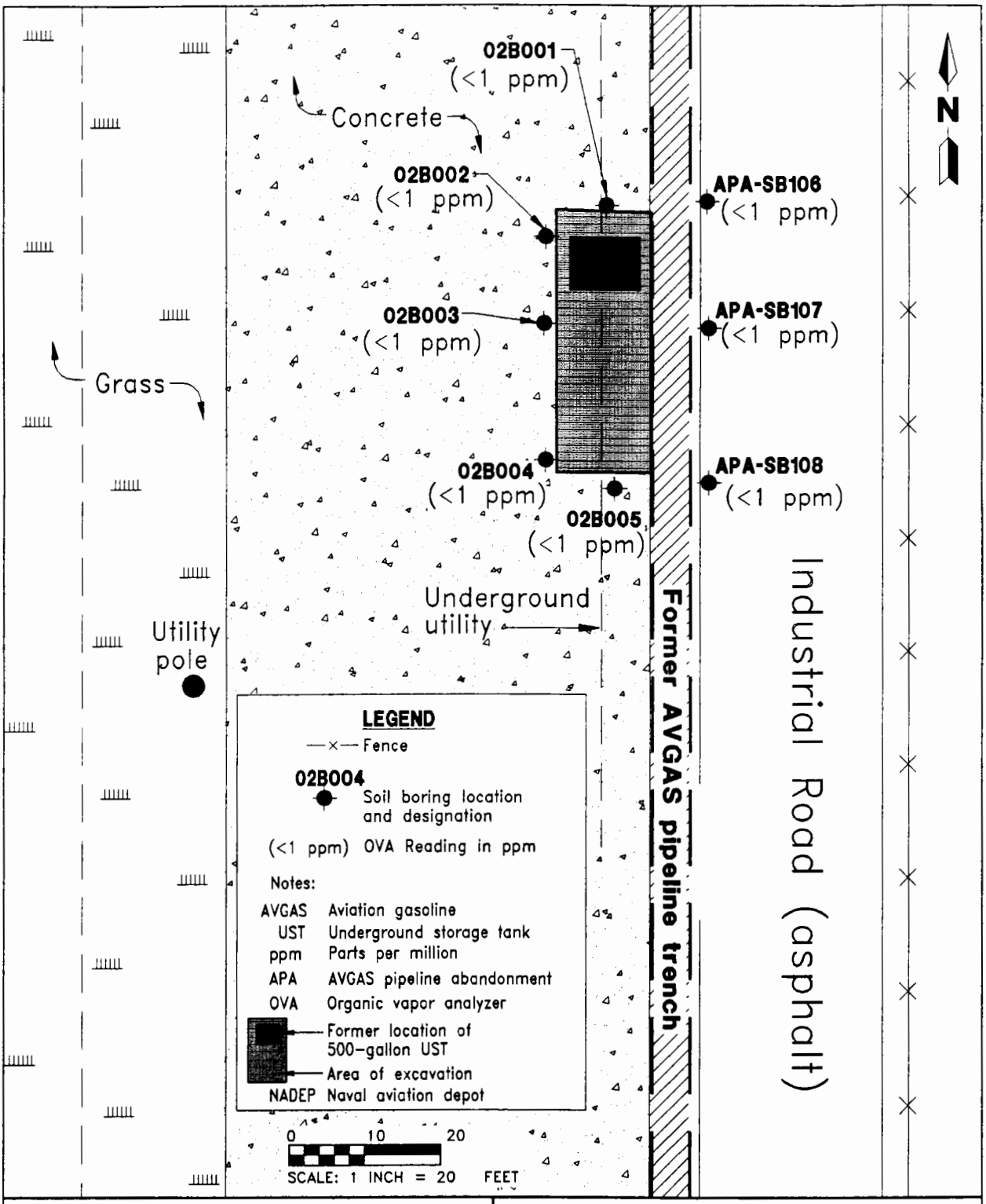

FIGURE 2-1
LITHOLOGIC SOIL BORING LOCATIONS AND SCREENING RESULTS, SEPTEMBER 22, 1994

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Florida Administrative Code (FAC). Figure 2-2 presents the composite soil sampling locations and the analytical results of 02B00601. Laboratory data sheets for all analytical soil samples are included in Appendix C of this report.

A total polynuclear aromatic hydrocarbons (PAH) concentration of 59,400 parts per billion (ppb) and a total recoverable petroleum hydrocarbons (TRPH) concentration of 59,800 ppm were detected in the soil sample 02B00601. Due to the high total PAH concentrations detected in 02B00601, a TRPH clean soil maximum concentration of 10 ppm was applied to the site according to Chapter 62-775.400, FAC. Total volatile organic aromatics (VOA), cadmium, chromium, arsenic, and lead concentrations were below the respective State maximum concentration levels.

On January 18, 1995, excessively contaminated soil from the former location of UST 104 was removed by Bechtel Environmental, Inc. (BEI). The excavation area is shown on Figure 2-1. Approximately 82 cubic yards of soil were removed from an area approximately 37 feet by 17 feet. Excavation continued until the water table was reached at 3.5 feet bls. The soil removed from the site primarily consisted of fine-grained, well-sorted sand, ranging in color from very light gray to dark gray. ABB-ES personnel present during the excavation reported that no stained soil was present on the excavation walls. Free product was not observed in the January 1995 excavation. The excavation was backfilled with clean soil. The contaminated soil from Site 2 was stockpiled with soil excavated from other lube-oil USTs during BEI excavation activities at Chevalier Field. In May 1995, the stockpiled soil was removed from the base and taken to an incineration facility for thermal treatment. The soil transportation manifests and receipts are included in the appendices of the AVGAS Pipeline Area CAR submitted to the Florida Department of Environmental Protection (FDEP) in August 1995.

2.1.2 Confirmatory Soil Assessment On January 31 and February 1, 1995, five confirmatory soil samples, 02B00702 through 02B01102, were collected around the perimeter of the excavation area. These soil samples were collected from 2 feet bls. All four of the samples were analyzed for TRPH, arsenic, cadmium, chromium, and lead, in accordance with Chapter 62-770.600, FAC. Table 2-2 summarizes the confirmatory sampling analytical results. Figure 2-3 presents confirmatory sample locations and laboratory analytical results.

A TRPH concentration of 6.8 ppm was detected in sample 02B01002. A lead concentration of 0.31 ppm was detected in soil samples 02B00702 and 02B00902. The concentrations of all contaminants detected in the confirmatory samples were below the State maximum concentrations listed in Chapter 17-775, FAC. Cadmium, chromium, and arsenic were not detected in any confirmatory sample.

2.2 GROUNDWATER ASSESSMENT.

2.2.1 Monitoring Well Installation In January and February 1995, ABB-ES personnel supervised the installation of 12 shallow monitoring wells and one deep monitoring well in and around the source area of Site 2. The shallow monitoring wells were designated 02G001 through 02G011 and 02G013. All shallow monitoring wells, except 02G001, were installed to a depth of 12 feet bls per FDEP guidelines (FDEP, August 1993). Monitoring well 02G001 was installed to a depth

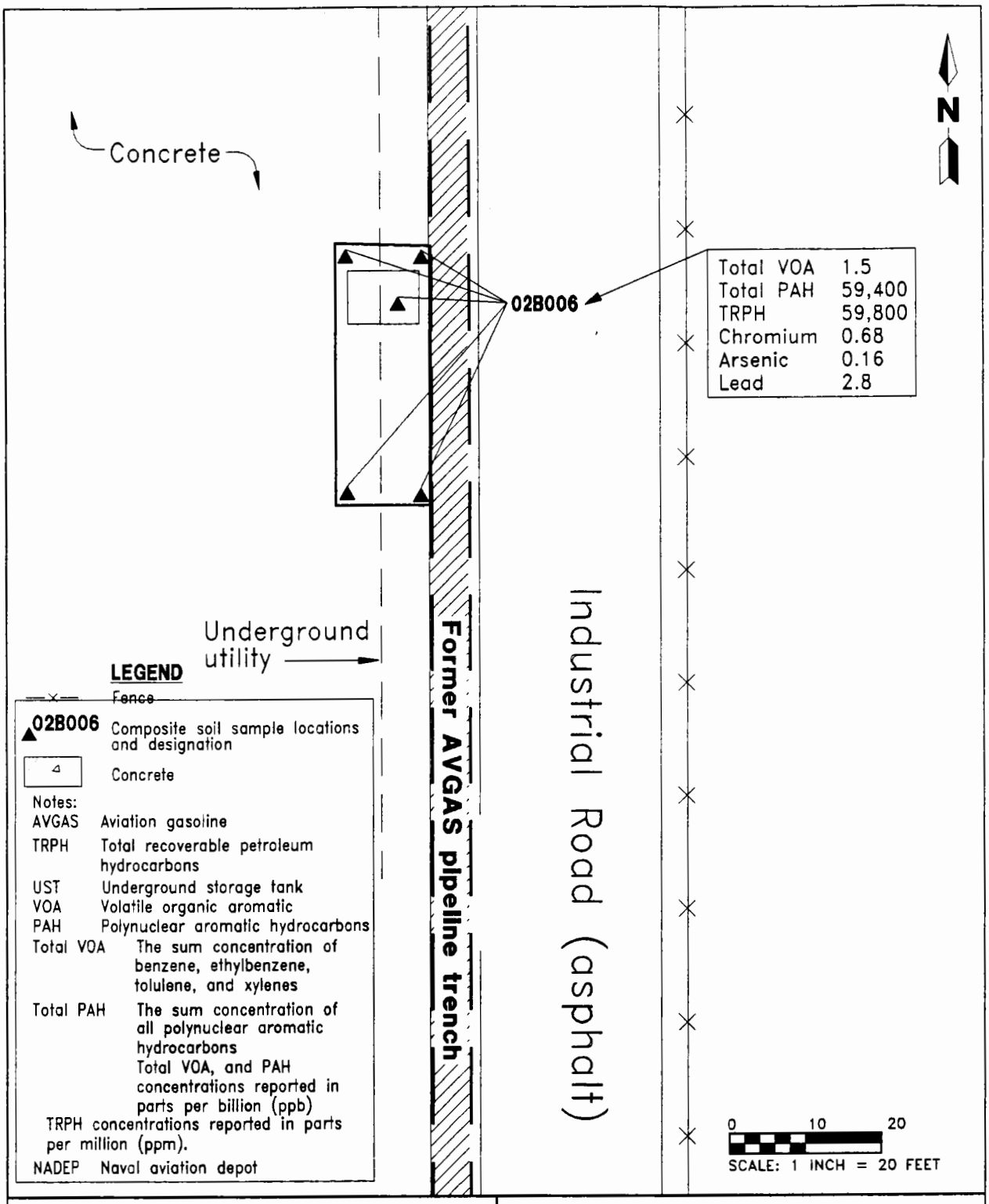

FIGURE 2-2
ANALYTICAL RESULTS OF 02B00601, OCTOBER 26, 1994

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CONTAMINATION ASSESSMENT REPORT ADDENDUM
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Table 2-2
Summary of Soil Sample Analytical Results, October 1994 and January and February 1995

Contamination Assessment Report Addendum
Site 2, UST 104, Naval Aviation Depot
Pensacola, Florida

Contaminant	Soil Sample Designation						Clean Soil Maximum Concentration[1]
	02B00601	02B00702	02B00802	02B00902	02B01002[2]	02B01102	
Volatile Organic Aromatics (VOA). Reported in parts per billion (ppb).							
Toluene	1.5 J	NS	NS	NS	NS	NS	
Total VOA	1.5	NS	NS	NS	NS	NS	100
Polynuclear Aromatic Hydrocarbons (PAH). Reported in ppb.							
Acenaphthene	2,400 J	NS	NS	NS	NS	NS	
Anthracene	3,300 J	NS	NS	NS	NS	NS	
Benzo(a)anthracene	4,600 J	NS	NS	NS	NS	NS	
Benzo(b)fluoranthene	2,900 J	NS	NS	NS	NS	NS	
Benzo(k)fluoranthene	3,400 J	NS	NS	NS	NS	NS	
Benzo(a)pyrene	2,900 J	NS	NS	NS	NS	NS	
Chrysene	5,500 J	NS	NS	NS	NS	NS	
Fluoranthene	13,000	NS	NS	NS	NS	NS	
Fluorene	1,700 J	NS	NS	NS	NS	NS	
Phenanthrene	9,900	NS	NS	NS	NS	NS	
Pyrene	8,800	NS	NS	NS	NS	NS	
Total PAH	59,400	NS	NS	NS	NS	NS	1000
Total Recoverable Petroleum Hydrocarbons (TRPH). Reported in parts per million (ppm).							
TRPH	59,800	<5.5	<5.2	<5.2	6.8	<5.4	10
Total Metals. Reported in milligrams per kilogram (mg/kg).							
Cadmium	<0.50	<0.55	<0.52	<0.52	<0.51	<0.54	37
Chromium	0.68 J	<2.8	<2.6	<2.6	<2.5	<2.7	50
Arsenic	0.16 J	<0.28	<0.26	<0.26	<0.25	<0.27	10
Lead	2.8	0.31	<0.26	0.31	<0.25	<0.27	108

[1]Chapter 62-775.400, Florida Administrative Code.
[2]Concentrations listed for this sample are the highest concentration detected in 02B01002 or its duplicate sample, 02B01002D.

Notes: UST = underground storage tank.
Total VOA = the sum concentration of benzene, toluene, ethylbenzene, and xylenes.
Total PAH = the sum concentration of PAH compounds detected by U.S. Environmental Protection Agency (USEPA) Method 8270A.
J = estimated concentration.
NS = sample not submitted for volatile or semivolatiles analysis.
< = less than.

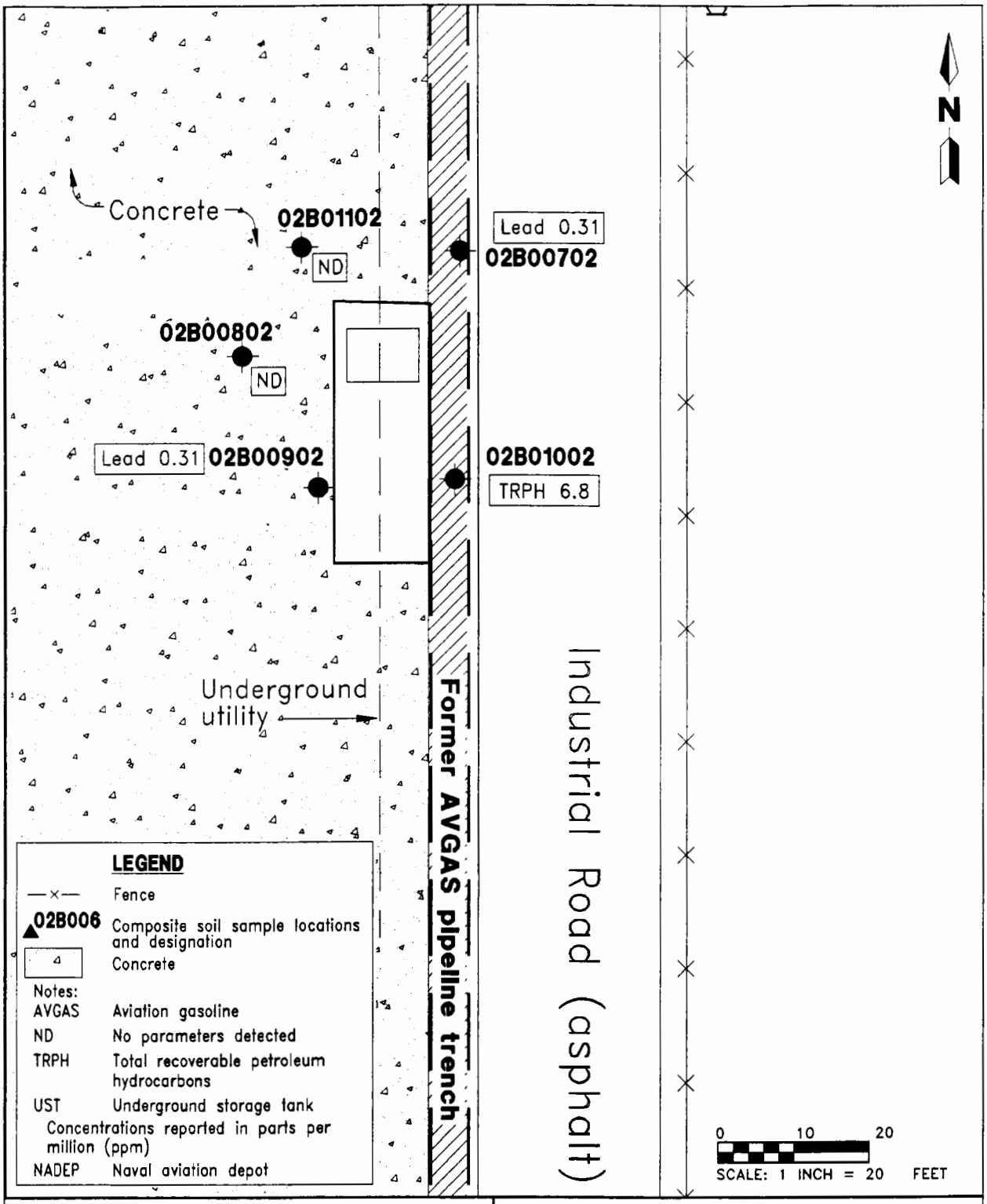

FIGURE 2-3
CONFIRMATORY LOCATIONS AND ANALYTICAL SOIL SAMPLE RESULTS, JANUARY AND FEBRUARY 1995

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of 11 feet bls near the center of the source area so that free-floating product, if present, could enter the monitoring well. The deep well was designated 02G012 and installed to a depth of 35 feet bls.

In March 1995, four monitoring wells (02G003, 02G007, 02G008, and 02G012) were destroyed by BRAC construction activities prior to sampling. These monitoring wells were replaced with temporary monitoring wells: 02Z003, 02Z007, 02Z008, and 02Z012. The temporary monitoring wells were installed to the same depth as the original monitoring wells and placed as close to the original locations as possible.

Temporary and permanent monitoring well construction details are included in the August 1995 AVGAS Pipeline Area CAR. Monitoring well logs for all permanent monitoring wells installed at Site 2 are included in Appendix B of this report. Figure 2-4 presents Site 2 monitoring well locations.

2.2.2 Site-Specific Hydrology Groundwater levels were measured at Site 2 on February 13, 1995, to assess elevation and flow direction of the water table. Groundwater elevation was calculated using the field-surveyed top-of-casing elevation data for each monitoring well and correlating the elevation data to a common arbitrary datum. Figure 2-5 presents the water-table elevation contour map for Site 2. Table 2-3 presents the top-of-casing elevations, total depths, and groundwater elevations for Site 2.

Groundwater flow direction is predominantly west. No free product was detected in any Site 2 monitoring well during groundwater-level measurement. No slug tests were conducted at Site 2.

2.2.3 Groundwater Assessment Results In March 1995, all Site 2 monitoring wells were analyzed for used oil group parameters described in Chapter 62-770.800, FAC. These parameters include volatile organics, base/neutral/acid extractables, TRPH, arsenic, cadmium, chromium, and lead. Tentatively identified compounds (TICs), contaminants with only a 50 percent accuracy level, were also reported. There are no State target levels or guidance concentrations for TICs. No free product was observed during this sampling event.

All groundwater samples were collected in accordance with ABB-ES's approved CompQAP using an extruded Teflon™ bailer. 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 Appendix D of this report. Figure 2-6 shows the distribution of laboratory analytical results. Table 2-4 summarized the compounds detected in each monitoring well sample. Tables 2-5 through 2-7 present the TICs concentrations detected in each sample.

Benzene was not detected in any groundwater sample. Total VOA concentrations of 1.5 ppb and 3.8 ppb were detected in the groundwater samples collected from 02Z007 and 02Z012, respectively. Total VOA concentrations were below method detection limits in all other groundwater samples. The Florida No Further Action target level for total VOA is 50 ppb.

TRPH and cadmium were not detected in any groundwater sample. Chromium and arsenic concentrations detected in Site 2 groundwater samples were below the Florida No Further Action target levels of 10 ppb and 50 ppb, respectively.

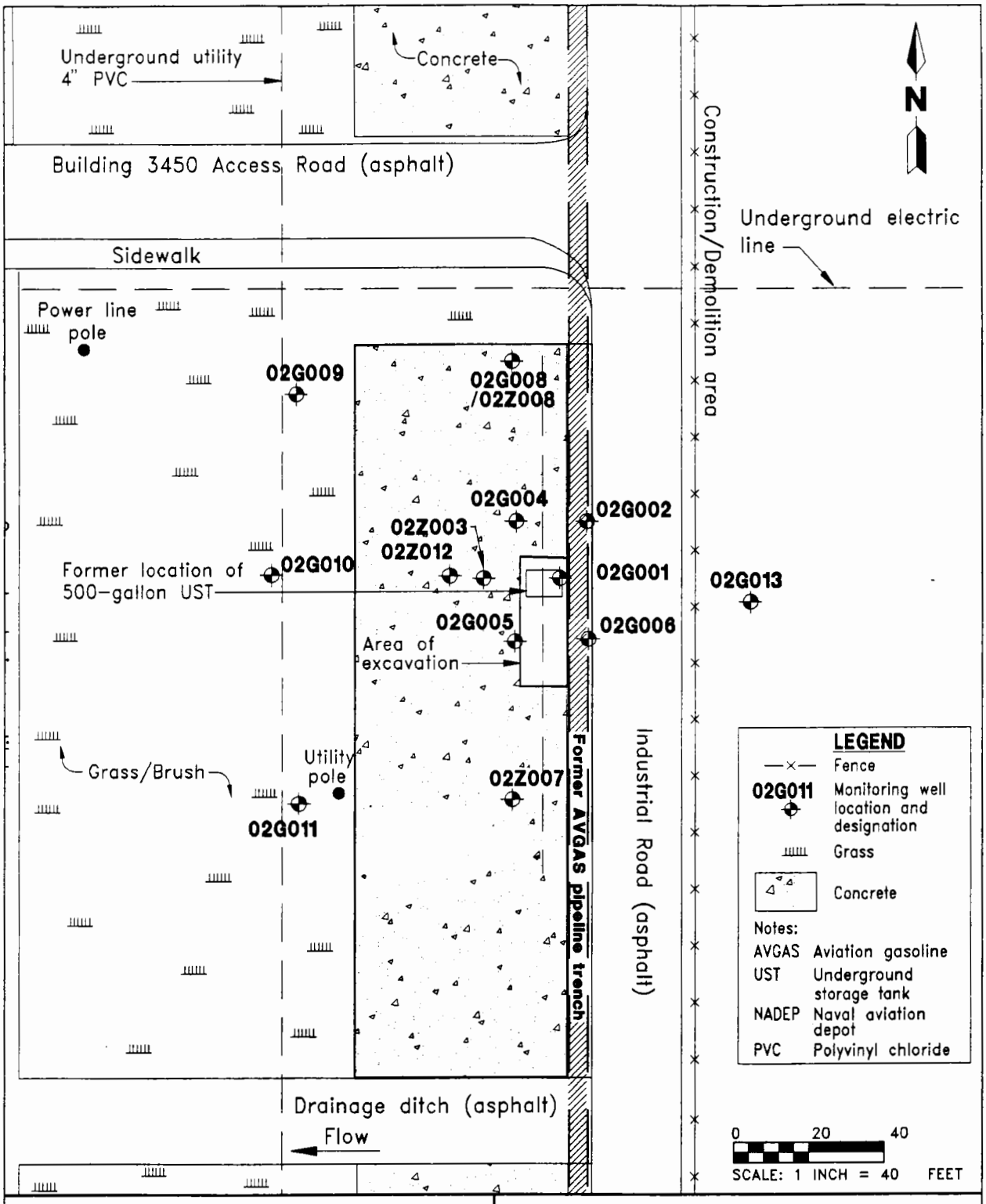

FIGURE 2-4
MONITORING WELL LOCATION MAP

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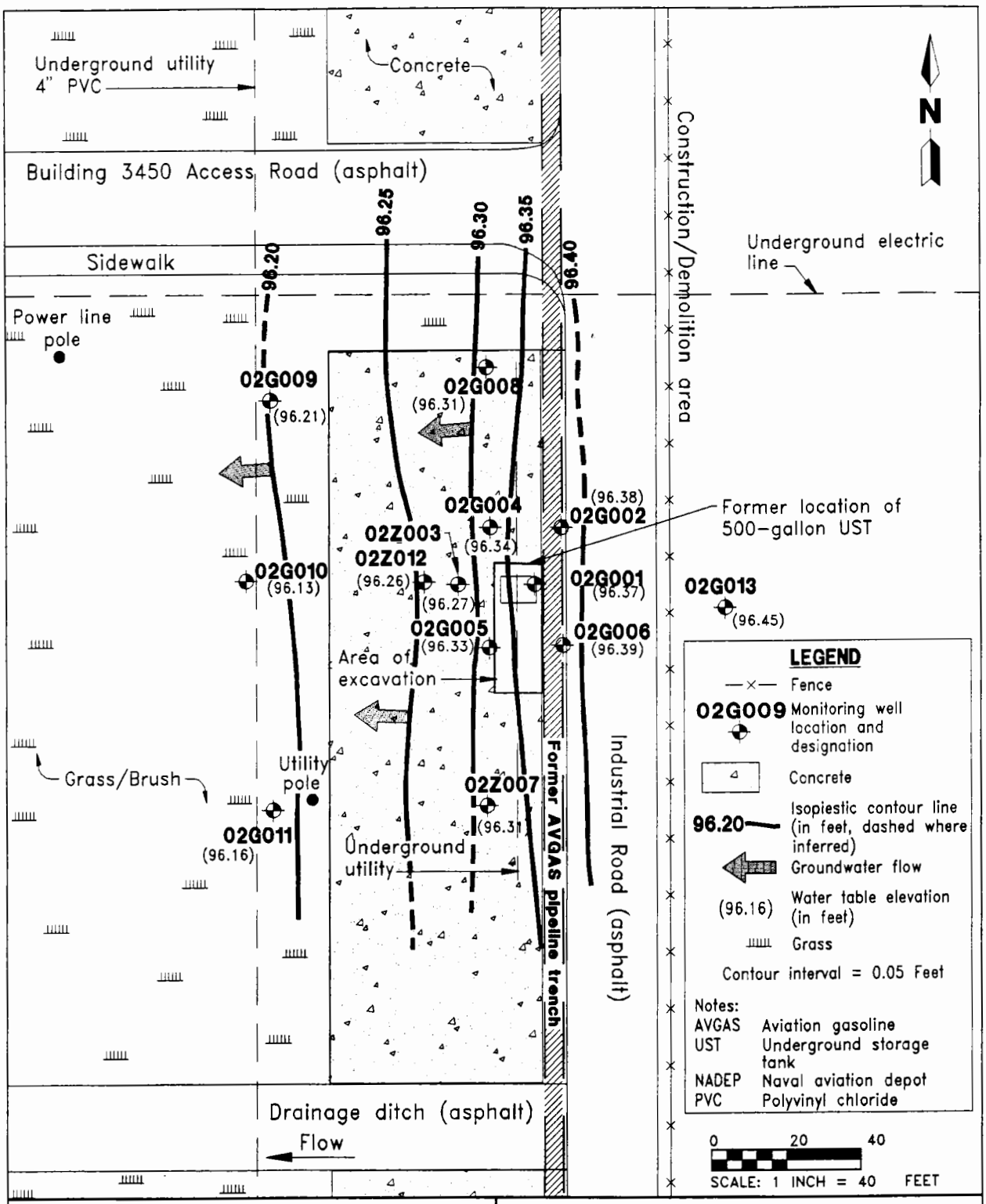

FIGURE 2-5
WATER TABLE ELEVATION CONTOUR MAP, FEBRUARY 13, 1995

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CONTAMINATION ASSESSMENT REPORT ADDENDUM
SITE 2, UST 104

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Table 2-3
Top-of-Casing and Groundwater Elevations, February 13, 1995

Contamination Assessment Report Addendum
Site 2, UST 104, Naval Aviation Depot
Pensacola, Florida

Monitoring Well Designation	Total Depth	Top-of-Casing Elevation	Depth to Groundwater	Groundwater Elevation
02G001	11.15	100.00	3.63	96.37
02G002	12.25	99.98	3.60	96.38
02G003	12.39	100.15	3.88	96.27
02G004	12.28	100.06	3.72	96.34
02G005	12.39	100.01	3.68	96.33
02G006	12.32	99.80	3.41	96.39
02G007	12.40	99.89	3.58	96.31
02G008	12.11	100.00	3.69	96.31
02G009	12.37	101.73	5.52	96.21
02G010	12.08	102.08	5.95	96.13
02G011	12.10	102.00	5.84	96.16
02G012	35.54	100.42	4.16	96.26
02G013	12.37	100.56	4.11	96.45

Notes: All depths and elevations recorded in feet.
Elevations are based on an arbitrary elevation of 100 feet for 1IG001.

UST = underground storage tank.

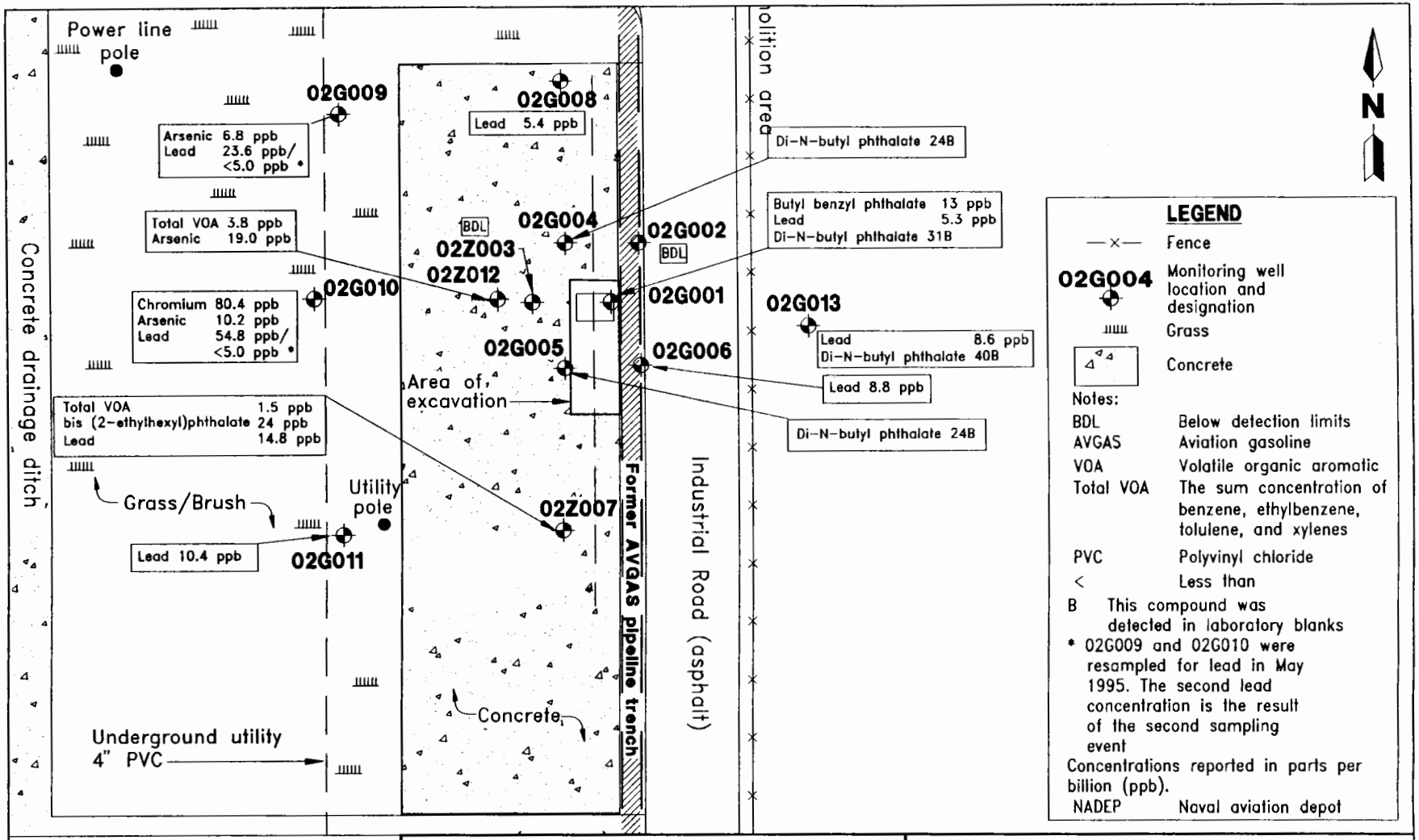

FIGURE 2-6
GROUNDWATER CONTAMINATION DISTRIBUTION MAP, MARCH 1995

CONTAMINATION ASSESSMENT REPORT ADDENDUM
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PENSACOLA, FLORIDA

Table 2-4
Summary of Groundwater Analytical Results, March 1995

Contamination Assessment Report
Site 2, UST 104, Naval Aviation Depot
Pensacola, Florida

Contaminant	Groundwater Sample Designation							State No Further Action Target Levels[1]
	02G00101	02G00201	02Z00302	02G00401	02G00501	02G00601	02Z00702	
Volatile Organic Aromatics (VOA). Reported in ppb.								
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	1.5	
Total xylenes	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Total VOA	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	1.5	50
Butyl benzyl phthalate	13	<10	<10	<10	<10	<10	<10	
Di-n-butyl phthalate	31 B	<10	<10	24 B	24 B	<10	<10	
Bis(2-Ethylhexyl)phthalate	<10	<10	<10	<10	<10	<10	24	
Total Recoverable Petroleum Hydrocarbons (TRPH). Reported in ppm.								
TRPH	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	5
Total Metals. Reported in ppb.								
Cadmium	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	10
Chromium	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	50
Arsenic	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	50
Lead[2]	5.3	<5.0	<5.0	<5.0	<5.0	8.8	14.8	50

See notes at end of table

Table 2-4, (Continued)
Summary of Groundwater Analytical Results,
March and April 1995

Contamination Assessment Report
Site 2, UST 104, Naval Aviation Depot
Pensacola, Florida

Contaminant	Groundwater Sample Designation								State No Further Action Target Levels[1]
	02Z00802	02G00902	02G00903	02G01002[3]	02G01003	02G01102	02Z01202	02G01301	
VOA. Reported in ppb.									
Benzene	<1.0	<1.0	NS	<1.0	NS	<1.0	<1.0	<1.0	1
Toluene	<1.0	<1.0	NS	<1.0	NS	<1.0	2.2	<1.0	
Total xylenes	<1.0	<1.0	NS	<1.0	NS	<1.0	1.6	<1.0	
Total VOA	<4.0	<4.0	NS	<4.0	NS	<4.0	3.8	<4.0	50
Butyl benzyl phthalate	<10	<10	NS	<10	NS	<10	<10	<10	
Di-n-butyl phthalate	<10	<10	NS	<10	NS	<10	<10	40 B	
Bis(2-Ethylhexyl)-phthalate	<10	<10	NS	<10	NS	<10	<10	<10	
TRPH. Reported in ppm.									
TRPH	<1.0	<1.0	NS	<1.0	NS	<1.0	<1.0	<1.0	5
Total Metals. Reported in ppb.									
Cadmium	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	10
Chromium	<50.0	<50.0	<50.0	80.4	<50.0	<50.0	<50.0	<50.0	50
Arsenic	<5.0	6.8	<5.0	10.2	<5.0	<5.0	19.0	<5.0	50
Lead[2]	5.4	23.6	<5.0	54.8	<5.0	10.4	<5.0	8.6	50

[1]No Further Action and Monitoring Only Guidelines for Petroleum Contaminated Sites, Division of Waste Management, Bureau of Waste Cleanup, October 1990.
[2]Lead was detected in the equipment blank at a concentration of 44.8 ppb.
[3]The concentrations reported for groundwater sample 02G01002 are the highest concentrations detected for that sample or its duplicate sample.

Notes: UST = underground storage tank.
Total VOA = the sum concentration of benzene, toluene, ethylbenzene, and xylenes.
B = compound detected in a laboratory method blank associated with this sample.
NS = not sampled.
< = less than.

Table 2-5
Summary of Groundwater Analytical Results, Tentatively Identified Compounds, 02G00101 through 02G00501

Contamination Assessment Report
Site 2, UST 104, Naval Aviation Depot
Pensacola, Florida

Tentatively Identified Compound	Groundwater Sample Designation				
	02G00101	02G00201	02Z00302	02G00401	02G00501
1,2,4-trithiolane	ND	ND	12	ND	ND
Thiourea	ND	ND	6	ND	ND
Caprolactam	35	160	26	8	250
2(2-methoxyethoxy)ethoxy-ethanol	ND	ND	ND	ND	10
6-hexylhexan-6-olide	ND	ND	ND	ND	5
5-methyl-2(5h)-thiophenone	ND	ND	ND	ND	8
R(+)-6-methyl-3-isopropyltetrahydro(2h)p	ND	ND	6	ND	ND
Maleic hydrazide	27	ND	16	ND	8
2-methylene-butanenitrile	ND	ND	ND	ND	ND
2-ethyl-1-hexanol	ND	ND	ND	ND	ND
2-hydroxy-5-ethyl-5-methyl-cyclopent-2-en	ND	ND	ND	ND	ND
2-hydroxy-3-methyl-2-cyclopenten	ND	ND	ND	ND	ND
3-ethyl-1,2,4-cyclopentanetrione	ND	ND	ND	ND	ND
dipropylhydrazone formaldehyde	ND	ND	ND	ND	ND
1,4-dioxaspiro{4.5}decane	ND	ND	ND	ND	ND
1-isocyanato-dodecane	ND	ND	ND	ND	ND
3,6,9,12,15-pentaxanonadecan-1-ol	ND	ND	ND	ND	ND
1-heptadecanol	5	ND	ND	ND	ND
1-nonadecanol	14	ND	ND	ND	ND
Boroxazolidin	8	15	ND	ND	ND
15-crown-5	ND	ND	ND	ND	ND
Stirofos	ND	ND	ND	16	ND
Carbon disulfide	ND	ND	ND	ND	2
p-xylene	ND	ND	ND	6	ND
Ethylbenzene	ND	ND	ND	6	ND

See notes at end of table.

Table 2-5 (Continued)
Summary of Groundwater Analytical Results, Tentatively Identified Compounds, 02G00101 through 02G00501

Contamination Assessment Report
Site 2, UST 104, Naval Aviation Depot
Pensacola, Florida

Tentatively Identified Compound	Groundwater Sample Designation				
	02G00101	02G00201	02Z00302	02G00401	02G00501
Acetone	ND	ND	ND	ND	ND
Sulfur	ND	ND	ND	ND	ND
1-undecanol	ND	ND	ND	ND	ND
15-tetracosenoic acid, methyl ester	ND	ND	ND	ND	ND
4-amino-5-methyl-2(1H)-pyrimidinone	4	ND	ND	ND	ND
Octicizer	9	ND	ND	ND	ND
3-nitro-1,2-benzenedicarboxylic acid	15	ND	ND	ND	ND
2-chloro-4-fluoroaniline	5	ND	ND	ND	ND
1,2-benzenedicarboxylic, butyl octy	ND	ND	ND	ND	ND
1,6-dimethyl-3-piperidinol	ND	ND	ND	ND	ND
1,4,7,10,13,16-hexaoxacyclooctadecane	ND	ND	ND	ND	ND
(1S,2S)-1,2-dihydroxy-4,7,10,13-tetraoxa	ND	ND	ND	ND	ND
1,2,3,6-tetrahydro-1-nitroso-pyridine	5	ND	ND	ND	ND

Notes: Concentrations are estimated and reported in parts per billion.

UST = underground storage tank.
ND = not detected at a concentration above the method detection limit.

Table 2-6
Summary of Groundwater Analytical Results, Tentatively Identified Compounds, 02G00601 through 02G01002

Contamination Assessment Report
Site 2, UST 104, Naval Aviation Depot
Pensacola, Florida

Tentatively Identified Compound	Groundwater Sample Designation				
	02G00601	02Z00702	02Z00802	02G00901	02G01002
1,2,4-trithiolane	ND	ND	ND	ND	ND
Thiourea	ND	ND	ND	ND	ND
Caprolactam	480	160	ND	18	71
2(2-methoxyethoxy)ethoxy-ethanol	4	ND	ND	ND	ND
6-hexylhexan-6-olide	ND	ND	ND	ND	ND
5-methyl-2(5H)-thiophenone	ND	ND	ND	ND	ND
R(+)-6-methyl-3-isopropyltetrahydro(2H)p	33	ND	ND	ND	ND
Maleic hydrazide	6	30	7	10	23
2-methylene-butanenitrile	16	ND	ND	ND	ND
2-ethyl-1-hexanol	ND	5	ND	ND	ND
2-hydroxy-5-ethyl-5-methyl-cyclopent-2-en	ND	6	ND	ND	ND
2-hydroxy-3-methyl-2-cyclopenten	ND	ND	ND	28	ND
3-ethyl-1,2,4-cyclopentanetrione	ND	ND	ND	ND	ND
Dipropylhydrazone formaldehyde	ND	7	ND	ND	ND
1,4-dioxaspiro{4.5}decane	ND	7	ND	ND	ND
1-isocyanato-dodecane	ND	ND	ND	ND	ND
3,6,9,12,15-pentaxanonadecan-1-ol	ND	ND	ND	ND	ND
1-heptadecanol	ND	ND	ND	ND	ND
1-nonadecanol	ND	ND	ND	ND	ND
Boroxazolidin	ND	38	ND	ND	6
15-crown-5	ND	40	ND	ND	ND
Stirofos	ND	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	ND	ND
p-xylene	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND

See notes at end of table.

Table 2-6 (Continued)
Summary of Groundwater Analytical Results,
Tentatively Identified Compounds,
02G00601 through 02G01002

Contamination Assessment Report
Site 2, UST 104, Naval Aviation Depot
Pensacola, Florida

Tentatively Identified Compound	Groundwater Sample Designation				
	02G00601	02Z00702	02Z00802	02G00901	02G01002
Acetone	ND	ND	ND	20	ND
Sulfur	ND	ND	ND	ND	16
1-undecanol	ND	ND	ND	ND	13
15-tetracosenoic acid, methyl ester	ND	ND	ND	ND	ND
4-amino-5-methyl-2(1H)-pyrimidinone	ND	ND	ND	ND	ND
Octicizer	ND	ND	ND	ND	ND
3-nitro-1,2-benzenedicarboxylic acid	ND	ND	ND	ND	ND
2-chloro-4-fluoroaniline	ND	ND	ND	ND	ND
1,2-benzenedicarboxylic, butyl octy	ND	ND	ND	ND	ND
1,6-dimethyl-3-piperidinol	ND	ND	ND	ND	ND
1,4,7,10,13,16-hexaoxacyclooctadecane	ND	14	ND	ND	ND
(1S,2S)-1,2-dihydroxy-4,7,10,13-tetraoxa	ND	ND	ND	ND	ND
1,2,3,6-tetrahydro-1-nitroso-pyridine	ND	ND	ND	ND	ND

Notes: Concentrations are estimated and reported in parts per billion.

UST = underground storage tank.
ND = not detected at a concentration above the method detection limit.

Table 2-7
Summary of Groundwater Analytical Results, Tentatively Identified Compounds, 02G01102 through 02G01301

Contamination Assessment Report
Site 2, UST 104, Naval Aviation Depot
Pensacola, Florida

Tentatively Identified Compound	Groundwater Sample Designation		
	02G01102	02Z01202	02G01301
1,2,4-trithiolane	ND	ND	ND
Thiourea	ND	ND	ND
Caprolactam	33	130	76
2(2-methoxyethoxy)ethoxy-ethanol	ND	ND	ND
6-hexylhexan-6-olide	ND	ND	ND
5-methyl-2(5H)-thiophenone	ND	ND	ND
R(+)-6-methyl-3-isopropyltetrahydro(2H)p	ND	ND	ND
Maleic hydrazide	ND	44	ND
2-methylene-butanenitrile	ND	ND	ND
2-ethyl-1-hexanol	ND	ND	ND
2-hydroxy-5-ethyl-5-methyl-cyclopent-2-en	ND	ND	ND
2-hydroxy-3-methyl-2-cyclopenten	ND	ND	ND
3-ethyl-1,2,4-cyclopentanetrione	4	ND	6
Dipropylhydrazone formaldehyde	ND	ND	ND
1,4-dioxaspiro{4.5}decane	ND	ND	ND
1-isocyanato-dodecane	ND	8	ND
3,6,9,12,15-pentaxanonadecan-1-ol	ND	4	ND
1-heptadecanol	ND	ND	ND
1-nonadecanol	ND	ND	ND
Boroxazolidin	ND	ND	ND
15-crown-5	ND	42	ND
Stirofos	ND	ND	ND
Carbon disulfide	ND	8	ND
P-xylene	ND	ND	ND
Ethylbenzene	ND	ND	ND

See notes at end of table.

Table 2-7 (Continued)
Summary of Groundwater Analytical Results, Tentatively Identified Compounds, 02G01102 through 02G01301

Contamination Assessment Report
Site 2, UST 104, Naval Aviation Depot
Pensacola, Florida

Tentatively Identified Compound	Groundwater Sample Designation		
	02G01102	02Z01202	02G01301
Acetone	ND	ND	ND
Sulfur	ND	ND	ND
1-undecanol	ND	ND	ND
15-tetracosenoic acid, methyl ester	10	ND	ND
4-amino-5-methyl-2(1H)-pyrimidinone	ND	ND	ND
Octicizer	ND	ND	ND
3-nitro-1,2-benzenedicarboxylic acid	ND	ND	ND
2-chloro-4-fluoroaniline	ND	ND	ND
1,2-benzenedicarboxylic, butyl octy	ND	20	ND
1,6-dimethyl-3-piperidinol	ND	26	ND
1,4,7,10,13,16-hexaoxacyclooctadecane	ND	ND	ND
(1S,2S)-1,2-dihydroxy-4,7,10,13-tetraoxa	ND	18	ND
1,2,3,6-tetrahydro-1-nitroso-pyridine	ND	ND	ND

Notes: Concentrations are estimated and reported in parts per billion.

UST = underground storage tank.
ND = not detected at a concentration above the method detection limit.

Lead was detected in 8 of 13 groundwater samples. The highest lead concentrations were detected in monitoring well samples 02G00901 (23.6 ppb) and 02G01002 (54.8 ppb). These monitoring wells were sampled again on May 3, 1995, using a low-flow sampling method and analyzed for lead. Lead concentrations from the second round of sampling were below method detection limits. All other lead concentrations were below the Chapter 62-770.730(5)(a), FAC, target level of 50 ppb.

Butyl benzyl phthalate, di-n-butyl phthalate, and bis(2-ethylhexyl)phthalate were detected in several groundwater samples from Site 2. Di-n-butyl phthalate was also detected in the laboratory blanks. There are no State target levels or guidance concentrations for these compounds.

Due to the BRAC construction, all Site 2 monitoring wells were properly abandoned in May 1995, after the final round of sampling.

3.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

3.1 **SUMMARY**. Based on the findings of the CA field investigations and laboratory analytical results, the following is a summary of existing conditions at Site 2.

- Site soil consists of fine-grained, well-sorted sand. The color of the soil ranges from very light gray to dark gray.
- The source of contamination, UST 104, has been removed.
- Excessively contaminated soil from the tank excavation area was removed. No visual evidence of soil contamination was observed on the excavation walls. The excavation was backfilled with clean soil. Contaminated soil was removed from the site and thermally treated.
- Five confirmatory soil samples were collected from the perimeter of the excavation. No contaminant concentrations detected in the confirmatory soil samples exceeded State maximum contaminant levels.
- Twelve shallow monitoring wells and one deep monitoring well were installed to assess the impact of soil contamination on the groundwater at Site 2.
- The groundwater flow direction at Site 2 is west.
- No free-floating product was observed or detected during this investigation.
- No groundwater contaminant concentration detected in the Site 2 groundwater samples exceeded any State target level except lead. An unfiltered lead concentration of 54.8 ppb was detected in the groundwater sample collected from monitoring well 02G010. The monitoring well was resampled using low-flow sampling techniques. The lead concentration detected in the second groundwater sample collected from 02G010 was below method detection limits.
- All Site 2 monitoring wells were properly abandoned subsequent to sampling.

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

- All excessively contaminated soil was removed from Site 2.
- The groundwater at Site 2 has not been impacted by the soil contamination detected during this investigation.

3.3 **RECOMMENDATIONS**. Based on the findings, conclusions, and interpretations of the CA, ABB-ES recommends a No Further Action proposal for Site 2.

4.0 PROFESSIONAL REVIEW CERTIFICATION

This contamination assessment report addendum was prepared under the direct supervision of a professional geologist registered in the State of Florida. This assessment was conducted using sound hydrogeologic principles and professional judgement and is based on the geologic investigation and associated information detailed in the text and appended to this report. If conditions are determined to exist that differ from those described, the undersigned geologist should be notified to evaluate the effects of any additional information on the assessment described in this report. This report meets the criteria set in Chapter 492 of the Florida Statutes with regard to good professional practices as applied to Chapter 62-770 of the Florida Administrative Code. This CAR Addendum was developed for Site 2, UST 104, at NADEP, Naval Air Station, Pensacola, Florida, and should not be construed to apply to any other site.

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

11/17/95
Date

REFERENCES

ABB Environmental Services, Inc., 1995, Aviation Gasoline Pipeline Area Contamination Assessment Report, August.

Florida Department of Environmental Regulation (FDER), 1994, Guidelines for Assessment and Remediation of Petroleum-Contaminated Soil, Division of Waste Management, May.

FDER, 1993, Memorandum from Doug Jones to Bureau of Waste Management Cleanup Staff, et al., Monitoring well construction specifications and related issues, Division of Waste Management, August 16.

FDER, 1990, No Further Action and Monitoring Only Guidelines for Petroleum-Contaminated Sites, Division of Waste Management, October.

Florida Department of Transportation, 1982, Florida official transportation map.

APPENDIX A

GT ENVIRONMENTAL SERVICE (GTES) CORRESPONDENCE

GT Environmental Services, Inc.

One Purlieu Place, Suite 205 • Winter Park, FL 32792 • 407/671-0125 • Fax: 407/671-2705

NAS Pensacola/ Chevalier Field
Closure Assessment / October 17, 1994
GT Environmental Services, Inc

Tanks 130, 138, 140, 143 had no visual contamination. Analytical was run for lead and TRPH. Contamination was detected on all the above tanks .

Tanks Removed		Contaminated		Method of Detection
#104		Soil/Groundwater		Visual
#107		Soil/Groundwater		Visual
#110		Soil		Visual
#116		Soil		Visual
#119		Soil/Groundwater		Visual
#122		Soil		Visual
#130		Soil	TPH 57 PPM	Analytical
#134	Galv.Tank	Soil		Visual
#136				Visual
#138		Soil	TPH 540 PPM	Analytical
#140			TPH 650 PPM; Lead 10PPM	Analytical
#143		Soil	TPH 49 PPM	Analytical

Note: Soil Samples were taken at points where visual contamination appeared. (Where no visual contamination appeared samples were taken from the ends and middle of soil from underground tanks)

Note: GT Environmental Services, Inc. used an HNU P.I.D. on all tank soil. Due to the heavy oil, the P.I.D. did not pick up any volatiles. We referred to the visual detection as required by the Florida Guidelines for Contamination Assessment for Oil Tanks.

GT ENVIRONMENTAL SERVICES, INC.
One Purlieu Place, Suite 205
Winter Park, Florida 32792
(407) 671-3625
FAX (407) 671-6703

FILE

September 12, 1994

Phoenix Construction Services, Inc.
1805 Tennessee Avenue
Lynn Haven, FL 32444

Attn: Terry Wilson

RE: Fuel Tankage Project
NAS, Pensacola, FL
Contract N62467-90-C-0486

Dear Terry:

In reference to the above captioned project, contaminated soil was found by visual inspection at Tank #104. The release appears to be caused by loose pipe at the suction end. The contamination was caused by lube oil or motor oil.

Sincerely,

G T Environmental Services, Inc.

George C. Wilbur

xc: PCS
PCS/GT

APPENDIX B

LITHOLOGIC LOGS

TITLE: NADEP Pensacola	**LOG of WELL:** 02G001		**BORING NO.**
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO:** 7527-34
CONTRACTOR: Groundwater Protection Inc.		**DATE STARTED:** 1/31/95	**COMPLTD:** 1/31/95
METHOD: 4.25" ID HSA	**CASE SIZE:** 2 inches	**SCREEN INT.:** 2-11'	**PROTECTION LEVEL:** D
TOC ELEV.: 100.00 FT.	**MONITOR INST.:** OVA	**TOT DPTH:** 11.15FT.	**DPTH TO ▽** 3.84 FT.
LOGGED BY: P. J. Wagner	**WELL DEVELOPMENT DATE:** 1/31/95		**SITE:** Site 2

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					ASPHALT				
					SAND: Fine-grained, well sorted, very pale orange.		SP		
5					SAND: Fine-grained, well sorted, medium to dark gray, wet becoming saturated.				
10									
15					* TOC elevation based on an arbitrarily selected elevation.				
20									

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola	**LOG of WELL:** 02G003		**BORING NO.**
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO:** 7527-34
CONTRACTOR: Groundwater Protection Inc.		**DATE STARTED:** 2/1/95	**COMPLTD:** 2/1/95
METHOD: 4.25" ID HSA	**CASE SIZE:** 2 inches	**SCREEN INT.:** 2-12'	**PROTECTION LEVEL:** D
TOC ELEV.: 100.15* FT.	**MONITOR INST.:** OVA	**TOT DPTH:** 12.39FT.	**DPTH TO ▽** 3.72 FT.
LOGGED BY: P. J. Wagner	**WELL DEVELOPMENT DATE:** 2/1/95		**SITE:** Site 2

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					No samples collected				
5									
10									
15									
					*TOC elevation based on an arbitrarily selected elevation.				
20									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola	**LOG of WELL:** 02G004		**BORING NO.**
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO:** 7527-34
CONTRACTOR: Groundwater Protection Inc.		**DATE STARTED:** 2/1/95	**COMPLTD:** 2/1/95
METHOD: 4.25" ID HSA	**CASE SIZE:** 2 inches	**SCREEN INT.:** 2-12'	**PROTECTION LEVEL:** D
TOC ELEV.: 100.08* FT.	**MONITOR INST.:** OVA	**TOT DPTH:** 12.28FT.	**DPTH TO ▽** 3.72 FT.
LOGGED BY: P. J. Wagner	**WELL DEVELOPMENT DATE:** 2/1/95		**SITE:** Site 2

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: Fine-grained, well sorted, dry to wet, light to medium gray.				
10									
15									
20					* TOC elevation based on an arbitrarily selected elevation.				

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola	**LOG of WELL:** 02G005		**BORING NO.**
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO:** 7527-34
CONTRACTOR: Groundwater Protection Inc.		**DATE STARTED:** 2/1/95	**COMPLTD:** 2/1/95
METHOD: 4.25" ID HSA	**CASE SIZE:** 2 inches	**SCREEN INT.:** 2-12'	**PROTECTION LEVEL:** D
TOC ELEV.: 100.01* FT.	**MONITOR INST.:** OVA	**TOT DPTH:** 12.39FT.	**DPTH TO ▽** 3.68 FT.
LOGGED BY: P. J. Wagner	**WELL DEVELOPMENT DATE:** 2/1/95		**SITE:** Site 2

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: Fine-grained, well sorted, very pale orange.		SP		
5					SAND: Fine-grained, well sorted, medium to dark gray, wet/saturated.				
10									
15					* TOC elevation based on an arbitrarily selected elevation.				
20									

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola	**LOG of WELL:** 02G008		**BORING NO.**
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO:** 7527-34
CONTRACTOR: Groundwater Protection Inc.		**DATE STARTED:** 2/1/95	**COMPLTD:** 2/1/95
METHOD: 4.25" ID HSA	**CASE SIZE:** 2 inches	**SCREEN INT.:** 2-12'	**PROTECTION LEVEL:** D
TOC ELEV.: 99.80* FT.	**MONITOR INST.:** OVA	**TOT DPTH:** 12.32FT.	**DPTH TO ▽** 3.41 FT.
LOGGED BY: P. J. Wagner	**WELL DEVELOPMENT DATE:** 2/1/95		**SITE:** Site 2

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					ASPHALT FILL: Red sandy clay.		FILL		
							SP		
5					SAND: Fine-grained, well sorted, very pale gray to medium gray, dry to saturated.				
10									
15									
20					* TOC elevation based on an arbitrarily selected elevation.				

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola	**LOG of WELL:** 02G007		**BORING NO.**
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO:** 7527-34
CONTRACTOR: Groundwater Protection Inc.		**DATE STARTED:** 2/1/95	**COMPLTD:** 2/1/95
METHOD: 4.25" ID HSA	**CASE SIZE:** 2 inches	**SCREEN INT.:** 2-12'	**PROTECTION LEVEL:** D
TOC ELEV.: 99.80* FT.	**MONITOR INST.:** OVA	**TOT DPTH:** 12.40FT.	**DPTH TO ▽** 3.58 FT.
LOGGED BY: P. J. Wagner	**WELL DEVELOPMENT DATE:** 2/1/95		**SITE:** Site 2

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE				
					FILL: yellowish orange sand.		FILL		
							SP		
5					SAND: Fine-grained, well sorted, very pale gray to medium gray, dry to saturated.				
10									
15									
					* TOC elevation based on an arbitrarily selected elevation.				
20									

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola	**LOG of WELL:** 02G008		**BORING NO.**
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO:** 7527-34
CONTRACTOR: Groundwater Protection Inc.		**DATE STARTED:** 2/1/95	**COMPLTD:** 2/1/95
METHOD: 4.25" ID HSA	**CASE SIZE:** 2 inches	**SCREEN INT.:** 2-12'	**PROTECTION LEVEL:** D
TOC ELEV.: 100.00* FT.	**MONITOR INST.:** OVA	**TOT DPTH:** 12.11FT.	**DPTH TO ∇** 3.89 FT.
LOGGED BY: P. J. Wagner	**WELL DEVELOPMENT DATE:** 2/1/95		**SITE:** Site 2

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: Fine- to very-fine, moderate sort, light gray mixed with dark yellowish orange, dry.		SP		
					SAND: Fine-grained, well sorted, light to medium gray, dry to saturated.				
5									
10									
15									
					* TOC elevation based on an arbitrarily selected elevation.				
20									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola	**LOG of WELL:** 02G009		**BORING NO.**
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO:** 7527-34
CONTRACTOR: Groundwater Protection Inc.		**DATE STARTED:** 2/1/95	**COMPLTD:** 2/1/95
METHOD: 4.25" ID HSA	**CASE SIZE:** 2 inches	**SCREEN INT.:** 2-12'	**PROTECTION LEVEL:** D
TOC ELEV.: 101.73* FT.	**MONITOR INST.:** OVA	**TOT DPTH:** 12.37FT.	**DPTH TO ▽** 5.52 FT.
LOGGED BY: P. J. Wagner	**WELL DEVELOPMENT DATE:** 2/1/95		**SITE:** Site 2

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					SAND: Fine- to very-fine, moderate sort, light gray mixed with dark yellowish orange, dry.		SP		
					SAND: Fine-grained, well sorted, light to medium gray, dry/saturated.				
5									
10									
15									
					* TOC elevation based on an arbitrarily selected elevation.				
20									

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola	**LOG of WELL:** 02G010		**BORING NO.**
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO:** 7527-34
CONTRACTOR: Groundwater Protection Inc.		**DATE STARTED:** 2/1/95	**COMPLTD:** 2/1/95
METHOD: 4.25" ID HSA	**CASE SIZE:** 2 inches	**SCREEN INT.:** 2-12'	**PROTECTION LEVEL:** D
TOC ELEV.: 102.08* FT.	**MONITOR INST.:** OVA	**TOT DPTH:** 12.08FT.	**DPTH TO ▽** 5.95 FT.
LOGGED BY: P. J. Wagner	**WELL DEVELOPMENT DATE:** 2/1/95		**SITE:** Site 2

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					SAND: Fine-grained, well sorted, trace black organics, yellowish brown, dry.		SP		
					SAND: Fine-grained, well sorted, medium gray, damp to saturated.				
5									
10									
15									
					* TOC elevation based on an arbitrarily selected elevation.				
20									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola	**LOG of WELL:** 02G011		**BORING NO.**
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO:** 7527-34
CONTRACTOR: Groundwater Protection Inc.		**DATE STARTED:** 2/2/95	**COMPLTD:** 2/2/95
METHOD: 4.25" ID HSA	**CASE SIZE:** 2 inches	**SCREEN INT.:** 2-12'	**PROTECTION LEVEL:** D
TOC ELEV.: 102.00* FT.	**MONITOR INST.:** OVA	**TOT DPTH:** 12.10FT.	**DPTH TO ▽** 5.84 FT.
LOGGED BY: P. J. Wagner	**WELL DEVELOPMENT DATE:** 2/2/95		**SITE:** Site 2

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					FILL: Gravel and sand.		FILL		
					SAND: Fine-grained with 10% clay, 5% small gravel, very poor sort, yellowish orange to light gray, dry.		SW		
5					SAND: Fine-grained, well sorted, very light gray to medium gray, dry to saturated.		SP		
10									
15									
20									

* TOC elevation based on an arbitrarily selected elevation.

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola	LOG of WELL: 02G012	BORING NO.
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO: 7527-34
CONTRACTOR: Groundwater Protection Inc.	DATE STARTED: 2/2/95	COMPLTD: 2/5/95
METHOD: 4.25" ID HSA	CASE SIZE: 2 inches	SCREEN INT.: 30-35'	PROTECTION LEVEL: D
TOC ELEV.: 100.42* FT.	MONITOR INST.: OVA	TOT DPTH: 35.54FT.	DPTH TO ▽ 4.18 FT.
LOGGED BY: P. J. Wagner	WELL DEVELOPMENT DATE: 2/5/95	SITE: Site 2

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: Very fine- to fine-grained, moderate sort, dark yellowish orange to mottled very pale orange and moderate red, dry.		SP		
					SAND: Fine-grained, well sorted, very pale gray, dry.				
5					SAND: Fine-grained, well sorted, damp to saturated, brownish gray.				
10									
15									
20					SAND: Very fine- to fine-grained, moderate sort, brownish gray, saturated.				
25									
30									
35									
40					*TOC elevation based on an arbitrarily selected elevation.				

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP Pensacola	**LOG of WELL:** 02G013		**BORING NO.**
CLIENT: SOUTHNAVFACENGCOM			**PROJECT NO:** 7527-34
CONTRACTOR: Groundwater Protection Inc.		**DATE STARTED:** 2/2/95	**COMPLTD:** 2/2/95
METHOD: 4.25" ID HSA	**CASE SIZE:** 2 inches	**SCREEN INT.:** 2-12'	**PROTECTION LEVEL:** D
TOC ELEV.: 100.58* FT.	**MONITOR INST.:** OVA	**TOT DPTH:** 12.37FT.	**DPTH TO ▽** 4.11 FT.
LOGGED BY: P. J. Wagner	**WELL DEVELOPMENT DATE:** 2/2/95		**SITE:** Site 2

DEPTH FT.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					SAND: Very fine- to fine- grained mixed with shell material, poorly sorted, yellowish brown.		FILL		
					FILL: Red sandy clay mixed with asphalt.				
					SAND: Fine-grained, well sorted, dry, very dark gray mixed with light gray.		SP		
5					SAND: Fine-grained, well sorted, damp to wet, brownish gray to dark gray.				
10									
15									
20					* TOC elevation based on an arbitrarily selected elevation.				

ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP PENSACOLA		LOG of WELL: NA	BORING NO. PEN-104-SB1
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: 07527
CONTRACTOR: Southern Waste Services		DATE STARTED: 9/22/94	COMPLTD: 9/22/94
METHOD: Hand Auger	CASE SIZE: NA	SCREEN INT.: NA	PROTECTION LEVEL: D
TOC ELEV.: NA FT.	MONITOR INST.: OVA	TOT DPTH: 3FT.	DPTH TO ▽ 3 FT.
LOGGED BY: P. Wagner and J. Ullo	WELL DEVELOPMENT DATE: NA		SITE: UST-104, Site 02

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		
				0	SAND: Fine-grained; well sorted; dark yellowish orange to very pale orange, damp.				
5									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP PENSACOLA	LOG of WELL: NA		BORING NO. PEN-104-SB2
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: 07527
CONTRACTOR: Southern Waste Services		DATE STARTED: 9/22/94	COMPLTD: 9/22/94
METHOD: Hand Auger	CASE SIZE: NA	SCREEN INT.: NA	PROTECTION LEVEL: D
TOC ELEV.: NA FT.	MONITOR INST.: OVA	TOT DPTH: 3FT.	DPTH TO ▽ 3 FT.
LOGGED BY: P. Wagner and J. Ullo	WELL DEVELOPMENT DATE: NA		SITE: UST-104, Site 02

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: Fine-grained; well sorted; dark yellowish orange.		SP		
				0	SAND: Fine-grained; well sorted; very pale orange; damp.				▽
5									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP PENSACOLA	LOG of WELL: NA		BORING NO. PEN-104-SB3
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: 07527
CONTRACTOR: Southern Waste Services		DATE STARTED: 9/22/94	COMPLTD: 9/22/94
METHOD: Hand Auger	CASE SIZE: NA	SCREEN INT.: NA	PROTECTION LEVEL: D
TOC ELEV.: NA FT.	MONITOR INST.: OVA	TOT DPTH: 3FT.	DPTH TO ▽ 3 FT.
LOGGED BY: P. Wagner and J. Ullo	WELL DEVELOPMENT DATE: NA		SITE: UST-104, Site 02

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: Fine-grained; well sorted; dark yellowish orange.		SP		
				0	SAND: Fine-grained; well sorted; very pale orange; damp.				▽
5									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP PENSACOLA	LOG of WELL: NA		BORING NO. PEN-104-SB4
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: 07527
CONTRACTOR: Southern Waste Services		DATE STARTED: 9/23/94	COMPLTD: 9/23/94
METHOD: Hand Auger	CASE SIZE: NA	SCREEN INT.: NA	PROTECTION LEVEL: D
TOC ELEV.: NA FT.	MONITOR INST.: OVA	TOT DPTH: 4FT.	DPTH TO ▽ 3 FT.
LOGGED BY: P. Wagner and J. Ullo	WELL DEVELOPMENT DATE: NA		SITE: UST-104, Site 02

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: Fine-grained; well sorted; dark yellowish orange; damp.		SP		
				0	SAND: Fine-grained; well sorted; very pale orange; damp.				▽
					SAND: Fine-grained; well sorted; very pale orange; wet.				
5									

 ABB ENVIRONMENTAL SERVICES, INC.

TITLE: NADEP PENSACOLA	LOG of WELL: NA		BORING NO. PEN-104-SB5
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: 07527
CONTRACTOR: Southern Waste Services		DATE STARTED: 9/23/94	COMPLTD: 9/23/94
METHOD: Hand Auger	CASE SIZE: NA	SCREEN INT.: NA	PROTECTION LEVEL: D
TOC ELEV.: NA FT.	MONITOR INST.: OVA	TOT DPTH: 4FT.	DPTH TO ▽ 4 FT.
LOGGED BY: P. Wagner and J. Ullo	WELL DEVELOPMENT DATE: NA		SITE: UST-104, Site 02

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: Fine-grained; well sorted; dark yellowish orange; damp.		SP		
				0	SAND: Fine-grained; well sorted; very pale orange; damp.				
5									

 ABB ENVIRONMENTAL SERVICES, INC.

APPENDIX C

LABORATORY ANALYTICAL SOIL DATA

08/04/95 NADEP AVGAS PIPELINE SITE 2 09:58:13

Lab Sample Number:	B4J2700400
Site	NADEP-2
Locator	02B00601
Collect Date:	26-OCT-94

	VALUE	QUAL	UNITS	DL
GC Semi-Volatiles				
PCB-1016	1	U	mg/kg	1
PCB-1221	1	U	mg/kg	1
PCB-1232	1	U	mg/kg	1
PCB-1242	1	U	mg/kg	1
PCB-1248	1	U	mg/kg	1
PCB-1254	1	U	mg/kg	1
PCB-1260	1	U	mg/kg	1
GC/MS Volatiles				
Acrolein	52	U	ug/kg	52
Acrylonitrile	52	U	ug/kg	52
Benzene	5.2	U	ug/kg	5.2
Bromodichloromethane	5.2	U	ug/kg	5.2
Bromoform	5.2	U	ug/kg	5.2
Bromomethane	5.2	U	ug/kg	5.2
Carbon tetrachloride	5.2	U	ug/kg	5.2
Chlorobenzene	5.2	U	ug/kg	5.2
Dibromochloromethane	5.2	U	ug/kg	5.2
Chloroethane	5.2	U	ug/kg	5.2
2-Chloroethyl vinyl ether	5.2	U	ug/kg	5.2
Chloroform	5.2	U	ug/kg	5.2
Chloromethane	5.2	U	ug/kg	5.2
1,2-Dichlorobenzene	6800	U	ug/kg	6800
1,3-Dichlorobenzene	6800	U	ug/kg	6800
1,4-Dichlorobenzene	6800	U	ug/kg	6800
1,1-Dichloroethane	5.2	U	ug/kg	5.2
1,2-Dichloroethane	5.2	U	ug/kg	5.2
1,1-Dichloroethene	5.2	U	ug/kg	5.2
cis-1,2-Dichloroethene	5.2	U	ug/kg	5.2
trans-1,2-Dichloroethene	5.2	U	ug/kg	5.2
1,2-Dichloropropane	5.2	U	ug/kg	5.2
cis-1,3-Dichloropropene	5.2	U	ug/kg	5.2
trans-1,3-Dichloropropene	5.2	U	ug/kg	5.2
Ethylbenzene	5.2	U	ug/kg	5.2
Trichlorofluoromethane	5.2	U	ug/kg	5.2
Methylene chloride	5.2	U	ug/kg	5.2
1,1,2,2-Tetrachloroethane	5.2	U	ug/kg	5.2
Tetrachloroethene	5.2	U	ug/kg	5.2
Toluene	1.5	J	ug/kg	5.2
1,1,1-Trichloroethane	5.2	U	ug/kg	5.2
1,1,2-Trichloroethane	5.2	U	ug/kg	5.2
Trichloroethene	5.2	U	ug/kg	5.2
Vinyl chloride	5.2	U	ug/kg	5.2
Xylenes, Total	5.2	U	ug/kg	5.2
GC/MS Semi-Volatiles				
Acenaphthene	2400	J	ug/kg	6800
Acenaphthylene	6800	U	ug/kg	6800
Anthracene	3300	J	ug/kg	6800
Benzidine	35000	U	ug/kg	35000
Benzo(a)anthracene	4600	J	ug/kg	6800

Lab Sample Number: B4J2700400
Site: NADEP-2
Locator: 02B00601
Collect Date: 26-OCT-94

	VALUE	QUAL	UNITS	DL
Benzo(b)fluoranthene	2900	J	ug/kg	6800
Benzo(k)fluoranthene	3400	J	ug/kg	6800
Benzo(ghi)perylene	-			
Benzo(a)pyrene	2900	J	ug/kg	6800
Bis(2-chloroethoxy)methane	6800	U	ug/kg	6800
Bis(2-chloroethyl)ether	6800	U	ug/kg	6800
Bis(2-chloroisopropyl)ether	6800	U	ug/kg	6800
Bis(2-ethylhexyl)phthalate	6800	U	ug/kg	6800
4-Bromophenyl phenyl ether	6800	U	ug/kg	6800
Butyl benzyl phthalate	6800	U	ug/kg	6800
4-Chloro-3-methylphenol	6800	U	ug/kg	6800
2-Chloronaphthalene	6800	U	ug/kg	6800
2-Chlorophenol	6800	U	ug/kg	6800
4-Chlorophenyl phenyl ether	6800	U	ug/kg	6800
Chrysene	5500	J	ug/kg	6800
Dibenz(a,h)anthracene	6800	U	ug/kg	6800
Di-n-butyl phthalate	6800	U	ug/kg	6800
1,2-Dichlorobenzene	6800	U	ug/kg	6800
1,3-Dichlorobenzene	6800	U	ug/kg	6800
1,4-Dichlorobenzene	6800	U	ug/kg	6800
3,3'-Dichlorobenzidine	35000	U	ug/kg	35000
2,4-Dichlorophenol	6800	U	ug/kg	6800
Diethyl phthalate	6800	U	ug/kg	6800
2,4-Dimethylphenol	6800	U	ug/kg	6800
Dimethyl phthalate	6800	U	ug/kg	6800
Di-n-octyl phthalate	6800	U	ug/kg	6800
4,6-Dinitro-2-methylphenol	35000	U	ug/kg	35000
2,4-Dinitrophenol	35000	U	ug/kg	35000
2,4-Dinitrotoluene	6800	U	ug/kg	6800
2,6-Dinitrotoluene	6800	U	ug/kg	6800
Fluoranthene	13000		ug/kg	6800
Fluorene	1700	J	ug/kg	6800
Hexachlorobenzene	6800	U	ug/kg	6800
Hexachlorocyclopentadiene	6800	U	ug/kg	6800
Hexachloroethane	6800	U	ug/kg	6800
Indeno(1,2,3-cd)pyrene	6800	U	ug/kg	6800
Isophorone	6800	U	ug/kg	6800
Naphthalene	6800	U	ug/kg	6800
Nitrobenzene	6800	U	ug/kg	6800
2-Nitrophenol	6800	U	ug/kg	6800
4-Nitrophenol	35000	U	ug/kg	35000
N-Nitrosodimethylamine	6800	U	ug/kg	6800
N-Nitrosodi-n-propylamine	6800	U	ug/kg	6800
N-Nitrosodiphenylamine	6800	U	ug/kg	6800
Pentachlorophenol	35000	U	ug/kg	35000
Phenanthrene	9900		ug/kg	6800
Phenol	6800	U	ug/kg	6800
Pyrene	8800		ug/kg	6800
1,2,4-Trichlorobenzene	6800	U	ug/kg	6800
2,4,6-Trichlorophenol	6800	U	ug/kg	6800
Hexachlorobutadiene	6800	U	ug/kg	6800

08/04/95 NADEP AVGAS PIPELINE SITE 2 09:58:13

Lab Sample Number:	B4J2700400
Site	NADEP-2
Locator	02B00601
Collect Date:	26-OCT-94

	VALUE	QUAL	UNITS	DL
TOTAL METALS				
Cadmium	.5	U	mg/kg	.5
Chromium	.68	J	mg/kg	2.5
Arsenic	.16	J	mg/kg	.25
Lead	2.8		mg/kg	.25
TOTAL SOLIDS				
Total Solids	97.1		PERCE	1

U = Not Detected J = Estimated Value

08/07/95 NADEP AVGAS PIPELINE SITE 2 15:07:47

Lab Sample Number:	B5B0200040				B5B0200040				B5B0300910				B5B0300910			
Site	NADEP-2				NADEP-2				NADEP-2				NADEP-2			
Locator	02B00702				02B00802				02B00902				02B01002			
Collect Date:	31-JAN-95				31-JAN-95				01-FEB-95				01-FEB-95			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
TOTAL METALS																
Cadmium	.55	U	mg/kg	.55	.52	U	mg/kg	.52	.52	U	mg/kg	.52	.51	U	mg/kg	.51
Chromium	2.8	U	mg/kg	2.8	2.6	U	mg/kg	2.6	2.6	U	mg/kg	2.6	2.5	U	mg/kg	2.5
Arsenic	.28	U	mg/kg	.28	.26	U	mg/kg	.26	.26	U	mg/kg	.26	.25	U	mg/kg	.25
Lead	.31		mg/kg	.28	.26	U	mg/kg	.26	.31		mg/kg	.26	.25	U	mg/kg	.25
TOTAL SOLIDS																
Total Solids	90.1		PERCE	1	96.6		PERCE	1	96.7		PERCE	1	98		PERCE	1
TRPH																
Total petroleum hydrocarbons	5.5	U	mg/kg	5.5	5.2	U	mg/kg	5.2	5.2	U	mg/kg	5.2	5.1	U	mg/kg	5.1

U = Not Detected J = Estimated Value

08/07/95 NADEP AVGAS PIPELINE SITE 2 15:07:47

Lab Sample Number:	B5B0300910				B5B0300910			
Site	NADEP-2				NADEP-2			
Locator	02B01002D				02B01102			
Collect Date:	01-FEB-95				01-FEB-95			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
TOTAL METALS								
Cadmium	.51	U	mg/kg	.51	.54	U	mg/kg	.54
Chromium	2.5	U	mg/kg	2.5	2.7	U	mg/kg	2.7
Arsenic	.25	U	mg/kg	.25	.27	U	mg/kg	.27
Lead	.25	U	mg/kg	.25	.27	U	mg/kg	.27
TOTAL SOLIDS								
Total Solids	98.2		PERCE	1	92.1		PERCE	1
TRPH								
Total petroleum hydrocarbons	6.8		mg/kg	5.1	5.4	U	mg/kg	5.4

U = Not Detected J = Estimated Value

APPENDIX D

LABORATORY ANALYTICAL GROUNDWATER DATA

08/07/95 NADEP AVGAS PIPELINE SITE 2 15:46:31

Lab Sample Number:		B5C2100430				B5C2100430				B5C2900590				B5C2100430				
Site		NADEP-2				NADEP-2				NADEP-2				NADEP-2				
Locator		02G00101				02G00201				02Z00302				02G00401				
Collect Date:		19-MAR-95				19-MAR-95				28-MAR-95				19-MAR-95				
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL		
EPA 601/602																		
Chloromethane	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		
Vinyl chloride	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		
Dichloromethane	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		
1,1-Dichloroethene	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		
trans-1,2-Dichloroethene	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		
1,2-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1		
1,1,1-Trichloroethane	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		
1,2-Dichloropropane	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		
Trichloroethene	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		
1,1,2-Trichloroethane	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		
Bromoform	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		
Tetrachloroethene	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		
1,3-Dichlorobenzene	1	U	ug/l	1	10	U	ug/l	10	11	U	ug/l	11	1	U	ug/l	1		
1,2-Dichlorobenzene	10	U	ug/l	10	10	U	ug/l	10	1	U	ug/l	1	10	U	ug/l	10		
1,4-Dichlorobenzene	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		
Toluene	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		
Ethylbenzene	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		
METALS																		
Lead	5.3		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 Values

08/07/95 NADEP AVGAS PIPELINE SITE 2 15:46:31

Lab Sample Number:	B5C2100430				B5C2100430				B5C2900590				B5C2900590			
Site	NADEP-2				NADEP-2				NADEP-2				NADEP-2			
Locator	02G00501				02G00601				02Z00702				02Z00802			
Collect Date:	19-MAR-95				19-MAR-95				27-MAR-95				27-MAR-95			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
EPA 601/602																
Chloromethane	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
Vinyl chloride	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
Dichloromethane	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
1,1-Dichloroethene	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
trans-1,2-Dichloroethene	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
1,2-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,1-Trichloroethane	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
1,2-Dichloropropane	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
Trichloroethene	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
1,1,2-Trichloroethane	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
Bromoform	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
Tetrachloroethene	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
1,3-Dichlorobenzene	10	U	ug/l	10	1	U	ug/l	1	11	U	ug/l	11	10	U	ug/l	10
1,2-Dichlorobenzene	1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1	10	U	ug/l	10
1,4-Dichlorobenzene	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1	10	U	ug/l	10
Benzene	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	1.5		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
Ethylbenzene	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
METALS																
Lead	5	U	ug/l	5	8.8		ug/l	5	14.8		ug/l	5	5.4		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 Values

08/07/95 NADEP AVGAS PIPELINE SITE 2 15:46:31

Lab Sample Number:		B5C2900590				B5E0500040				B5C2900590				B5C2900590		
Site		NADEP-2				NADEP-2				NADEP-2				NADEP-2		
Locator		02G00902				02G00903				02G01002				02G01002D		
Collect Date:		27-MAR-95				03-MAY-95				27-MAR-95				27-MAR-95		
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
EPA 601/602																
Chloromethane	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
Vinyl chloride	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
Dichloromethane	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
1,1-Dichloroethene	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
trans-1,2-Dichloroethene	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
1,2-Dichloroethane	1	U	ug/l	1	-				1	U	ug/l	1	1	U	ug/l	1
1,1,1-Trichloroethane	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
1,2-Dichloropropane	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
Trichloroethene	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
1,1,2-Trichloroethane	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
Bromoform	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
Tetrachloroethene	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
1,3-Dichlorobenzene	10	U	ug/l	10	-				10	U	ug/l	10	10	U	ug/l	10
1,2-Dichlorobenzene	1	U	ug/l	1	-				10	U	ug/l	10	1	U	ug/l	1
1,4-Dichlorobenzene	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	1	U	ug/l	1
Toluene	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
Ethylbenzene	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
METALS																
Lead	23.6		ug/l	5	5	U	ug/l	5	54.8		ug/l	5	53.5		ug/l	5
TRPH																
Total petroleum hydrocarbons	1	U	mg/l	1	-				1	U	mg/l	1	1	U	mg/l	1

U = Not Detected J = Estimated Values

08/07/95 NADEP AVGAS PIPELINE SITE 2 15:46:31

Lab Sample Number:		B5E0500040				B5C2900590				B5C2900590				B5C2100430		
Site		NADEP-2				NADEP-2				NADEP-2				NADEP-2		
Locator		02G01003				02G01102				02Z01202				02G01301		
Collect Date:		03-MAY-95				27-MAR-95				28-MAR-95				19-MAR-95		
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
EPA 601/602																
Chloromethane		-			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
Vinyl chloride		-			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
Dichloromethane		-			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
1,1-Dichloroethene		-			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
trans-1,2-Dichloroethene		-			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
1,2-Dichloroethane		-			1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,1-Trichloroethane		-			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
1,2-Dichloropropane		-			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
Trichloroethene		-			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
1,1,2-Trichloroethane		-			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
Bromoform		-			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
Tetrachloroethene		-			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
1,3-Dichlorobenzene		-			1	U	ug/l	1	10	U	ug/l	10	1	U	ug/l	1
1,2-Dichlorobenzene		-			10	U	ug/l	10	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
Benzene		-			1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
Toluene		-			1	U	ug/l	1	2.2		ug/l	1	1	U	ug/l	1
Chlorobenzene		-			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
Xylenes (total)		-			1	U	ug/l	1	1.6		ug/l	1	1	U	ug/l	1
METALS																
Lead	5	U	ug/l	5	10.4		ug/l	5	5	U	ug/l	5	8.6		ug/l	5
TRPH																
Total petroleum hydrocarbons		-			1	U	mg/l	1	1	U	mg/l	1	1	U	mg/l	1

U = Not Detected J = Estimated Values

08/07/95 NADEP AVGAS PIPELINE SITE 2 15:46:31

Lab Sample Number:	B5C2900590				B5C2900590				B5C2100430		
Site	NADEP-2				NADEP-2				NADEP-2		
Locator	02G0EB02				02G0TB02				TRIPBLANK		
Collect Date:	27-MAR-95				28-MAR-95				19-MAR-95		
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
EPA 601/602												
Chloromethane	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
Vinyl chloride	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
Dichloromethane	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
1,1-Dichloroethene	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
trans-1,2-Dichloroethene	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
1,2-Dichloroethane	1	U	ug/l	1	1	U	ug/l	1	1	U	ug/l	1
1,1,1-Trichloroethane	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
1,2-Dichloropropane	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
Trichloroethene	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
1,1,2-Trichloroethane	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
Bromoform	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
Tetrachloroethene	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
1,3-Dichlorobenzene	10	U	ug/l	10	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
1,4-Dichlorobenzene	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
Toluene	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
Ethylbenzene	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
METALS												
Lead	44.8		ug/l	5	-				-			
TRPH												
Total petroleum hydrocarbons	1	U	mg/l	1	-				-			

U = Not Detected J = Estimated Values

09/06/95 NADEP AVGAS PIPELINE SITE 2 09:27:43

Lab Sample Number:	B5C2100430			B5C2100430			B5C2900590			B5C2100430		
Site	NADEP-2TIC			NADEP-2TIC			NADEP-2TIC			NADEP-2TIC		
Locator	02G00101			02G00201			02Z00302			02G00401		
Collect Date:	19-MAR-95			19-MAR-95			28-MAR-95			19-MAR-95		
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
TENTATIVELY IDENTIFIED CMPNDS.																
1-Nonadecanol	14		ug/l													
Octicizer	9		ug/l													
Caprolactam	35		ug/l													
Maleic Hydrazide	27		ug/l													
Pyridine, 1,2,3,6-Tetrahydro-1	5		ug/l													
1-Heptadecanol	5		ug/l													
Diptych (Boroxazolidin), B-Eth	8		ug/l													
2(1h)-Pyrimidinone, 4-Amino-5-	4		ug/l													
1,2-Benzenedicarboxylic Acid,	15		ug/l													
2-Chloro-4-Fluoroaniline	5		ug/l													
Caprolactam					160		ug/l									
Diptych (Boroxazolidin), B-Eth					15		ug/l									
1,2,4-Trithiolane									12		ug/l					
Caprolactam									26		ug/l					
Maleic Hydrazide									16		ug/l					
Thiourea									6		ug/l					
R(+)-6-Methyl-3-Isopropyltetra									6		ug/l					
Ethylbenzene													6		ug/l	
Caprolactam													8		ug/l	
Para-Xylene													6		ug/l	
Stirofos													16		ug/l	

09/06/95 NADEP AVGAS PIPELINE SITE 2 09:27:43

Lab Sample Number:		B5C2100430			B5C2100430			B5C2900590			B5C2900590			
Site		NADEP-2TIC			NADEP-2TIC			NADEP-2TIC			NADEP-2TIC			
Locator		02G00501			02G00601			02Z00702			02Z00802			
Collect Date:		19-MAR-95			19-MAR-95			27-MAR-95			27-MAR-95			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
TENTATIVELY IDENTIFIED CMPNDS.																
2(5h)-Thiophenone, 5-Methyl-	8		ug/l													
Carbon Disulfide	2		ug/l													
Ethanol, 2(2-Methoxyethoxy)Eth	10		ug/l													
Ethanol, 2(2-Butoxyethoxy)Etho	8		ug/l													
Maleic Hydrazide	8		ug/l													
Caprolactam	250		ug/l													
6-Hexylhexan-6-Olide	5		ug/l													
Maleic Hydrazide					6		ug/l									
Caprolactam					480		ug/l									
Butanenitrile, 2-Methylene-					16		ug/l									
2(5h)-Thiophenone, 5-Methyl-					33		ug/l									
Ethanol, 2(2-Methoxyethoxy)Eth					4		ug/l									
2-Hydroxy-5-Ethyl-5-Methylcycl									6		ug/l					
1-Hexanol, 2-Ethyl-									5		ug/l					
Caprolactam									160		ug/l					
Maleic Hydrazide									30		ug/l					
Formaldehyde, Dipropylhydrazon									7		ug/l					
1,4-Dioxaspiro(4.5)Decane									7		ug/l					
Diptych (Boroxazolidin), B-Eth									38		ug/l					
1,4,7,10,13,16-Hexaoxacyclooct									14		ug/l					
15-Crown-5									40		ug/l					
Maleic Hydrazide													7		ug/l	

09/06/95 NADEP AVGAS PIPELINE SITE 2 09:27:43

Lab Sample Number:	B5C2900590			B5C2900590			B5C2900590			B5C2900590		
Site	NADEP-2TIC			NADEP-2TIC			NADEP-2TIC			NADEP-2TIC		
Locator	02G00902			02G01002			02G01002D			02G01102		
Collect Date:	27-MAR-95			27-MAR-95			27-MAR-95			27-MAR-95		
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
TENTATIVELY IDENTIFIED CMPNDS.																
Acetone	20		ug/l													
2-Cyclopenten-1-One, 2-Hydroxy	28		ug/l													
Caprolactam	18		ug/l													
Maleic Hydrazide	10		ug/l													
Maleic Hydrazide					23		ug/l									
Caprolactam					71		ug/l									
Diptych (Boroxazolidin), B-Eth					6		ug/l									
1-Undecanol					13		ug/l									
Sulfur					16		ug/l									
1,2,4-Cyclopentanetrione, 3-Et									8		ug/l					
Caprolactam									93		ug/l					
Cyclododecanemethanol									15		ug/l					
1,2-Cyclopentanedione, Dichlor									7		ug/l					
Diptych (Boroxazolidin), B-Eth									6		ug/l					
Caprolactam													33		ug/l	
1,2,4-Cyclopentanetrione, 3-Et													4		ug/l	
15-Tetracosenoic Acid, Methyl													10		ug/l	

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Lab Sample Number:		B5C2900590			B5C2100430			B5C2900590		
Site		NADEP-2TIC			NADEP-2TIC			NADEP-2TIC		
Locator		02Z01202			02G01301			02G0EB02		
Collect Date:		28-MAR-95			19-MAR-95			27-MAR-95		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	
TENTATIVELY IDENTIFIED CMPNDS.										
Caprolactam	130	ug/l								
Maleic Hydrazide	44	ug/l								
Dodecane, 1-isocyanato-	8	ug/l								
3,6,9,12,15-Pentaoxanonadecan-	4	ug/l								
15-Crown-5	42	ug/l								
Carbon Disulfide	8	ug/l								
1,2-Benzenedicarboxylic Acid,	20	ug/l								
3-Piperidinol, 1,6-Dimethyl-	26	ug/l								
(1s,2s)-1,2-Dihydroxy-4,7,10,1	18	ug/l								
1,2,4-Cyclopentanetrione, 3-Et				6	ug/l					
Caprolactam				76	ug/l					
Acetone							11	ug/l		
3,6,9,12,15-Pentaoxanonadecan-							7	ug/l		