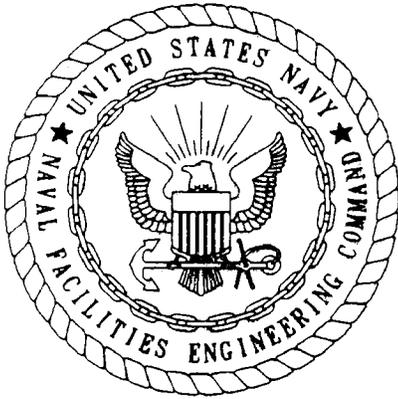


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CONTAMINATION ASSESSMENT REPORT ADDENDUM SITE 12 UNDERGROUND  
STORAGE TANK 140 (UST 140) NAVAL AVIATION DEPOT NAS PENSACOLA FL  
11/1/1995  
ABB ENVIRONMENTAL SERVICES INC.



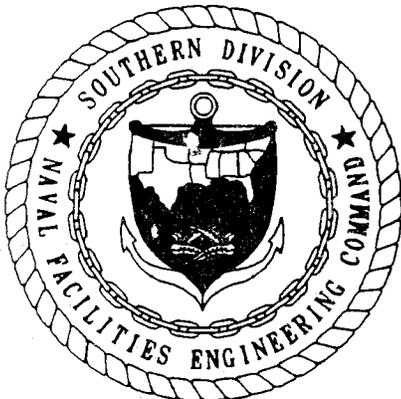
**CONTAMINATION ASSESSMENT REPORT ADDENDUM**

**SITE 12, UST 140  
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**

**SITE 12, UST 140  
NAVAL AVIATION DEPOT**

**NAVAL AIR STATION  
PENSACOLA, FLORIDA**

**Unit Identification Code: N00204**

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

**Prepared by:**

**ABB Environmental Services, Inc.  
2590 Executive Center Circle, East  
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**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)

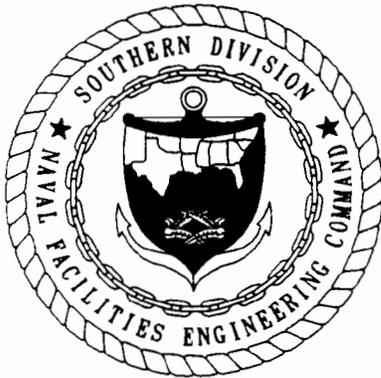
The Contractor, ABB Environmental Services, Inc., hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-89-D-0317/008 are complete and accurate and comply with all requirements of this contract.

DATE: November 13, 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 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. Byas Glover, SOUTHNAVFACENGCOM, Code 18410, at (803) 743-0651.

## 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

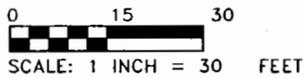
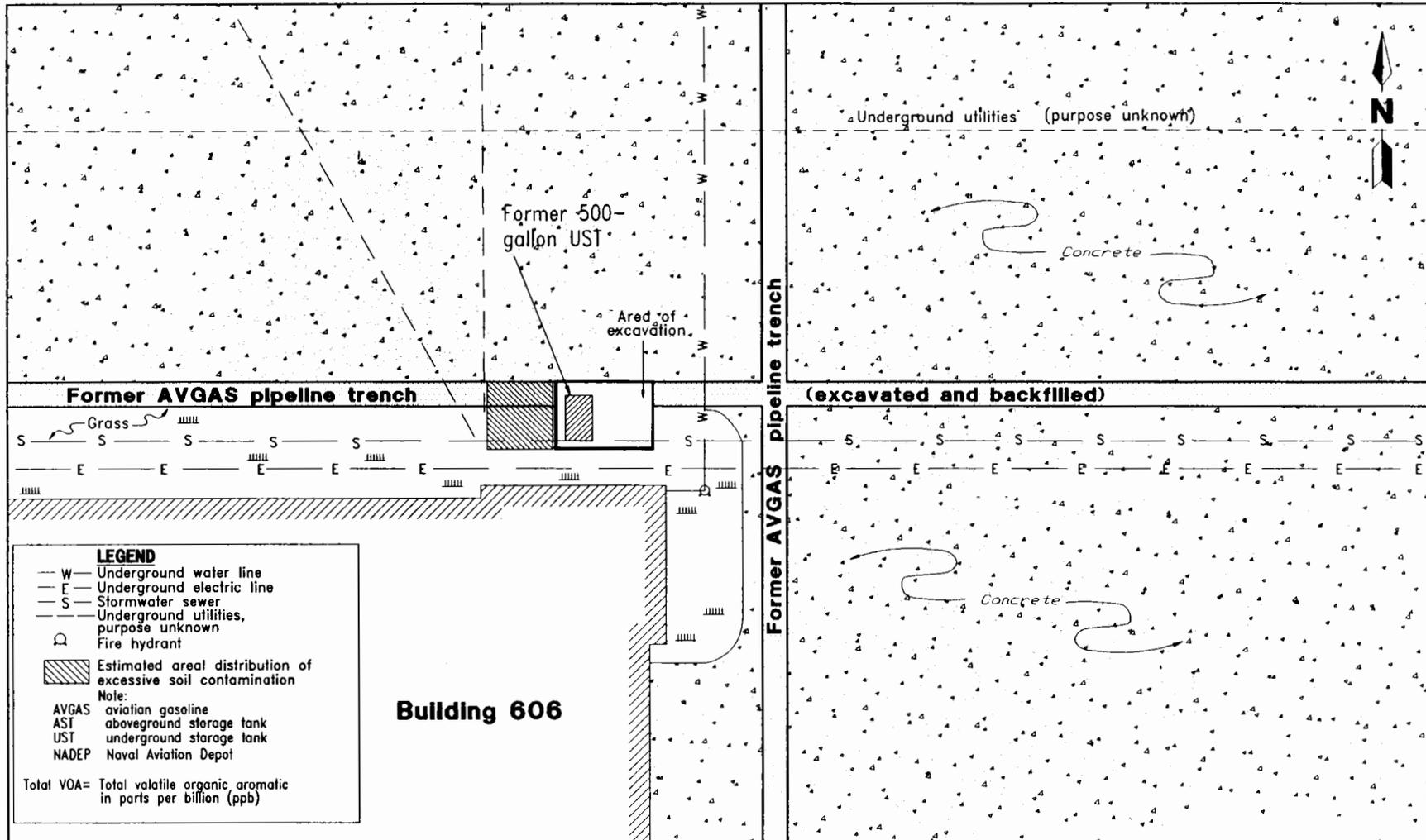
The following report is an addendum to the Aviation Gasoline (AVGAS) Pipeline Area Contamination Assessment Report (CAR) submitted by ABB Environmental Services, Inc. (ABB-ES) in August 1995. Information such as regional and local physiography, regional hydrology, investigative methodologies, and supplemental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

Site 12 is the former location of a 500-gallon underground storage tank (UST) located on the southern boundary of Chevalier Field, Naval Aviation Depot, Pensacola. The tank, designated UST 140, was located on the northeast corner of Building 606. UST 140 was constructed of unprotected steel and contained lubricating oil. The UST 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 the suspected usage was to dispense lube oil and air during aircraft maintenance.

During the UST 140 removal in September 1994, analytical results of soil samples collected from the excavation area revealed excessive total recoverable petroleum hydrocarbon (TRPH) contamination. All excavated soil was returned to the excavation. Site 12, UST 140, was transferred to ABB-ES in late September 1994 for closure and investigation.

### Findings.

- Site soil consists of very fine- to fine-grained, moderately sorted sand ranging in color from very pale orange to light gray.
- The sources of contamination, the UST and the AVGAS pipeline, have been removed.
- Excessively contaminated soil previously returned to the UST 140 excavation was removed. The excavation was backfilled with clean soil.
- Five confirmatory soil samples were collected from the excavation walls and surrounding area. TRPH contamination exceeding the State maximum concentration of 50 parts per million was detected in an area approximately 15 feet by 15 feet on the west side of the excavation. The executive summary figure presents the aerial extent of excessively contaminated soil.
- No potable wells are located within a 0.25-mile radius of Site 12.
- A total of 17 shallow monitoring wells and one deep monitoring well were installed to assess the impact of soil contamination on the groundwater at Site 12.
- The groundwater flow direction at Site 12 is southeast.



**EXECUTIVE SUMMARY FIGURE  
AREAL EXTENT OF EXCESSIVE  
SOIL CONTAMINATION**



**CONTAMINATION ASSESSMENT  
REPORT ADDENDUM  
SITE 12, UST 140**

**NADEP PENSACOLA  
PENSACOLA, FLORIDA**

- A benzene concentration of 6.9 parts per billion was detected in the groundwater sample collected from monitoring well 12G014. No other groundwater contaminant concentration detected in the Site 12 groundwater samples exceeded State No Further Action (NFA) target levels.

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

- Approximately 42 cubic yards of excessively contaminated soil located on the west site of the Site 12 excavation must be remediated. The executive summary figure presents the estimated areal extent of remaining soil contamination.
- The benzene concentration detected in the groundwater sample collected from monitoring well 12G014 does not exceed the, Florida Department of Environmental Protection NFA target level as defined in Chapter 62-770.600(5), Florida Administrative Code, because there are no potable wells located within a 0.25-mile radius of Site 12.

Recommendations. Based on the findings, conclusions, and interpretations of the CA, ABB-ES recommends that the excessively contaminated soil be removed. After the Base Realignment and Closure (BRAC) construction is completed, ABB-ES recommends that an NFA proposal be accepted for Site 12.

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APPENDICES

- Appendix A: GT Environmental Services (GTES) Correspondence
- Appendix B: Monitoring Well Logs
- Appendix C: Laboratory Analytical Data Sheets

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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
BTEX	benzene, toluene, ethylbenzene, and xylenes
CA	contamination assessment
CAR	Contamination Assessment Report
CompQAP	Comprehensive Quality Assurance Plan
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
GC	gas chromatograph
GTES	GT Environmental Services
ml	milliliter
NADEP	Naval Aviation Depot
NFA	No Further Action
NTTC	Naval Technical Training Center
PAH	polynuclear aromatic hydrocarbons
ppb	parts per billion
ppm	parts per million
PVC	polyvinyl chloride
SOUTHNAV - FACENCOM	Southern Division, Naval Facilities Engineering Command
TIC	tentatively identified compound
TOC	top of casing
TRPH	total recoverable petroleum hydrocarbons
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
VOA	volatile organic aromatics
VOH	volatile organic halocarbons
yd <sup>3</sup>	cubic yard

## 1.0 SITE BACKGROUND AND DESCRIPTION

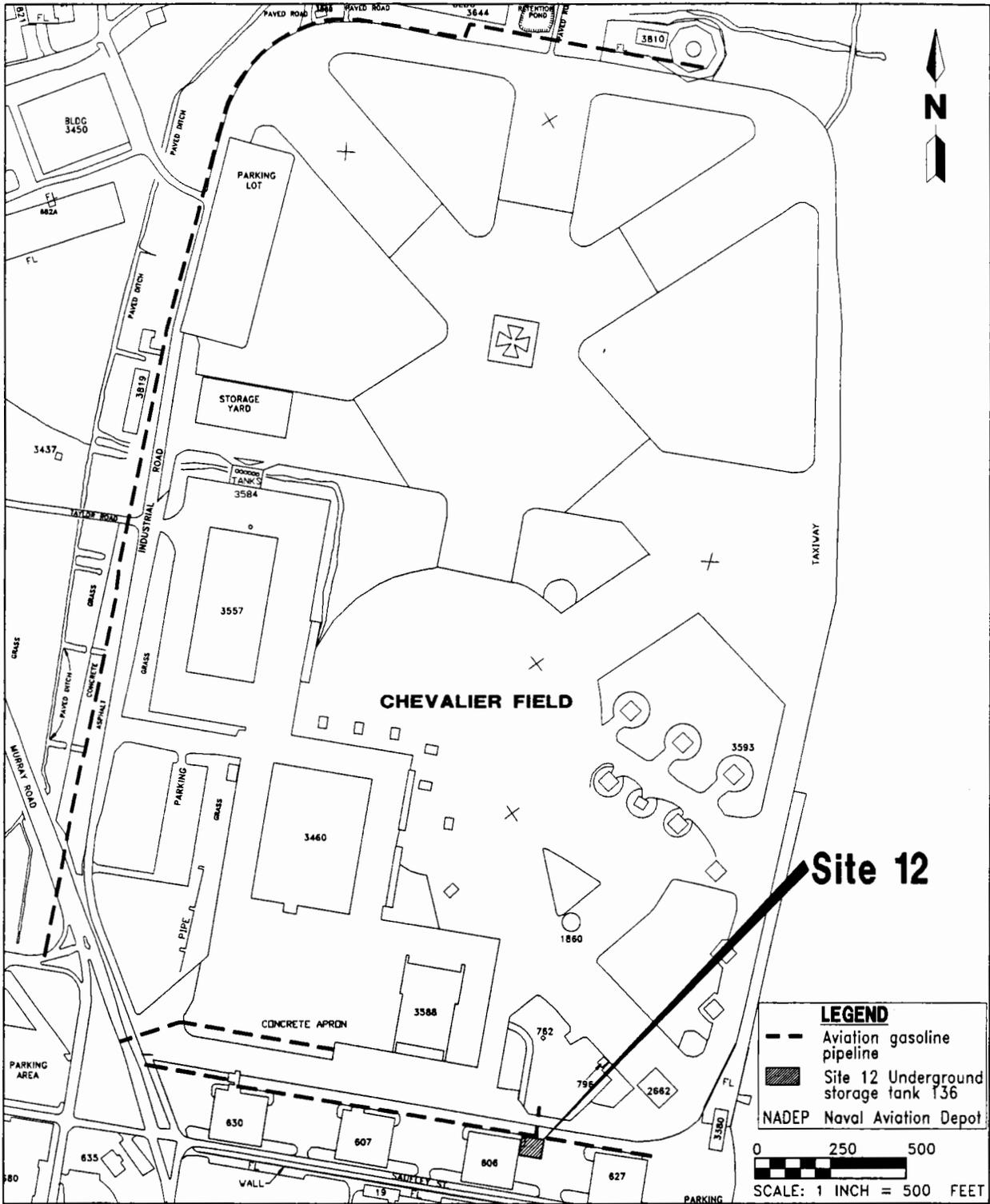
Site 12 is located on the southeast boundary of Chevalier Field, Naval Aviation Depot (NADEP) Pensacola (Figure 1-1). It is the former location of a 500-gallon underground storage tank (UST) associated with the Aviation Gasoline (AVGAS) Pipeline Area (Figure 1-2). The tank, designated UST 140, located on the northeast corner of Building 606, was used to store lubricating oil. The UST 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 "oil 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 lube oil and air during aircraft maintenance.

UST 140 was removed in September 1994 by Phoenix Construction Company and their subcontractor, GT Environmental Services, Inc. (GTES). During the tank removal operations, no visual observation of contamination was reported by GTES personnel. A composite sample was collected from the soil around the UST. Analysis of this soil sample revealed 650 parts per million (ppm) total recoverable petroleum hydrocarbons (TRPH). Subsequent to the UST removal, all excavated soil was returned to the excavation.

The UST site was transferred to ABB Environmental Services, Inc. (ABB-ES), in late September 1994 for closure. The closure report form for UST 140 is presented in Appendix A of the AVGAS Pipeline Area Contamination Assessment Report (CAR) submitted by ABB-ES in August 1995. Because excessive TRPH contamination was detected in the GTES soil sample, a discharge reporting form was filed with the closure report. The discharge reporting form is also included in Appendix A of the August 1995 AVGAS Pipeline CAR.

The demolition of Chevalier Field commenced in January 1995. 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 (NTTC) is being constructed on the former airfield. Buildings 606, 607, 627, and 630 are currently undergoing asbestos remediation and remodeling for use at NTTC. Removal of the concrete and asphalt parking areas around these buildings began in March 1995.

The following report summarizes the data gathered during the Site 12, UST 140, 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.



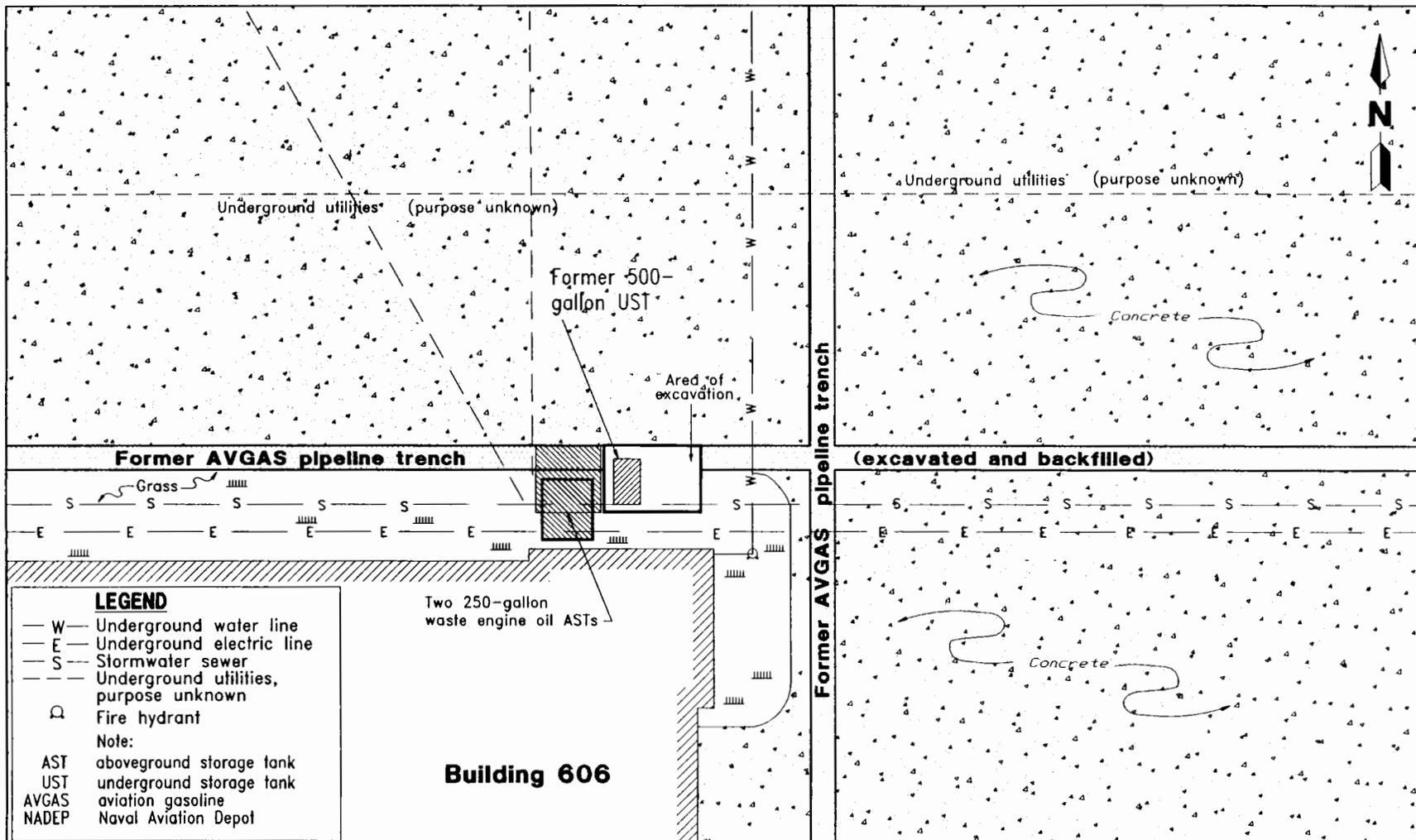
**FIGURE 1-1  
SITE LOCATION MAP**



**CONTAMINATION ASSESSMENT  
REPORT ADDENDUM  
SITE 12, UST 140**

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PENSACOLA, FLORIDA**

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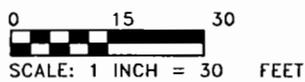


**LEGEND**

- W — Underground water line
- E — Underground electric line
- S — Stormwater sewer
- — — Underground utilities, purpose unknown
- ⊕ Fire hydrant

Note:

- AST aboveground storage tank
- UST underground storage tank
- AVGAS aviation gasoline
- NADEP Naval Aviation Depot



**FIGURE 1-2  
SITE PLAN, MARCH 1995**



**CONTAMINATION ASSESSMENT  
REPORT ADDENDUM  
SITE 12, UST 140**

**NAVAL AVIATION DEPOT  
PENSACOLA, FLORIDA**

## 2.0 CONTAMINATION ASSESSMENT RESULTS

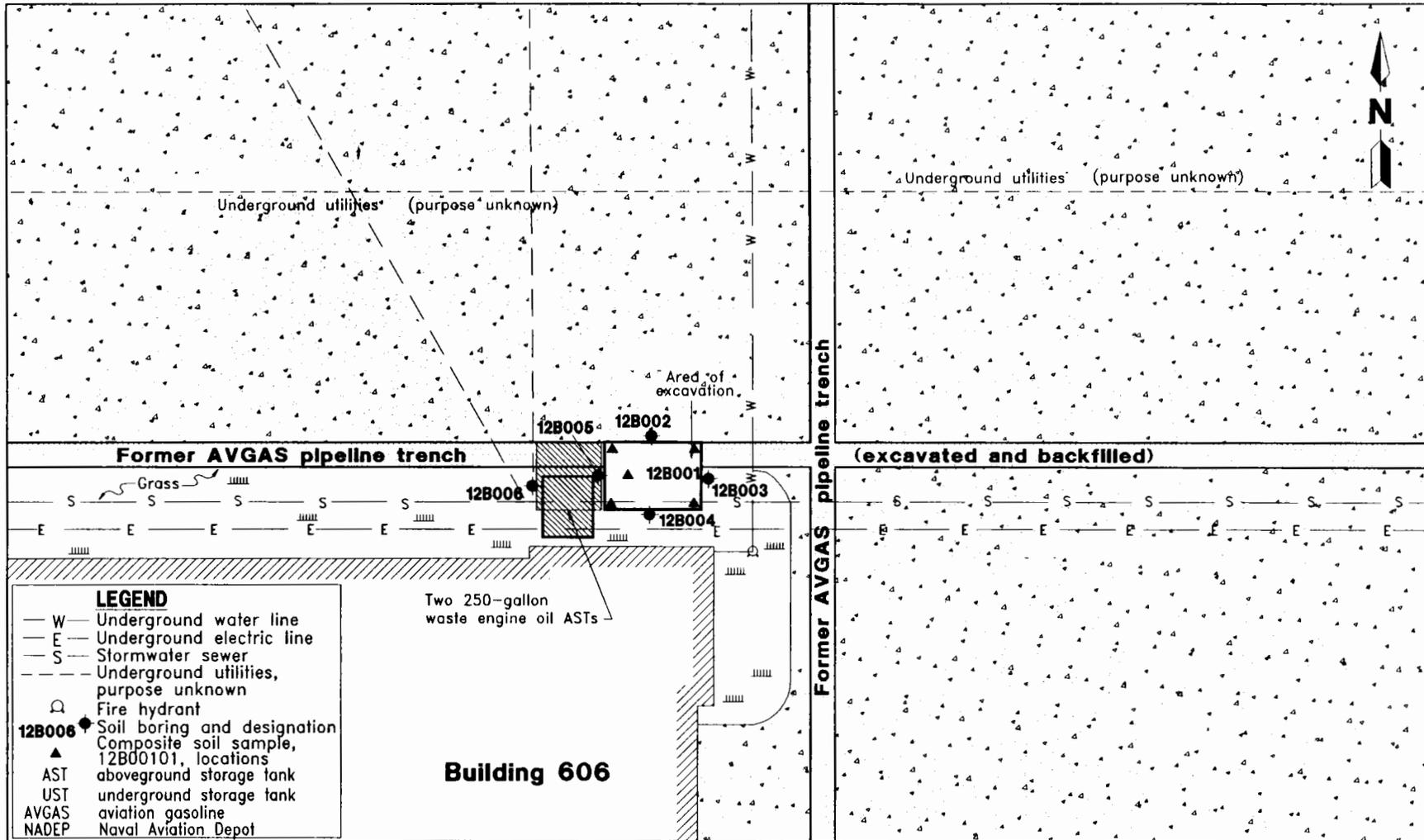
2.1 SOIL ASSESSMENT RESULTS. All laboratory analytical soil samples were collected in accordance with ABB-ES's approved Comprehensive Quality Assurance Plan (CompQAP) using a hand-operated auger. Samples were placed in the appropriate containers, labeled, packed in ice, and shipped by overnight carrier to Quanterra Environmental Services in Tampa, Florida, for analysis. Figure 2-1 presents all soil boring locations. Laboratory analytical results for all soil samples are summarized in Table 2-1. Laboratory data sheets are included in Appendix C of this report.

2.1.1 Initial Soil Assessment On October 26, 1994, a composite soil sample, 12B00101, was collected from the soil returned to the Site 12 excavation area. This sample was composited from soil collected at each corner and the center of the UST excavation area from 2.5 to 3.0 feet below land surface (bls). The composite sample was analyzed for volatile organics, semivolatile organics, TRPH, and metals according to Chapter 62-770.600, Florida Administrative Code (FAC). Figure 2-2 presents the analytical results of composite sample 12B00101.

Total volatile organic aromatics (VOA) and total polynuclear aromatic hydrocarbons (PAH) concentrations were below method detection limits for composite sample 12B00101. A TRPH concentration of 527 ppm was detected. Because total VOA and total PAH were not detected, a TRPH clean soil maximum concentration of 50 ppm was applied to Site 12 according to Chapter 62-775.400, FAC. Lead was detected at a concentration of 136 ppm. The State maximum concentration for lead is 108 ppm. Cadmium, chromium, and arsenic concentrations were below the respective State maximum concentrations.

On March 10, 1995, excessively contaminated soil from the former location of UST 140 was removed by Bechtel Environmental, Inc. (BEI). The excavation area is shown on Figure 2-1. Approximately 41 cubic yards (yd<sup>3</sup>) of soil were removed from an area approximately 17 feet by 13 feet. Excavation continued until the water table was reached at 5 feet bls. The soil removed from the site primarily consisted of very fine- to fine-grained, moderately sorted sand, ranging in color from very pale orange to light gray. ABB-ES personnel supervising the excavation reported that no stained soil was visible in the excavation or on the excavation walls. The excavation was backfilled with clean soil. The contaminated soil from Site 12 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 March 13, 1995, four confirmatory soil samples, 12B00202 through 12B00502, were collected from the excavation walls. These soil samples were collected from 2 to 3 feet bls. All four samples were analyzed for TRPH, arsenic, cadmium, chromium, and lead, in accordance with Chapter 62-770.600(8)(c), FAC. Table 2-1 summarizes the confirmatory sampling results. Figure 2-1 presents confirmatory sample locations. Figure 2-2 presents the areal distribution of the laboratory analytical results.



**Table 2-1  
Summary of Soil Sample Laboratory Analytical Results,  
October 1994 through April 1995**

Contamination Assessment Report Addendum  
Site 12, UST 140, Naval Aviation Depot  
Pensacola, Florida

Contaminant	Soil Sample Designation						Clean Soil <sup>1</sup> Maximum Concentration
	12B00101 <sup>2</sup>	12B00202 <sup>3</sup>	12B00302	12B00402	12B00502	12B00603	
<b>Volatle Organic Aromatics (VOA). Reported in parts per billion (ppb).</b>							
Total VOA	bdl	NS	NS	NS	NS	NS	100
<b>Polynuclear Aromatic Hydrocarbons (PAH). Reported in ppb.</b>							
Total PAH	bdl	NS	NS	NS	NS	NS	1000
<b>Total Recoverable Petroleum Hydrocarbons (TRPH). Reported in parts per million (ppm).</b>							
TRPH	527	27.5	38.9	59.4	48.6	28.9	50 <sup>4</sup>
<b>Total Metals. Reported in milligrams per kilogram (mg/kg).</b>							
Cadmium	0.92	0.61	1.2	<0.53	4.9	<0.54	37
Chromium	9.0	30.7	9.0	4.4	12.9	5.0	50
Lead	136	60.1	45.2	46.2	168	32.3	108
Arsenic	0.68	0.48	0.99	1.3	1.2	1.3	10

<sup>1</sup>Chapter 62-775.400, Florida Administrative Code.

<sup>2</sup>This composite sample was collected from contaminated soil which had been returned to the excavation during underground storage tank (UST) removal operations.

<sup>3</sup>The concentration reported in this column is the highest concentration detected in either 12B00202 or its duplicate, 12B00202D.

<sup>4</sup>Provided total PAH does not exceed 100 ppb and total volatile organic halocarbons (VOH) do not exceed 50 ppb. In all other cases the TRPH maximum concentration is 10 ppm (Chapter 62-775.400, FAC).

Notes: UST = underground storage tank.

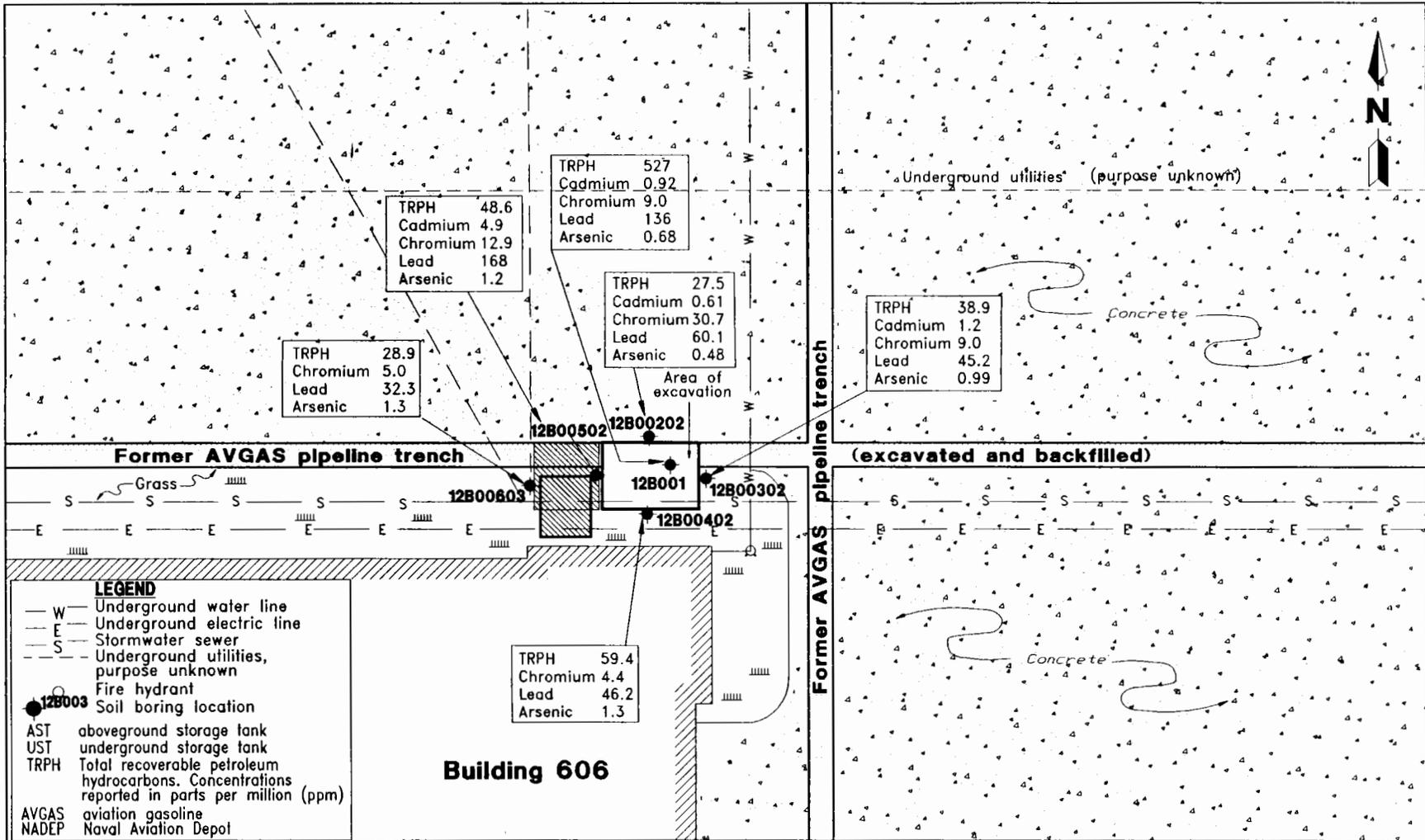
Total VOA = the sum concentration of benzene, toluene, ethylbenzene, and xylenes.

bdl = below detection limits.

NS = not sampled.

Total PAH = the sum concentration of PAH compounds detected by U.S. Environmental Protection Agency (USEPA) Method 8270A.

< = less than.



**FIGURE 2-2  
SOIL CONTAMINATION DISTRIBUTION MAP**

0 15 30  
SCALE: 1 INCH = 30 FEET



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A TRPH concentration of 59.4 ppm was detected in sample 12B00402 on the south side of the excavation. TRPH concentrations detected in confirmatory samples 12B00202, 12B00302, and 12B00502 were below the State maximum TRPH concentration of 50 ppm. A lead concentration of 168 ppm was detected in sample 12B00502 on the west side of the excavation. Lead concentration detected in confirmatory samples 12B00202, 12B00302, and 12B00402 were below the State maximum lead concentration of 108 ppm. Cadmium, chromium, and arsenic concentrations were below State maximum concentrations in all four confirmatory samples.

Because of the proximity of Building 606, no additional soil samples were collected around 12B00402; however, to further assess the lead contamination, one additional soil sample was collected west of sample location 12B005 on April 12, 1995. This sample, 12B00603, was analyzed for TRPH, cadmium, chromium, lead, and arsenic. No parameter detected in sample 12B00603 exceeded the State maximum concentrations defined in Chapter 62-775.400, FAC.

Based on the areal distribution of soil contamination (Figure 2-2), an area approximately 15 feet by 15 feet of excessively contaminated soil remains on the west side of the Site 12 excavation. The estimated total volume of excessively contaminated soil is 42 yd<sup>3</sup>.

## 2.2 GROUNDWATER ASSESSMENT.

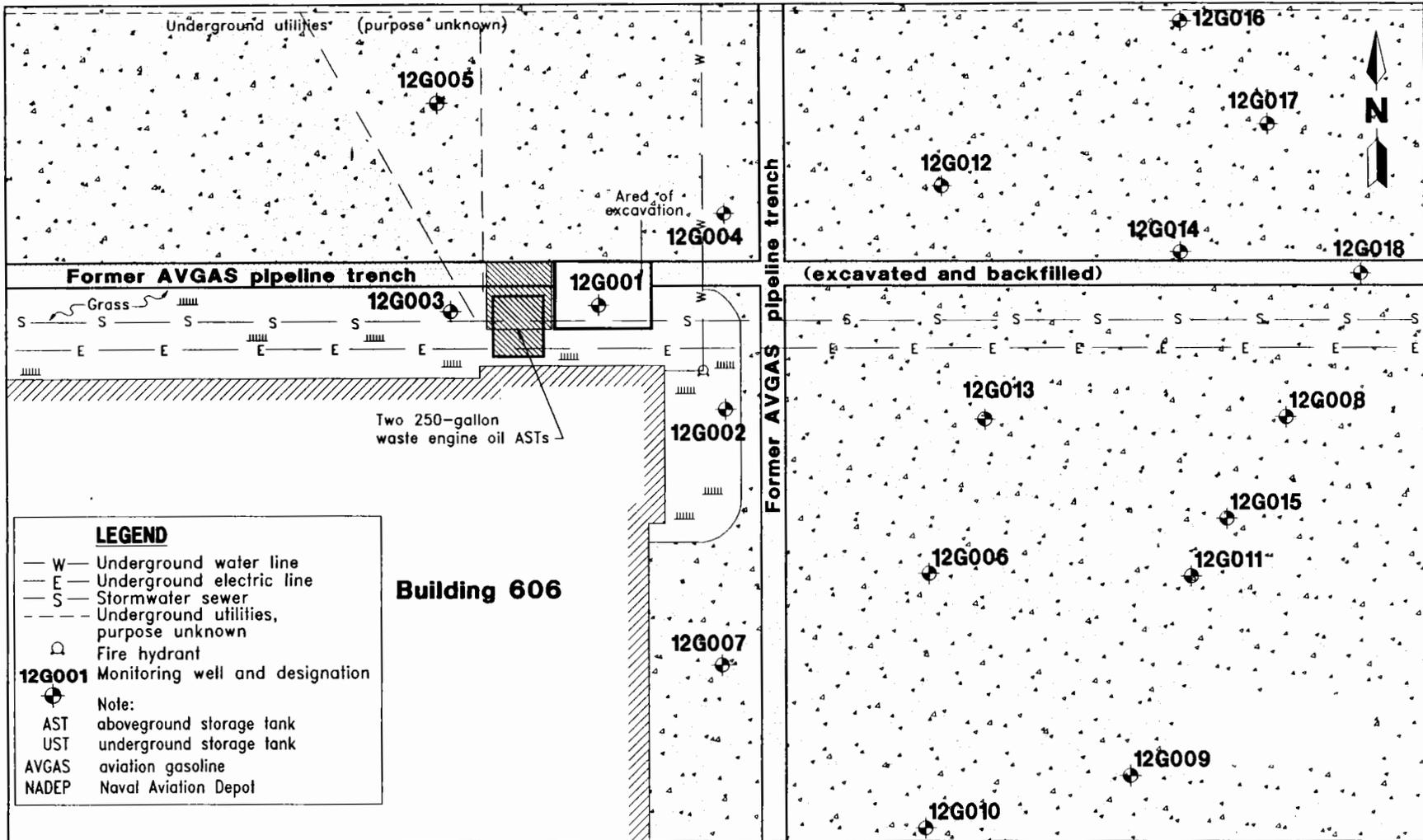
2.2.1 Potable Well Survey Detailed potable well survey information is presented in Chapter 5.0 of the August 1995 AVGAS Pipeline Area CAR.

Two potable supply wells exist at NAS Pensacola (Wilkins and others, 1985). Neither well is currently used for potable water supplies, but both are available as reserve sources should the need arise. Neither potable well is located within a 0.25-mile radius of Site 12.

2.2.2 Monitoring Well Installation In March 1995, ABB-ES personnel supervised the installation of 16 shallow permanent monitoring wells and one deep permanent monitoring well in and around the source area of Site 12. The shallow monitoring wells were installed to a depth of 12 feet bls and designated 12G001 through 12G014 and 12G016 through 12G017. The deep well was installed to a depth of 35 feet with 28 feet of 6-inch polyvinyl chloride (PVC) protective casing and designated 12G015. Based on the groundwater sampling results of the 17 monitoring wells, one additional shallow monitoring well was installed to adequately assess the areal extent of the plume. The additional monitoring well, 12G018, was installed on the northeast side of the Site 12 groundwater contaminant plume.

Monitoring well construction details are presented in the August 1995 AVGAS Pipeline Area CAR. Monitoring well logs for Site 12 monitoring wells are presented in Appendix B of this report. Figure 2-3 presents Site 12 monitoring well locations.

A portable gas chromatograph (GC) was used to analyze groundwater samples prior to monitoring well placement. Groundwater samples were collected for GC screening by drilling to 10 feet bls with 4.25-inch hollow-stem augers and lowering a 40-milliliter (ml) vial into the groundwater within the augers.



**FIGURE 2-3  
MONITORING WELL LOCATION MAP**



**CONTAMINATION ASSESSMENT  
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Groundwater samples from all monitoring wells except 12G015 were screened for benzene, toluene, ethylbenzene, and xylenes (BTEX). GC screening results are summarized in Table 2-2.

**2.2.3 Site-Specific Hydrology** The water table elevation at Site 12 was calculated using the field-surveyed top-of-casing (TOC) elevation data for each monitoring well and correlating the elevation data to a common arbitrary datum. The TOC elevation at monitoring well 12G001 was chosen as the datum and assigned an arbitrary elevation of 100.00 feet above mean sea level. Groundwater levels were measured on March 30, 1995, and April 10, 1995. Groundwater flow direction is predominantly southeast. Figures 2-4 and 2-5 present the water table elevation contour maps for Site 12. Table 2-3 presents the top-of-casing elevations, total depths, and groundwater elevations for Site 12.

The groundwater flow direction at Site 12 is southeast. No slug tests were conducted at Site 12 due to the low levels of petroleum contamination detected and the availability of comparable data from nearby sites.

**2.2.4 Groundwater Assessment Results** In March through April, 1995, groundwater samples were collected from monitoring wells 12G001 through 12G017. The sample collected from monitoring well 12G001 was analyzed for the used oil analytical group parameters as defined in Chapter 62-770.600(8)(c), FAC, because it was located in the former UST excavation area. The used oil analytical group includes volatile organics, base-neutral-acid extractables, TRPH, arsenic, cadmium, chromium, lead, and tentatively identified compounds (TICs), possible contaminants with a 50 percent accuracy level. Because AVGAS from the adjacent AVGAS pipeline was the suspected contaminant at this site, the remaining monitoring well samples were analyzed for the gasoline analytical group parameters described in Chapter 62-770.600(8)(c), FAC. The gasoline analytical group includes volatile organics, ethylene dibromide, TRPH, and lead.

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 C of this report. Table 2-4 presents the laboratory results for each monitoring well sample. Table 2-5 presents the TIC concentrations detected in sample 12G00102. Figure 2-6 presents the areal distribution of the groundwater sample analytical results.

A benzene concentration of 6.9 parts per billion (ppb) was detected in groundwater sample 12G01401. Benzene was not detected in any other groundwater sample from Site 12. The State No Further Action (NFA) target level for benzene is 50 ppb if no potable wells exist within 0.25 miles of the site (Chapter 62-770.730(5)(a), FAC).

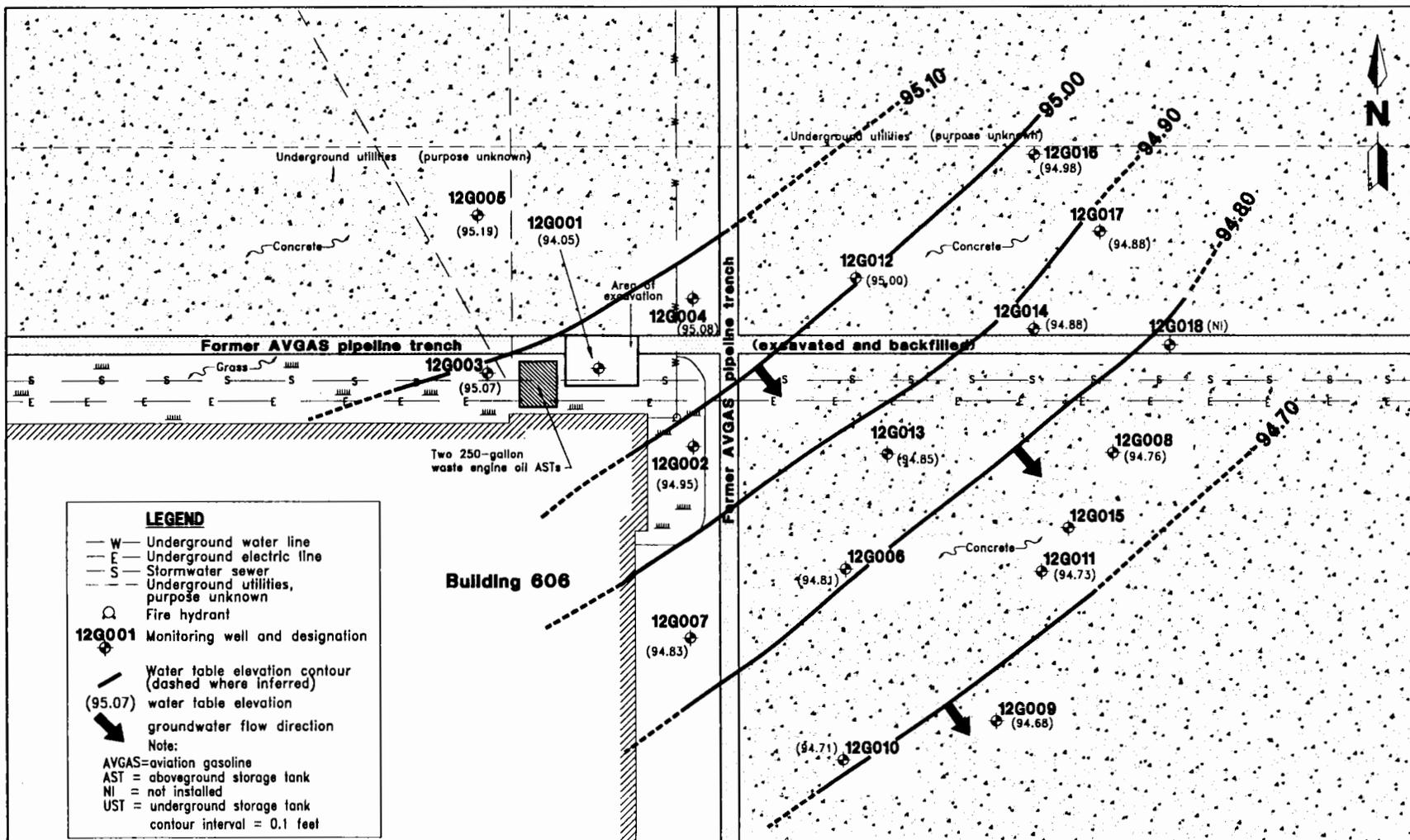
Total VOA are the sum concentration of benzene, ethylbenzene, toluene, and total xylenes. Total VOA concentrations ranged from below detection limits to 21.5 ppb in sample 12G01401. All total VOA concentrations were below the State NFA target level of 50 ppb (FDEP, October 1990).

**Table 2-2  
Gas Chromatograph Screening Results of Groundwater Samples,  
February through March 1995**

Contamination Assessment Report Addendum  
Site 12, UST 140, Naval Aviation Depot  
Pensacola Florida

Sample Location	Benzene	Toluene	Ethylbenzene	Total Xylenes
12G001	3	bdl	38	21
12G002	bdl	bdl	29	41
12G003	2	bdl	bdl	bdl
12G004	bdl	bdl	bdl	bdl
12G005	bdl	bdl	bdl	bdl
12G006	1	bdl	bdl	bdl
12G007	bdl	bdl	bdl	bdl
12G008	2	bdl	bdl	bdl
12G009	bdl	bdl	bdl	bdl
12G010	bdl	bdl	bdl	bdl
12G011	8	bdl	6	bdl
12G012	bdl	bdl	bdl	bdl
12G013	387	bdl	bdl	10
12G014	16	bdl	bdl	bdl
12G015	NS	NS	NS	NS
12G016	bdl	bdl	bdl	bdl
12G017	bdl	bdl	bdl	bdl
12G018	1	bdl	bdl	bdl

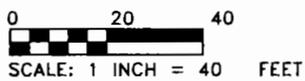
Notes: UST = underground storage tank.  
Estimated concentrations reported in parts per billion.  
Unknown peaks are not quantified.  
bdl = below method detection limit of 1 part per billion.  
NS = not sampled.



**LEGEND**

- W — Underground water line
- E — Underground electric line
- S — Stormwater sewer
- — Underground utilities, purpose unknown
- ⊕ — Fire hydrant
- ⊕ 12G001 — Monitoring well and designation
- — Water table elevation contour (dashed where inferred)
- (95.07) — water table elevation
- ↘ — groundwater flow direction

Note:  
 AVGAS=aviation gasoline  
 AST = aboveground storage tank  
 NI = not installed  
 UST = underground storage tank  
 contour interval = 0.1 feet

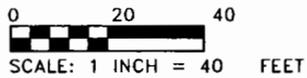
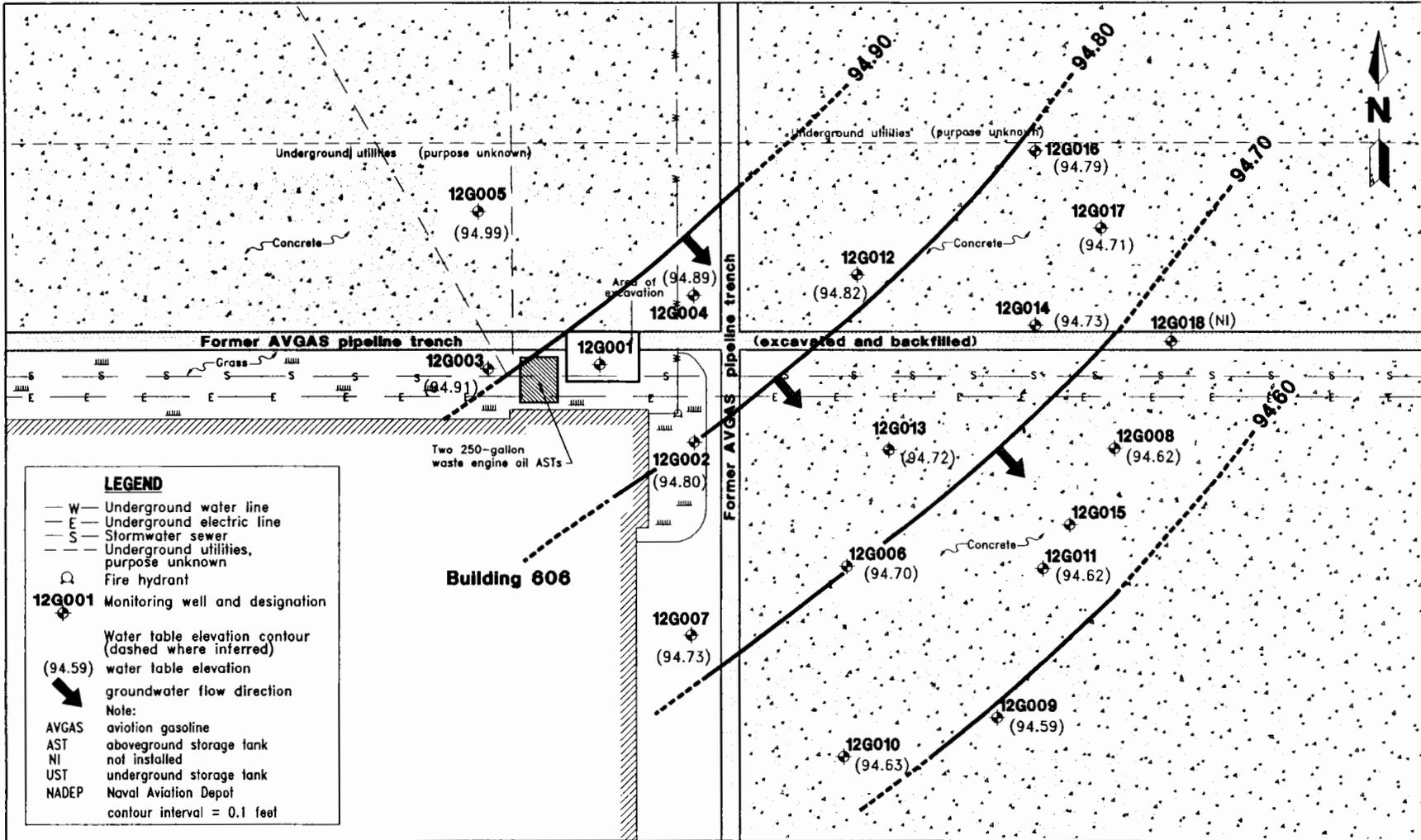


**FIGURE 2-4**  
**WATER TABLE ELEVATION CONTOUR MAP,**  
**MARCH 30, 1995**



**CONTAMINATION ASSESSMENT**  
**REPORT ADDENDUM**  
**SITE 12, UST 140**

**NAVAL AVIATION DEPOT**  
**PENSACOLA, FLORIDA**



**FIGURE 2-5**  
**WATER TABLE ELEVATION CONTOUR MAP,**  
**APRIL 10, 1995**



**CONTAMINATION ASSESSMENT**  
**REPORT ADDENDUM**  
**SITE 12, UST 140**

**NADEP PENSACOLA**  
**PENSACOLA, FLORIDA**

**Table 2-3  
Top-of-Casing and Groundwater Elevations,  
March 30 and April 10, 1995**

Contamination Assessment Report Addendum  
Site 12, UST 140, Naval Aviation Depot  
Pensacola, Florida

Monitoring Well Designation	Total Depth	Top-of-Casing Elevation	March 30, 1995		April 10, 1995	
			Depth to Groundwater	Groundwater Elevation	Depth to Groundwater	Groundwater Elevation
<sup>1</sup> 12G001	11.72	100.00	4.95	95.05	NM	NM
12G002	12.20	100.21	5.26	94.95	5.41	94.80
12G003	12.32	100.16	5.09	95.07	5.25	94.91
12G004	12.05	99.31	4.23	95.08	4.42	94.89
12G005	12.10	99.30	4.11	95.15	4.31	94.99
12G006	12.02	99.47	4.66	94.81	4.77	94.70
12G007	12.09	99.96	5.13	94.83	5.23	94.73
12G008	12.14	98.90	4.14	94.76	4.28	94.62
12G009	12.20	99.07	4.39	94.68	4.48	94.59
12G010	12.16	99.49	4.78	94.71	4.86	94.63
12G011	12.35	99.00	4.27	94.73	4.38	94.62
12G012	12.47	99.30	4.30	95.00	4.48	94.82
12G013	12.27	99.51	4.66	94.85	4.79	94.72
12G014	12.30	99.01	4.13	94.88	4.28	94.73
<sup>2</sup> 12G015	35.00	99.29	4.45	94.84	NM	NM
12G016	12.15	98.94	3.96	94.98	4.15	94.79
12G017	12.14	98.68	3.80	94.88	3.97	94.71
12G018	11.57	99.00	NI	NI	NI	NI

<sup>1</sup>Water-level measurements were not collected from monitoring well 12G001 on April 10, 1995, because it had been destroyed.

<sup>2</sup>Groundwater elevation data for the deep monitoring well, 12G015, were not used in water table elevation contour maps.

Notes: UST = underground storage tank.  
All depths and elevations are recorded in feet.  
Elevations are based on an arbitrary elevation of 100.00 feet for 12G001.  
NM = water level was not measured.  
NI = monitoring wells were not installed at the time of measurement.

**Table 2-4**  
**Summary of Groundwater Analytical Results,**  
**March, April, and June 1995**

Contamination Assessment Report Addendum  
Site 12, UST 140, Naval Aviation Depot  
Pensacola, Florida

Contaminant	Groundwater Sample Designation							State Action Levels <sup>1</sup>
	12G00102 <sup>2</sup>	12G00202	02G00302/03	12G00402	12G00402D	12G00502	12G00602	
<b>Volatile Organic Aromatics (VOA). Reported in parts per billion (ppb).</b>								
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1
Toluene	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.3	
Ethylbenzene	<1.0	1.8	<1.0	<1.0	<1.0	<1.0	<1.0	
Total xylenes	<1.0	3.6	<1.0	<1.0	<1.0	<1.0	<1.0	
Total VOA	1.2 N	5.4 N	<4.0	<4.0	<4.0	<4.0	1.3 N	50
1,1-dichloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Bromodichloromethane	<1.0	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	
Dibromochloromethane	<1.0	2.2	<1.0	<1.0	<1.0	<1.0	<1.0	
Chloroform	<1.0	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	
Total trihalomethanes	<3.0	5.0	<3.0	<3.0	<3.0	<3.0	<3.0	100
Chloromethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
<b>Base-Neutral Acid Extractables (BNA). Reported in ppb.</b>								
Di-n-butyl phthalate	65	NA	NA	NA	NA	NA	NA	
<b>Total Recoverable Petroleum Hydrocarbons (TRPH). Reported in parts per million (ppm).</b>								
TRPH	3.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	5
<b>Total Lead. Reported in ppb.</b>								
Arsenic	7.9	NA	NA	NA	NA	NA	NA	50
Lead	53.7	38.0	<sup>4</sup> 206/9.0	15.2	<5.0	<5.0	<5.0	50
See notes at end of table.								

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

Contamination Assessment Report Addendum  
Site 12, UST 140, Naval Aviation Depot  
Pensacola, Florida

Contaminant	Groundwater Sample Designation							State Action Levels <sup>1</sup>
	12G00702	12G00802	12G00902	12G01002	12G01002D	12G01102	12G01201	
<b>VOA. Reported in ppb.</b>								
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	
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Total xylenes	<1.0	<1.0	<1.0	<1.0	<1.0	2.0	<1.0	
Total VOA	<4.0	<4.0	<4.0	<4.0	<4.0	2.0 N	<4.0	50
1,1-dichloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Bromodichloromethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Dibromochloromethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Chloroform	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Total trihalomethanes	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	100
Chloromethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
<b>TRPH. Reported in ppm.</b>								
TRPH	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	5
<b>Total Lead. Reported in ppb.</b>								
Lead	<5.0	14.2	15.5	8.5	9.7	9.7	<5.0	50
See notes at end of table.								

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

Contamination Assessment Report Addendum  
Site 12, UST 140, Naval Aviation Depot  
Pensacola, Florida

Contaminant	Groundwater Sample Designation							State Action Levels <sup>1</sup>
	12G01302	12G01401	12G01501	12G01601	12G01701	12G01702	12G01801	
<b>VOA. Reported in ppb.</b>								
Benzene	<1.0	6.9	<1.0	<1.0	<1.0	NA	<1.0	1
Toluene	1.6	13	<1.0	<1.0	<1.0	NA	<1.0	
Ethylbenzene	1.1	1.6	<1.0	<1.0	<1.0	NA	<1.0	
Total xylenes	2.6	<1.0	1.1	<1.0	<1.0	NA	<1.0	
Total VOA	5.3 n	21.5 n	1.1 n	<4.0	<4.0	NA	<4.0	50
1,1-dichloroethane	<1.0	<1.0	1.7	<1.0	<1.0	NA	<1.0	
Bromodichloromethane	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	
Dibromochloromethane	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	
Chloroform	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	
Total trihalomethanes	<3.0	<3.0	<3.0	<3.0	<3.0	NA	<3.0	100
Chloromethane	<1.0	<1.0	<1.0	<1.0	<1.0	NA	5.7	
<b>TRPH. Reported in ppm.</b>								
TRPH	<1.0	1.8	<1.0	<1.0	1.3	NA	<1.0	5
<b>Total Lead. Reported in ppb.</b>								
Lead <sup>3</sup>	15.0	21.3	<5.0	<5.0	<sup>4</sup> 80.9/	<5.0	<5.0	50

<sup>1</sup>Florida Department of Environmental Protection (FDEP), No Further Action and Monitoring Only Guidelines for Petroleum Sites, October 1990; Chapter 62-770.730(5)(a), Florida Administrative Code (FAC); Chapter 62-550, FAC; and FDEP Groundwater Guidance Concentrations, June 1994.

<sup>2</sup>Monitoring well 12G001 was sampled for the used oil analytical group because it is located at a former lube-oil underground storage tank location. All other groundwater samples were analyzed for the gasoline analytical group.

<sup>3</sup>Lead was detected in the equipment blank at a concentration of 44.8 ppb.

<sup>4</sup>Due to a high lead concentration detected during the first sampling round, these monitoring wells were resampled for lead in June 1995. The second concentration listed is the June sampling result.

Notes: UST = underground storage tank.

Total VOA = the sum concentration of benzene, toluene, ethylbenzene, and xylenes.

Total trihalomethanes = the sum concentration of bromodichloromethane, dibromochloromethane, and chloroform.

NA = sample not analyzed for the parameters.

N = the actual total concentration may be higher than the listed concentration.

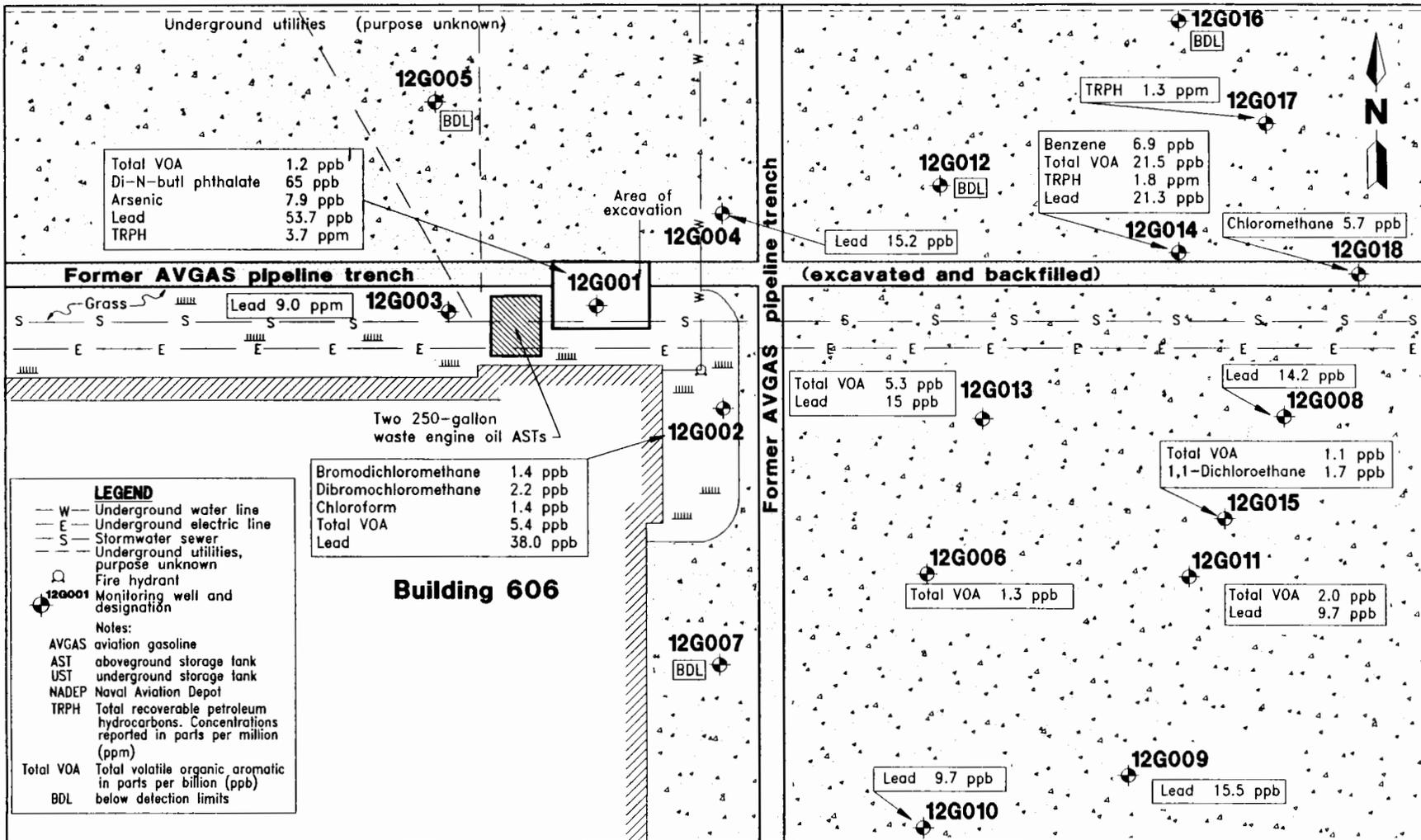
< = less than.

**Table 2-5**  
**Summary of Tentatively Identified Compounds, 12G00102,**  
**April 10, 1995**

Contamination Assessment Report Addendum  
 Site 12, UST 140, Naval Aviation Depot  
 Pensacola, Florida

Contaminant	Concentration (ppb)
Cyclobutane, ethyl-	21
Cyclo-octane	15
Butanoic acid	100
Butanoic acid, 3-methyl-	34
Pentanoic acid	17
Nonane, 3-methyl-	15
Heptane, 4-propyl-	15
Cyclohexane, 1,2-diethyl-3-methyl-	50
Undecane, 6-methyl-	46
Cyclohexanone, 5-methyl-2-(1-methylethyl)-	45
Undecane, 2,6-dimethyl	100
Hexadecane	170
Heptadecane, 2,6-dimethyl-	370
Dodecane	67
Dodecane, 2,6,11-trimethyl-	160
Tridecanol, 2-ethyl-2-methyl-	43
Boroxazolidin	55

Notes: Tentatively identified compounds are reported with a 50 percent accuracy.  
 ppb = parts per billion.

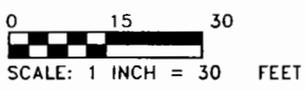


**LEGEND**

- W — Underground water line
- E — Underground electric line
- S — Stormwater sewer
- — Underground utilities, purpose unknown
- ⊕ Fire hydrant
- ⊕ 12G001 Monitoring well and designation

**Notes:**

- AVGAS aviation gasoline
- AST aboveground storage tank
- UST underground storage tank
- NADEP Naval Aviation Depot
- TRPH Total recoverable petroleum hydrocarbons. Concentrations reported in parts per million (ppm)
- Total VOA Total volatile organic aromatic in parts per billion (ppb)
- BDL below detection limits



**FIGURE 2-6  
GROUNDWATER CONTAMINATION DISTRIBUTION MAP**



**CONTAMINATION ASSESSMENT  
REPORT ADDENDUM  
SITE 12, UST 140**

**NADEP PENSACOLA  
PENSACOLA, FLORIDA**

Total trihalomethanes is the sum concentration of bromodichloromethane, dibromochloromethane, and chloroform. A total trihalomethanes concentration of 5.0 ppb was detected only in groundwater sample 12G00202. The State guidance concentration for total trihalomethanes is 100 ppb (FDEP, June 1994).

A 1,1-dichloroethane concentration of 1.7 ppb was detected in sample 12G01501. A di-n-butyl phthalate concentration of 65 ppb was detected in 12G00102. There are no State target levels or guidance concentrations for these compounds.

TRPH concentrations of 3.7 ppm, 1.8 ppm, and 1.3 ppm were detected in groundwater samples 12G00102, 12G01401, and 12G01701, respectively. The State NFA target level for TRPH is 5 ppm (FDEP, October 1990). TRPH was not detected in any other groundwater sample.

Due to suspended sediments, lead concentrations detected in groundwater samples collected from monitoring wells 12G001, 12G003, and 12G017 were unacceptably high. Monitoring wells 12G003 and 12G017 were sampled again on June 14, 1995, using a low-flow sampling technique. Both lead values are reported in Table 2-4. Only the lowest lead concentrations are discussed in the text and figures. Monitoring well 12G001 could not be sampled again because it was destroyed before the first round of sampling results was received.

The lead concentration detected in groundwater sample 12G00102 was 53.7 ppb and only slightly exceeds the State NFA target level of 50 ppm for lead (FDEP, October 1990). Lead concentrations were below the State target level in all other groundwater samples.

The arsenic concentration detected in sample 12G00102 was 7.9 ppb. The State maximum contaminant level for arsenic is 50 ppb (Chapter 62-550, FAC, Table 1).

A detailed summary of the TICs detected in groundwater sample 12G00102 is presented in Table 2-5. There are no State target levels or guidance concentrations for TICs.

Due to the elevated benzene concentration detected in 12G01401, monitoring well 12G018 was installed 30 feet west of 12G014. A groundwater sample from monitoring well 12G018 was collected on June 14, 1995, and analyzed for the gasoline analytical group parameters. A chloromethane concentration of 5.7 ppb was detected in sample 12G01801. There are no State target levels or guidance concentrations for chloromethane. No other contaminants were detected in sample 12G01801.

Due to the BRAC construction, all Site 12 monitoring wells were properly abandoned in September 1995.

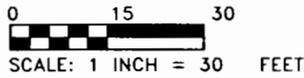
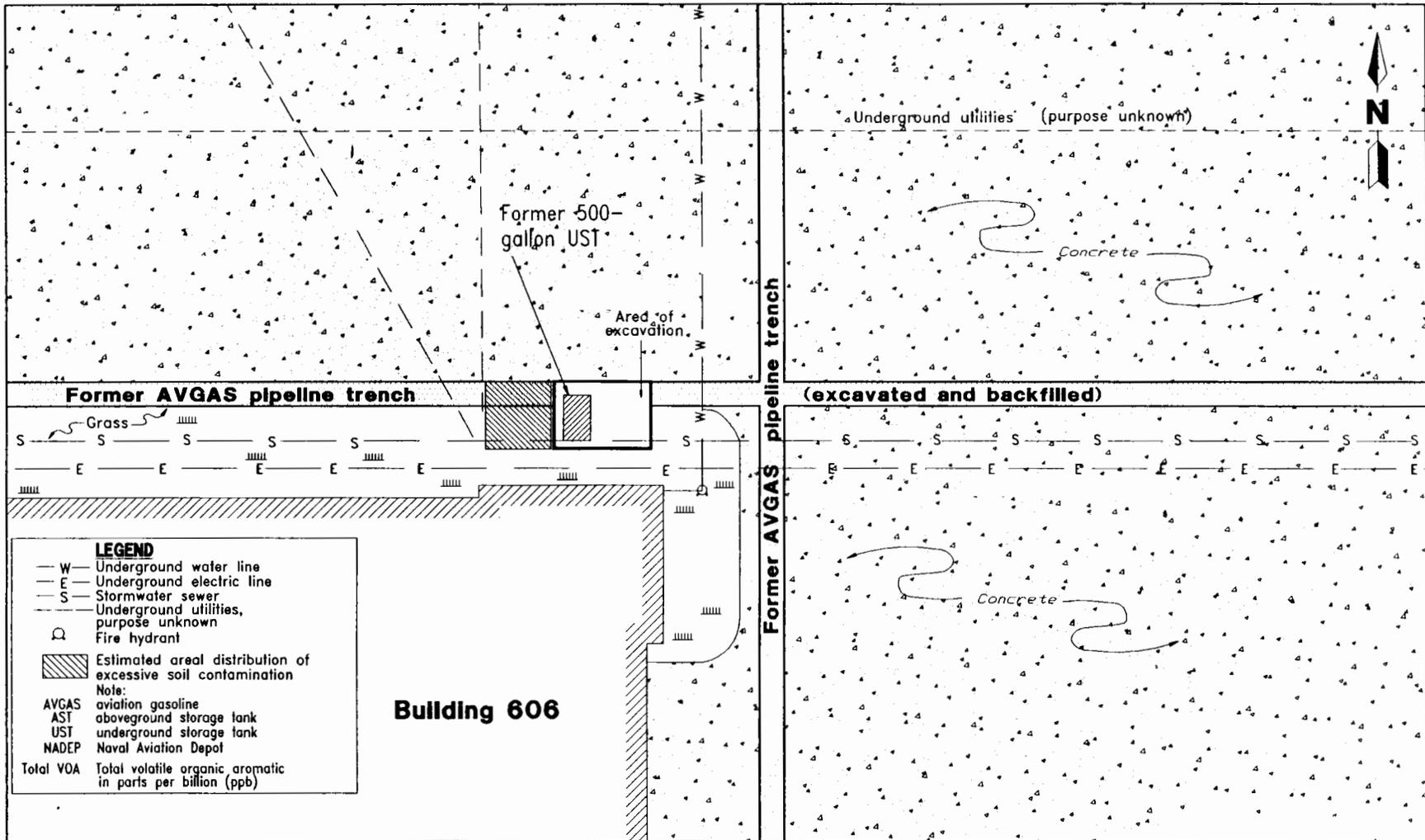
### 3.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

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 the site.

- Site soil consists of very fine- to fine-grained, moderately sorted sand ranging in color from very pale orange to light gray.
- The sources of contamination, the UST and the AVGAS pipeline, have been removed.
- Excessively contaminated soil from the tank excavation area was removed. No visual evidence of soil contamination was observed in the excavation or on the excavation walls. The excavation was backfilled with clean soil. Contaminated soil was removed from the site and thermally treated.
- Four confirmatory soil samples were collected from the excavation walls. Contamination detected in one soil sample, 12B00402, exceeded the State maximum concentration for TRPH. One additional soil sample was collected west of 12B00402 and analyzed. Contaminants detected in sample 12B00402 were below pertinent State maximum concentrations.
- No potable wells are located within a 0.25-mile radius of Site 12.
- A total of 17 shallow monitoring wells and one deep monitoring well were installed to assess the impact of soil contamination on the groundwater at Site 12.
- The groundwater flow direction at Site 12 is southeast.
- A benzene concentration of 6.9 ppb was detected in the groundwater sample collected from 12G01401. No other groundwater contaminant concentration detected in the Site 12 groundwater samples exceeded State NFA target levels.
- Monitoring wells 12G004, 12G005, 12G014, and 12G016 through 12G018 were properly abandoned subsequent to sampling. The remaining Site 12 wells will be abandoned as the BRAC construction requires.

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

- Approximately 42 yd<sup>3</sup> of excessively contaminated soil remains at Site 12 on the west side of the excavation. Figure 3-1 presents the estimated areal extent of remaining soil contamination.



**FIGURE 3-1  
AREAL EXTENT OF EXCESSIVE  
SOIL CONTAMINATION**



**CONTAMINATION ASSESSMENT  
REPORT ADDENDUM  
SITE 12, UST 140**

**NADEP PENSACOLA  
PENSACOLA, FLORIDA**

- The groundwater at Site 12 has not been impacted by soil contamination associated with UST 140; however, it does appear that leakage from the AVGAS pipeline has impacted the groundwater in the vicinity of 12G014.
- The benzene concentration detected in the groundwater sample collected from monitoring well 12G014 does not exceed the FDEP NFA target level as defined in Chapter 62-770.600(5), FAC, because there are no potable wells located within a 0.25-mile radius of Site 12.

**3.3 RECOMMENDATIONS.** Based on the findings, conclusions, and interpretations of the CA, ABB-ES recommends that the excessively contaminated soil be removed. After the BRAC construction is completed, ABB-ES recommends that an NFA proposal be accepted for Site 12.

#### 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 12, UST 140, 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, AVGAS Pipeline Area Contamination Assessment Reports, August.
- Florida Department of Environmental Protection (FDEP), 1990, No Further Action and Monitoring Only Guidelines for Petroleum-Contaminated Sites, Division of Waste Management, October.
- FDEP, 1994a, Guidelines for Assessment and Remediation of Petroleum-Contaminated Soil, Division of Waste Management, May.
- FDEP, 1994b, Groundwater Guidance Concentrations, Bureau of Drinking Water and Ground Water Resources, June.
- Florida Department of Transportation, 1982, Florida official transportation map.
- Wilkins, K. T., J. R. Wagner, and T. W. Allen, 1985, Hydrogeologic Data from the Sand-and-Gravel Aquifer in Southern Escambia County, Florida, Northwest Florida Water Management District Technical File Report 85-2.

**APPENDIX A**  
**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.

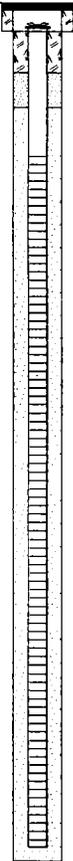
**APPENDIX B**  
**MONITORING WELL LOGS**

TITLE: NADEP Pensacola		LOG of WELL: I2G001	BORING NO.
CLIENT: SOUTHNAVFACENCOM		PROJECT NO: 7527-34	
CONTRACTOR: Groundwater Protection Inc.		DATE STARTED: 3/18/95	COMPLTD: 3/18/95
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: 11.72FT.	DPTH TO $\nabla$ 4.95 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 3/18/95		SITE: Site 12

DEPTH F.T.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
0							FILL		
5					FILL: Red clayey sand.				
10					SAND: Very fine- to fine-grained, moderately sorted, saturated, very pale orange.		SP		
15									
20									

\* TOC elevation referenced to a common arbitrarily selected site datum

TITLE: NADEP Pensacola		LOG of WELL: I2G002	BORING NO.
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: 7527-34
CONTRACTOR: Groundwater Protection Inc.		DATE STARTED: 3/19/95	COMPLTD: 3/19/95
METHOD: 4-15" ID HSA	CASE SIZE: 2 inches	SCREEN INT.: 2-12'	PROTECTION LEVEL: D
TOC ELEV.: 100.21* FT.	MONITOR INST.: OVA	TOT DPTH: 12.20FT.	DPTH TO $\nabla$ 5.26 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 3/21/95		SITE: Site I2

DEPTH F.T.	LABORATORY SAMPLE ID.	RECOVERY SAMPLE	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
5				SAND: Very fine- to fine-grained, moderately well sorted, light gray, dry.		SP		
10				SAND: As above, saturated, slight petroleum odor.				
15								
20								

\* TOC elevation referenced to a common arbitrarily selected site datum

TITLE: NADEP Pensacola		LOG of WELL: 126003	BORING NO.
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO: 7527-34	
CONTRACTOR: Groundwater Protection Inc.		DATE STARTED: 3/19/95	COMPLTD: 3/19/95
METHOD: 4.25" ID HSA	CASE SIZE: 2 inches	SCREEN INT.: 2-12"	PROTECTION LEVEL: D
TOC ELEV.: 100.16* FT.	MONITOR INST.: OVA	TOT DPTH: 12.32FT.	DPTH TO $\nabla$ 5.09 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 3/21/95		SITE: Site 12

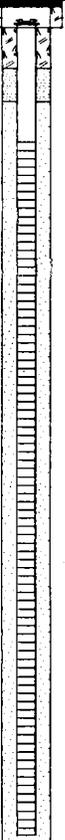
DEPTH FT.	LABORATORY SAMPLE ID.	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
0				FILL: Silty sand mixed with cobble-size fragments of concrete and brick.		FILL		
5				SAND: Very fine- to fine-grained, moderately sorted, light gray, saturated, no odor.		SP		
10								
15								
20				* TOC elevation referenced to a common arbitrarily selected site datum				

TITLE: NADEP Pensacola		LOG of WELL: 12G004	BORING NO.
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: 7527-34
CONTRACTOR: Groundwater Protection Inc.		DATE STARTED: 3/20/95	COMPLTD: 3/20/95
METHOD: 4.25" ID HSA	CASE SIZE: 2 inches	SCREEN INT.: 2-12'	PROTECTION LEVEL: D
TOC ELEV.: 99.31* FT.	MONITOR INST.: OVA	TOT DPTH: 12.05FT.	DPTH TO $\nabla$ 4.23 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 3/21/95		SITE: Site 12

DEPTH F.T.	LABORATORY SAMPLE ID.	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				CONCRETE		FILL		
				FILL: Silty sand mixed with cobble-size fragments of concrete and brick.				
5				SAND: Very fine- to fine-grained, moderately sorted, light gray, saturated, no odor.		SP		
10								
15								
20								

\* TOC elevation referenced to a common arbitrarily selected site datum

TITLE: NADEP Pensacola		LOG of WELL: 12G005	BORING NO.
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: 7527-34
CONTRACTOR: Groundwater Protection Inc.		DATE STARTED: 3/21/95	COMPLTD: 3/21/95
METHOD: 4.25" ID HSA	CASE SIZE: 2 inches	SCREEN INT.: 2-12'	PROTECTION LEVEL: D
TOC ELEV.: 99.30* FT.	MONITOR INST.: OVA	TOT DPTH: 12.10FT.	DPTH TO $\nabla$ 4.11 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 3/21/95		SITE: Site 12

DEPTH F.T.	LABORATORY SAMPLE ID.	RECOVERY HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
			CONCRETE.				
			SAND/FILL: Very fine- to fine-grained sand mixed with porcelain artifacts and coble-size fragments of concrete, brown.		FILL		
		2	SAND/FILL: Very fine- to fine-grained mixed cobble-size brick fragments, medium reddish brown, dry.				
5			SAND: Very fine- to fine-grained, moderately well sorted, light gray, wet.		SP		
10							
15							
20							

\* TOC elevation referenced to a common arbitrarily selected site datum

TITLE: NADEP Pensacola		LOG of WELL: 12G006	BORING NO.
CLIENT: SOUTHNAVFACENCOM		PROJECT NO: 7527-34	
CONTRACTOR: Groundwater Protection Inc.		DATE STARTED: 3/21/95	COMPLTD: 3/21/95
METHOD: 4.25" ID HSA	CASE SIZE: 2 inches	SCREEN INT.: 2-12'	PROTECTION LEVEL: D
TOC ELEV.: 99.47* FT.	MONITOR INST.: OVA	TOT DPTH: 12.02FT.	DPTH TO $\nabla$ 4.66 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 3/21/95		SITE: Site 12

DEPTH F.T.	LABORATORY SAMPLE ID.	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				CONCRETE.		FILL		
				SAND/FILL: Very fine- to fine-grained sand mixed with cobble-size concrete, very poorly sorted, dry.				
5				SAND: Very fine- to fine-grained, moderately well sorted, light gray, faint petroleum odor, saturated.		SP		
10								
15								
20								

\* TOC elevation referenced to a common arbitrarily selected site datum

TITLE: NADEP Pensacola		LOG of WELL: 12G007	BORING NO.
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO: 7527-34	
CONTRACTOR: Groundwater Protection Inc.		DATE STARTED: 3/21/95	COMPLTD: 3/21/95
METHOD: 4.25" ID HSA	CASE SIZE: 2 inches	SCREEN INT.: 2-12'	PROTECTION LEVEL: D
TOC ELEV.: 99.96* FT.	MONITOR INST.: OVA	TOT DPTH: 12.09FT.	DPTH TO $\nabla$ 5.13 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 3/21/95		SITE: Site 12

DEPTH F.T.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE.		FILL		
				<1	SAND/FILL: Very fine- to fine-grained sand mixed with cobble-size concrete fragments, very poorly sorted, dry.				
5					SAND: Very fine- to fine-grained, moderately well sorted, light gray, no odor, saturated.		SP		$\nabla$
10									
15									
20									

\* TOC elevation referenced to a common arbitrarily selected site datum

TITLE: NADEP Pensacola		LOG of WELL: 12G008	BORING NO.
CLIENT: SOUTHNAVFACENCOM		PROJECT NO: 7527-34	
CONTRACTOR: Groundwater Protection Inc.		DATE STARTED: 3/28/95	COMPLTD: 3/28/95
METHOD: 4.25" ID HSA	CASE SIZE: 2 inches	SCREEN INT.: 2-12'	PROTECTION LEVEL: D
TOC ELEV.: 98.90* FT.	MONITOR INST.: OVA	TOT DPTH: 12.14FT.	DPTH TO $\nabla$ 4.14 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE:		SITE: Site 12

DEPTH F.T.	LABORATORY SAMPLE ID.	RECOVERY SAMPLE	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				CONCRETE.		FILL		
				FILL: Very fine- to fine-grained sand mixed with cobble-size concrete fragments and brick, very poorly sorted, dry.				
5				SAND: Very fine- to fine-grained, moderately sorted, light gray, saturated.		SP		
10								
15								
20								

\* TOC elevation referenced to a common arbitrarily selected site datum

TITLE: NADEP Pensacola		LOG of WELL: 126009	BORING NO.
CLIENT: SOUTHNAVFACENGCOM		DATE STARTED: 3/28/95	PROJECT NO: 7527-34
CONTRACTOR: Groundwater Protection Inc.		SCREEN INT.: 2-12'	COMPLTD: 3/28/95
METHOD: 4.25" ID HSA	CASE SIZE: 2 inches	TOT DPTH: 12.20FT.	PROTECTION LEVEL: D
TOC ELEV.: 98.07* FT.	MONITOR INST.: OVA		DPTH TO $\nabla$ 4.39 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE:		SITE: Site 12

DEPTH FT.	LABORATORY SAMPLE ID.	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				CONCRETE.		FILL		
				FILL: Very fine- to fine-grained sand mixed with cobble-size brick and concrete fragments, very poorly sorted, dry.				
5				SAND: Very fine- to fine-grained, moderately sorted, brownish gray, saturated.		SP		
10								
15								
20								

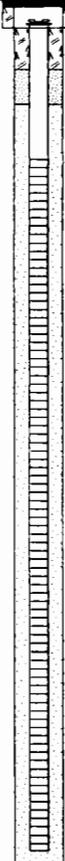
\* TOC elevation referenced to a common arbitrarily selected site datum

TITLE: NADEP Pensacola		LOG of WELL: 12G010	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM		DATE STARTED: 3/28/95	PROJECT NO: 7527
CONTRACTOR: Groundwater Protection, Inc.		COMPLTD: 3/28/95	
METHOD: 4.25" THSA	CASE SIZE: 2-inch	SCREEN INT.: 2'-12'	PROTECTION LEVEL: D
TOC ELEV.: 99.49 FT	MONITOR INST.: OVA	TOT DPTH: 12.16FT.	DPTH TO $\nabla$ 4.86 FT.
LOGGED BY: P. ...	WELL DEVELOPMENT DATE: 3/28/95	SITE: Site 12	

DEPTH FT.	LABORATORY SAMPLE ID.	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				CONCRETE		FILL		
				FILL: Very fine- to fine-grained sand mixed with cobble-size concrete fragments and brick.				
5				SAND: Light gray, very fine- to fine-grained, moderately sorted.		SP		
10								
15								
20								

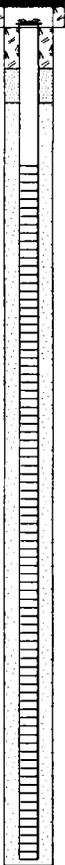
\* TOC elevation referenced to a common arbitrarily selected site datum

TITLE: NADEP Pensacola		LOG of WELL: 12G011	BORING NO. NA
CLIENT: SOUTHNAVFACENCOM		DATE STARTED: 3/28/95	PROJECT NO: 7527
CONTRACTOR: Groundwater Protection, Inc.		COMPLTD: 3/28/95	
METHOD: 4.25" ID HSA	CASE SIZE: 2-inch	SCREEN INT.: 2'-12'	PROTECTION LEVEL: D
TOC ELEV.: 99.00 FT.	MONITOR INST.: OVA	TOT DPTH: 12.35FT.	DPTH TO $\nabla$ 4.38 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 3/28/95	SITE: Site 12	

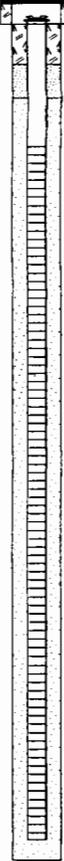
DEPTH FT.	LABORATORY SAMPLE ID.	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
5				CONCRETE		FILL		
				FILL: Fine-grained sand mixed with cobble-size coal, concrete, and brick fragments, paper and plastic garbage, very poorly sorted, dry.				
10				SAND: Light gray, fine-grained, trace very fine-grained, well sorted, slight sulfur odor.		SP		
15								
20								

\* TOC elevation referenced to a common arbitrarily selected site datum

TITLE: NADEP Pensacola		LOG of WELL: 12G012	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM			PROJECT NO: 7527
CONTRACTOR: Groundwater Protection, Inc.		DATE STARTED: 3/28/95	COMPLTD: 3/28/95
METHOD: 4.25" ID HSA	CASE SIZE: 2-inch	SCREEN INT.: 2'-12'	PROTECTION LEVEL: D
TOC ELEV.: 99.30 FT.	MONITOR INST.: OVA	TOT DPTH: 12.47FT.	DPTH TO $\nabla$ 4.48 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 3/28/95		SITE: Site 12

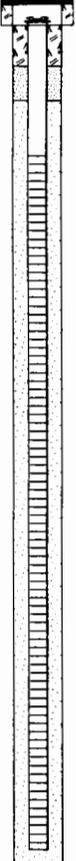
DEPTH F.T.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE.		SC		
					FILL: Red clayey sand.		SP		
					SAND: Dark gray, very fine- to fine-grained, moderately sorted, some cobble-size asphalt fragments, dry.				
5					SAND: Light gray, fine-grained, well sorted, some shell material.				
10									
15									
20					* TOC elevation referenced to a common arbitrarily selected site datum				

TITLE: NADEP Pensacola		LOG of WELL: 12G013	BORING NO. NA
CLIENT: SOUTHNAVFACENCOM		PROJECT NO: 7527	
CONTRACTOR: Groundwater Protection, Inc.		DATE STARTED: 3/28/95	COMPLTD: 3/28/95
METHOD: 4.25" ID HSA	CASE SIZE: 2-inch	SCREEN INT.: 2'-12'	PROTECTION LEVEL: D
TOC ELEV.: 99.51 FT.	MONITOR INST.: OVA	TOT DPTH: 12.27FT.	DPTH TO $\nabla$ 4.79 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 3/28/95		SITE: Site 12

DEPTH FT.	LABORATORY SAMPLE ID.	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				CONCRETE		FILL		
				FILL: Very fine- to fine-grained sand with cobble-size concrete and brick fragments, very poorly sorted, dry.				
						SP		
				SAND: Dark gray, very fine- to fine-grained, moderately to well sorted, very strong petroleum odor.				
5								
10								
15								
20								

\* TOC elevation referenced to a common arbitrarily selected site datum

TITLE: NADEP Pensacola		LOG of WELL: 12G014	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM		DATE STARTED: 3/28/95	PROJECT NO: 7527
CONTRACTOR: Groundwater Protection, Inc.		SCREEN INT.: 2'-12'	COMPLTD: 3/28/95
METHOD: 4.25" ID HSA	CASE SIZE: 2-inch	TOT DPTH: 12.30FT.	PROTECTION LEVEL: D
TOC ELEV.: 99.01 FT.	MONITOR INST.: OVA	DPTH TO $\nabla$ 4.28 FT.	
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 3/28/95	SITE: Site 12	

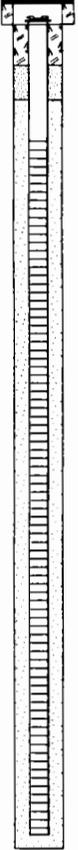
DEPTH F.T.	LABORATORY SAMPLE ID.	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				CONCRETE		FILL		
				FILL: Very fine- to fine-grained sand mixed with cobble-size concrete and brick fragments and glass shards, very poorly sorted, dry.				
5				SAND: Light gray, very fine- to fine-grained, moderately to well sorted, slight petroleum odor.		SP		
10								
15								
20								
				* TOC elevation referenced to a common arbitrarily selected site datum				

TITLE: NADEP Pensacola		LOG of WELL: 12G015	BORING NO. NA
CLIENT: SOUTHNAVFACENCOM		PROJECT NO: 7527	
CONTRACTOR: Groundwater Protection, Inc.		DATE STARTED: 3/28/95	COMPLTD: 3/29/95
METHOD: Mud Rotary	CASE SIZE: 2- & 6-inch	SCREEN INT.: 29'-34'	PROTECTION LEVEL: D
TOC ELEV.: 99.29 FT.	MONITOR INST.: OVA	TOT DPTH: 34FT.	DPTH TO $\nabla$ 4.45 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 3/29/95		SITE: Site 12

DEPTH FT.	LABORATORY SAMPLE ID.	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
				CONCRETE		FILL		
				FILL: Very fine- to fine-grained sand, some cobble-size brick, metal, and concrete fragments, very poorly sorted, dry.				
				SAND: Pale orange, fine-grained, well sorted, some cobble-size brick fragments, dry.		SP		
5				SAND: Dark gray, very fine- to fine-grained, moderately sorted.				
				SAND: As above, pale orange to light gray, petroleum odor.				
10				SAND: As above, dark gray.				
				SAND: Grayish brown, fine-grained, trace very fine-grained, some shell fragments, slight petroleum odor.				
15				SAND: As above, medium gray.				
20								
25								
30								
35								
40								

\* TOC elevation referenced to a common arbitrarily selected site datum

TITLE: NADEP Pensacola		LOG of WELL: I2G016	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO: 7527	
CONTRACTOR: Groundwater Protection, Inc.		DATE STARTED: 3/29/95	COMPLTD: 3/29/95
METHOD: 4.25" ID HSA	CASE SIZE: 2-inch	SCREEN INT.: 2'-12'	PROTECTION LEVEL: D
TOC ELEV.: 98.94 FT.	MONITOR INST.: OVA	TOT DPTH: 12.15FT.	DPTH TO $\nabla$ 4.15 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 3/29/95		SITE: Site 12

DEPTH FT.	LABORATORY SAMPLE ID.	RECOVERY HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
			APHALT				
			CONCRETE				
			FILL: Very fine- to fine-grained sand mixed with cobble-size brick, wood, and metal fragments, very poorly sorted, dry.		FILL		
					SP		
5			SAND: Dark gray to light gray, very fine- to fine-grained, moderately to well sorted.				
10			SAND: As above, pale orange to light gray.				
15							
20							

\* TOC elevation referenced to a common arbitrarily selected site datum

TITLE: NADEP Pensacola		LOG of WELL: 12G017	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO: 7527	
CONTRACTOR: Groundwater Protection, Inc.		DATE STARTED: 3/29/95	COMPLTD: 3/29/95
METHOD: 4.25" ID HSA	CASE SIZE: 2-inch	SCREEN INT.: 2'-12'	PROTECTION LEVEL: D
TOC ELEV.: 98.68 FT.	MONITOR INST.: OVA	TOT DPTH: 12.14F T.	DPTH TO $\nabla$ 3.97 FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 3/29/95		SITE: Site 12

DEPTH F.T.	LABORATORY SAMPLE ID.	SAMPLE	RECOVERY	HEADSPACE (ppm)	SOIL/ROCK DESCRIPTION AND COMMENTS	LITHOLOGIC SYMBOL	SOIL CLASS	BLOWS/6-IN	WELL DATA
					CONCRETE		FILL		
					FILL: Very fine- to fine-grained sand mixed with cobble-size brick, wood, and metal fragments, very poorly sorted, dry.				
5					SAND: Brownish gray to light gray, very fine- to fine-grained, moderately to well sorted.		SP		
10					SAND: As above, light gray.				
15									
20					* TOC elevation referenced to a common arbitrarily selected site datum				

TITLE: NADEP Pensacola		LOG of WELL: 12G018	BORING NO. NA
CLIENT: SOUTHNAVFACENGCOM		PROJECT NO: 7527	
CONTRACTOR: Groundwater Protection, Inc.		DATE STARTED: 6/7/95	COMPLTD: 6/7/95
METHOD: 4.25" ID HSA	CASE SIZE: 2-inch	SCREEN INT.: 2'-12'	PROTECTION LEVEL: D
TOC ELEV: 29.00 FT.	MONITOR INST.: OVA	TOT DPTH: 11.57 FT.	DPTH TO $\nabla$ FT.
LOGGED BY: P. Wagner	WELL DEVELOPMENT DATE: 6/7/95		SITE: Site 12

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: sandy clay, moderate reddish brown.		FILL		
5					SAND: Medium gray, fine-grained, trace very fine-grained, poorly sorted, some asphalt.		SP		
10					SAND: As above, moderately to well sorted, no asphalt.				
15									
20									

\* TOC elevation referenced to a common arbitrarily selected site datum

**APPENDIX C**  
**LABORATORY ANALYTICAL DATA SHEETS**

Lab Sample Number: B4J2700400  
 Site: WADEP-12  
 Locator: 12B00101  
 Collect Date: 26-OCT-94

VALUE QUAL UNITS DL

## GC/MS Volatiles

Acrolein	5.4 U	ug/kg	5.4
Acrylonitrile	5.4 U	ug/kg	5.4
Benzene	5.4 U	ug/kg	5.4
Bromodichloromethane	5.4 U	ug/kg	5.4
Bromoform	5.4 U	ug/kg	5.4
Bromomethane	5.4 U	ug/kg	5.4
Carbon tetrachloride	5.4 U	ug/kg	5.4
Chlorobenzene	5.4 U	ug/kg	5.4
Dibromochloromethane	5.4 U	ug/kg	5.4
Chloroethane	5.4 U	ug/kg	5.4
2-Chloroethyl vinyl ether	5.4 U	ug/kg	5.4
Chloroform	5.4 U	ug/kg	5.4
Chloromethane	5.4 U	ug/kg	5.4
1,2-Dichlorobenzene	5.4 U	ug/kg	5.4
1,3-Dichlorobenzene	5.4 U	ug/kg	5.4
1,4-Dichlorobenzene	5.4 U	ug/kg	5.4
1,1-Dichloroethane	5.4 U	ug/kg	5.4
1,2-Dichloroethane	5.4 U	ug/kg	5.4
1,1-Dichloroethene	5.4 U	ug/kg	5.4
cis-1,2-Dichloroethene	5.4 U	ug/kg	5.4
trans-1,2-Dichloroethene	5.4 U	ug/kg	5.4
1,2-Dichloropropane	5.4 U	ug/kg	5.4
cis-1,3-Dichloropropene	5.4 U	ug/kg	5.4
trans-1,3-Dichloropropene	5.4 U	ug/kg	5.4
Ethylbenzene	5.4 U	ug/kg	5.4
Trichlorofluoromethane	5.4 U	ug/kg	5.4
Methylene chloride	5.4 U	ug/kg	5.4
1,1,2,2-Tetrachloroethane	5.4 U	ug/kg	5.4
Tetrachloroethene	5.4 U	ug/kg	5.4
Toluene	5.4 U	ug/kg	5.4
1,1,1-Trichloroethane	5.4 U	ug/kg	5.4
1,1,2-Trichloroethane	5.4 U	ug/kg	5.4
Trichloroethene	5.4 U	ug/kg	5.4
Vinyl chloride	5.4 U	ug/kg	5.4
Xylenes (total)	5.4 U	ug/kg	5.4

## GC/MS Semi-Volatiles II

Acenaphthene	1400 U	ug/kg	1400
Acenaphthylene	1400 U	ug/kg	1400
Anthracene	1400 U	ug/kg	1400
Benzidine	7300 U	ug/kg	7300
Benzo (a) anthracene	1400 U	ug/kg	1400
Benzo (b) fluoranthene	1400 U	ug/kg	1400
Benzo (k) fluoranthene	1400 U	ug/kg	1400
Benzo (g,h,i) perylene	1400 U	ug/kg	1400
Benzo (a) pyrene	1400 U	ug/kg	1400
Bis(2-chloroethoxy)methane	1400 U	ug/kg	1400
Bis(2-chloroethyl)ether	1400 U	ug/kg	1400
Bis(2-chloroisopropyl)ether	1400 U	ug/kg	1400
Bis(2-ethylhexyl)phthalate	1400 U	ug/kg	1400
4-Bromophenyl phenyl ether	1400 U	ug/kg	1400

Lab Sample Number: B4J2700400  
 Site: NADEP-12  
 Locator: 12B00101  
 Collect Date: 26-OCT-94

VALUE QUAL UNITS DL

Butyl benzyl phthalate	1400 U	ug/kg	1400
2-Chloronaphthalene	1400 U	ug/kg	1400
2-Chlorophenol	1400 U	ug/kg	1400
4-Chlorophenyl phenyl ether	1400 U	ug/kg	1400
Chrysene	1400 U	ug/kg	1400
Dibenzo (a,h) anthracene	1400 U	ug/kg	1400
Di-n-butyl phthalate	1400 U	ug/kg	1400
1,2-Dichlorobenzene	5.4 U	ug/kg	5.4
1,3-Dichlorobenzene	5.4 U	ug/kg	5.4
1,4-Dichlorobenzene	5.4 U	ug/kg	5.4
3,3'-Dichlorobenzidine	7300 U	ug/kg	7300
2,4-Dichlorophenol	1400 U	ug/kg	1400
Diethyl phthalate	1400 U	ug/kg	1400
2,4-Dimethylphenol	1400 U	ug/kg	1400
Dimethyl phthalate	1400 U	ug/kg	1400
Di-n-octyl phthalate	1400 U	ug/kg	1400
2,4-Dinitrophenol	7300 U	ug/kg	7300
2,4-Dinitrotoluene	1400 U	ug/kg	1400
2,6-Dinitrotoluene	1400 U	ug/kg	1400
Fluoranthene	1400 U	ug/kg	1400
Fluorene	1400 U	ug/kg	1400
Hexachlorobenzene	1400 U	ug/kg	1400
Hexachlorocyclopentadiene	1400 U	ug/kg	1400
Hexachloroethane	1400 U	ug/kg	1400
Indeno(1,2,3-cd)pyrene	1400 U	ug/kg	1400
Isophorone	1400 U	ug/kg	1400
Naphthalene	1400 U	ug/kg	1400
Nitrobenzene	1400 U	ug/kg	1400
2-Nitrophenol	1400 U	ug/kg	1400
4-Nitrophenol	7300 U	ug/kg	7300
N-Nitrosodimethylamine	1400 U	ug/kg	1400
N-Nitrosodi-n-propylamine	1400 U	ug/kg	1400
N-Nitrosodiphenylamine	1400 U	ug/kg	1400
Pentachlorophenol	7300 U	ug/kg	7300
Phenanthrene	1400 U	ug/kg	1400
Phenol	1400 U	ug/kg	1400
Pyrene	1400 U	ug/kg	1400
1,2,4-Trichlorobenzene	1400 U	ug/kg	1400
2,4,6-Trichlorophenol	1400 U	ug/kg	1400
Hexachlorobutadiene	1400 U	ug/kg	1400
<b>GC Semi-Volatiles</b>			
PCB-1016	1.1 U	ng/kg	1.1
PCB-1221	1.1 U	ng/kg	1.1
PCB-1232	1.1 U	ng/kg	1.1
PCB-1242	1.1 U	ng/kg	1.1
PCB-1248	1.1 U	ng/kg	1.1
PCB-1254	1.1 U	ng/kg	1.1
PCB-1260	1.1 U	ng/kg	1.1

U = Not Detected J = Estimated Value

10/06/95 NADEP AVGAS PIPELINE SITE 12 08:14:04

Lab Sample Number:	B4J2700400		B5C1400170		B5C1400170		B5C1400170		
Site	NADEP-12		NADEP-12		NADEP-12		NADEP-12		
Locator	12B00101		12B00202		12B00202-D		12B00302		
Collect Date:	26-OCT-94		13-MAR-95		13-MAR-95		13-MAR-95		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL

TOTAL METALS												
Cadmium	.92	mg/kg	.5	.61	mg/kg	.52	.52 U	mg/kg	.52	1.2	mg/kg	.52
Chromium	9	mg/kg	2.5	27.3	mg/kg	2.6	30.7	mg/kg	2.6	9	mg/kg	2.6
Arsenic	.68	mg/kg	.5	.35	mg/kg	.26	.48	mg/kg	.26	.99	mg/kg	.26
Lead	136	mg/kg	5	60.1	mg/kg	2.6	47.7	mg/kg	2.6	45.2	mg/kg	2.6
TRPH												
Total petroleum hydrocarbons	527	mg/kg	10.7	27.5	mg/kg	5.2	9.8	mg/kg	5.2	38.9	mg/kg	5.2

U = Not Detected J = Estimated Value

Lab Sample Number:	B5C1400170		B5C1400170		B5D1400490		
Site	NADEP-12		NADEP-12		NADEP-12		
Locator	12B00402		12B00502		12B00603		
Collect Date:	13-MAR-95		13-MAR-95		12-APR-95		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE

TOTAL METALS

Cadmium	.53 U	mg/kg	.53	4.9	mg/kg	.54	.54 U	mg/kg	.54
Chromium	4.4	mg/kg	2.6	12.9	mg/kg	2.7	5	mg/kg	2.7
Arsenic	1.3	mg/kg	.26	1.2	mg/kg	.27	1.3	mg/kg	.27
Lead	46.2	mg/kg	2.6	168	mg/kg	2.7	32.3	mg/kg	2.7

TRPH

Total petroleum hydrocarbons	59.4	mg/kg	5.3	48.6	mg/kg	5.4	28.9	mg/kg	5.4
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U = Not Detected J = Estimated Value

Lab Sample Number: B5D1200490  
 Site NADEP-12  
 Locator 12G00102  
 Collect Date: 10-APR-95

VALUE QUAL UNITS DL

## GC/MS Volatiles

Acrolein	10 U	ug/l	10
Acrylonitrile	10 U	ug/l	10
Benzene	1 U	ug/l	1
Bromodichloromethane	1 U	ug/l	1
Bromoform	1 U	ug/l	1
Bromomethane	1 U	ug/l	1
Carbon tetrachloride	1 U	ug/l	1
Chlorobenzene	1 U	ug/l	1
Dibromochloromethane	1 U	ug/l	1
Chloroethane	1 U	ug/l	1
2-Chloroethyl vinyl ether	1 U	ug/l	1
Chloroform	1 U	ug/l	1
Chloromethane	1 U	ug/l	1
1,2-Dichlorobenzene	1 U	ug/l	1
1,3-Dichlorobenzene	10 U	ug/l	10
1,4-Dichlorobenzene	1 U	ug/l	1
1,1-Dichloroethane	1 U	ug/l	1
1,2-Dichloroethane	1 U	ug/l	1
1,1-Dichloroethene	1 U	ug/l	1
cis-1,2-Dichloroethene	1 U	ug/l	1
trans-1,2-Dichloroethene	1 U	ug/l	1
1,2-Dichloropropane	1 U	ug/l	1
cis-1,3-Dichloropropene	1 U	ug/l	1
trans-1,3-Dichloropropene	1 U	ug/l	1
Ethylbenzene	1 U	ug/l	1
Trichlorofluoroethane	1 U	ug/l	1
Methylene chloride	1 U	ug/l	1
1,1,2,2-Tetrachloroethane	1 U	ug/l	1
Tetrachloroethane	1 U	ug/l	1
Toluene	1.2	ug/l	1
1,1,1-Trichloroethane	1 U	ug/l	1
1,1,2-Trichloroethane	1 U	ug/l	1
Trichloroethane	1 U	ug/l	1
Vinyl chloride	1 U	ug/l	1
Xylenes, Total	1 U	ug/l	1

## GC/MS Semi-Volatiles II

Acenaphthene	10 U	ug/l	10
Acenaphthylene	10 U	ug/l	10
Anthracene	10 U	ug/l	10
Benzidine	50 U	ug/l	50
Benzo (a) anthracene	10 U	ug/l	10
Benzo (b) fluoranthene	10 U	ug/l	10
Benzo (k) fluoranthene	10 U	ug/l	10
Benzo (g,h,i) perylene	10 U	ug/l	10
Benzo (a) pyrene	10 U	ug/l	10
Bis(2-chloroethoxy)methane	10 U	ug/l	10
Bis(2-chloroethyl)ether	10 U	ug/l	10
Bis(2-chloroisopropyl)ether	10 U	ug/l	10
Bis(2-ethylhexyl)phthalate	10 U	ug/l	10
4-Bromophenyl phenyl ether	10 U	ug/l	10

Lab Sample Number: B5D1200490  
 Site NADEP-12  
 Locator 12G00102  
 Collect Date: 10-APR-95

VALUE QUAL UNITS DL

Butyl benzyl phthalate	10 U	ug/l	10
2-Chloronaphthalene	10 U	ug/l	10
2-Chlorophenol	10 U	ug/l	10
4-Chlorophenyl phenyl ether	10 U	ug/l	10
Chrysene	10 U	ug/l	10
Dibenzo (a,h) anthracene	10 U	ug/l	10
Di-n-butyl phthalate	65	ug/l	10
1,2-Dichlorobenzene	1 U	ug/l	1
1,3-Dichlorobenzene	10 U	ug/l	10
1,4-Dichlorobenzene	1 U	ug/l	1
3,3'-Dichlorobenzidine	50 U	ug/l	50
2,4-Dichlorophenol	10 U	ug/l	10
Diethyl phthalate	10 U	ug/l	10
2,4-Dimethylphenol	10 U	ug/l	10
Dimethyl phthalate	10 U	ug/l	10
Di-n-octyl phthalate	10 U	ug/l	10
2,4-Dinitrophenol	50 U	ug/l	50
2,4-Dinitrotoluene	10 U	ug/l	10
2,6-Dinitrotoluene	10 U	ug/l	10
Fluoranthene	10 U	ug/l	10
Fluorene	10 U	ug/l	10
Hexachlorobenzene	10 U	ug/l	10
Hexachlorocyclopentadiene	10 U	ug/l	10
Hexachloroethane	10 U	ug/l	10
Indeno(1,2,3-cd)pyrene	10 U	ug/l	10
Isophorone	10 U	ug/l	10
Naphthalene	10 U	ug/l	10
Nitrobenzene	10 U	ug/l	10
2-Nitrophenol	10 U	ug/l	10
4-Nitrophenol	50 U	ug/l	50
N-Nitrosodimethylamine	10 U	ug/l	10
N-Nitrosodi-n-propylamine	10 U	ug/l	10
N-Nitrosodiphenylamine	10 U	ug/l	10
Pentachlorophenol	50 U	ug/l	50
Phenanthrene	10 U	ug/l	10
Phenol	10 U	ug/l	10
Pyrene	10 U	ug/l	10
1,2,4-Trichlorobenzene	10 U	ug/l	10
2,4,6-Trichlorophenol	10 U	ug/l	10
Hexachlorobutadiene	10 U	ug/l	10
<b>TOTAL METALS</b>			
Cadmium	5 U	ug/l	5
Chromium	50 U	ug/l	50
Arsenic	7.9	ug/l	5
Lead	53.7	ug/l	5
<b>TRPH</b>			
Total petroleum hydrocarbons	3.7	mg/l	1

U = Not Detected J = Estimated Value

10/13/95 NADEP AVGAS PIPELINE SITE 12 13:34:46

Lab Sample Number:	B5D1300640		B5D1200490		B5F1501090		B5D1200490		
Site	NADEP-12		NADEP-12		NADEP-12		NADEP-12		
Locator	12G00202		12G00302		12G00303		12G00402		
Collect Date:	12-APR-95		10-APR-95		14-JUN-95		10-APR-95		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL

	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
Bromodichloromethane	1.4	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-Dichloroethane	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-Dichloroethane	1 U	ug/l	1	1 U	ug/l	1	-			1 U	ug/l	1
Chloroform	1.4	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-Dichloropropene	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	2.2	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
Tetrachloroethane	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	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-602	-			-			-			-		
Ethylbenzene	1.8	ug/l	1	1 U	ug/l	1	-			1 U	ug/l	1
Xylenes (total)	3.6	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
601 mod.												
Ethylene Dibromide	.02 U	ug/l	.02	.02 U	ug/l	.02	-			.02 U	ug/l	.02
METALS												
Lead	38	ug/l	5	206	ug/l	5	9	ug/l	5	15.2	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 Value

10/13/95 NADEP AVGAS PIPELINE SITE 12 13:34:46

Lab Sample Number:	B5D1200490		B5D1200490		B5D1200490		B5D1200490		
Site	NADEP-12		NADEP-12		NADEP-12		NADEP-12		
Locator	12G00402D		12G00502		12G00602		12G00702		
Collect Date:	10-APR-95		10-APR-95		10-APR-95		10-APR-95		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL

EPA 601/602												
Chloromethane	1 U	ug/l	1									
Bromomethane	1 U	ug/l	1									
Bromodichloromethane	1 U	ug/l	1									
Vinyl chloride	1 U	ug/l	1									
Chloroethane	1 U	ug/l	1									
Dichloromethane	1 U	ug/l	1									
Trichlorofluoromethane	1 U	ug/l	1									
1,1-Dichloroethane	1 U	ug/l	1									
1,1-Dichloroethane	1 U	ug/l	1									
trans-1,2-Dichloroethene	1 U	ug/l	1									
Chloroform	1 U	ug/l	1									
1,2-Dichloroethane	1 U	ug/l	1									
1,1,1-Trichloroethane	1 U	ug/l	1									
Carbon tetrachloride	1 U	ug/l	1									
1,2-Dichloropropane	1 U	ug/l	1									
cis-1,3-Dichloropropene	1 U	ug/l	1									
Trichloroethene	1 U	ug/l	1									
Dibromochloromethane	1 U	ug/l	1									
1,1,2-Trichloroethane	1 U	ug/l	1									
trans-1,3-Dichloropropene	1 U	ug/l	1									
Bromoform	1 U	ug/l	1									
1,1,2,2-Tetrachloroethane	1 U	ug/l	1									
Tetrachloroethene	1 U	ug/l	1									
Chlorobenzene	1 U	ug/l	1									
1,3-Dichlorobenzene	1 U	ug/l	1									
1,2-Dichlorobenzene	1 U	ug/l	1									
1,4-Dichlorobenzene	1 U	ug/l	1									
Benzene	1 U	ug/l	1									
Toluene	1 U	ug/l	1	1 U	ug/l	1	1.3	ug/l	1	1 U	ug/l	1
Chlorobenzene-602	-			-			-			-		
Ethylbenzene	1 U	ug/l	1									
Xylenes (total)	1 U	ug/l	1									
Methyl tert-butyl ether	1 U	ug/l	1									

601 mod.												
Ethylene Dibromide	.02 U	ug/l	.02									

METALS												
Lead	5 U	ug/l	5									

TRPH

10/13/95 NADEP AVGAS PIPELINE SITE 12 13:34:46

Lab Sample Number:	B5D1200490		B5D1200490		B5D1200490		B5D1200490		
Site	NADEP-12		NADEP-12		NADEP-12		NADEP-12		
Locator	12G00402D		12G00502		12G00602		12G00702		
Collect Date:	10-APR-95		10-APR-95		10-APR-95		10-APR-95		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL

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

10/13/95 NADEP AVGAS PIPELINE SITE 12 13:34:46

Lab Sample Number:  
 Site  
 Locator  
 Collect Date:

B5D1300640  
 NADEP-12  
 12G00802  
 12-APR-95

B5D1300640  
 NADEP-12  
 12G00902  
 12-APR-95

B5D1300640  
 NADEP-12  
 12G01002  
 12-APR-95

B5D1300640  
 NADEP-12  
 12G01002D  
 12-APR-95

	VALUE	QUAL	UNITS	DL												
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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

10/13/95 NADEP AVGAS PIPELINE SITE 12 13:34:46

Lab Sample Number:  
Site  
Locator  
Collect Date:

B5D1300640  
NADEP-12  
12G01102  
12-APR-95

B5D0300020  
NADEP-12  
12G01201  
30-MAR-95

B5D1300640  
NADEP-12  
12G01302  
12-APR-95

B5D0300020  
NADEP-12  
12G01401  
30-MAR-95

VALUE QUAL UNITS DL VALUE QUAL UNITS DL VALUE QUAL UNITS DL VALUE QUAL UNITS DL

Total petroleum hydrocarbons

1 U mg/l 1

1 U mg/l 1

1 U mg/l 1

1.8 mg/l 1

U = Not Detected J = Estimated Value

10/13/95 NADEP AVGAS PIPELINE SITE 12 13:34:46

Lab Sample Number:	B5D0300020	B5D0300020	B5D0300020	B5F1501090							
Site	NADEP-12	NADEP-12	NADEP-12	NADEP AVGAS							
Locator	12G01501	12G01601	12G01701	12G01702							
Collect Date:	30-MAR-95	30-MAR-95	30-MAR-95	14-JUN-95							
VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL

Total petroleum hydrocarbons

1 U mg/l

1

1 U mg/l

1

1.3 mg/l

1

-

U = Not Detected J = Estimated Value

10/13/95 NADEP AVGAS PIPELINE SITE 12 13:34:46

Lab Sample Number:  
Site  
Locator  
Collect Date:

B5F1501090  
NADEP AVGAS  
12G01801  
14-JUN-95

B5D1300640  
NADEP-12  
12G0EB02  
12-APR-95

B4J2700400  
NADEP-12  
TRIPBLANK  
26-OCT-94

VALUE QUAL UNITS DL VALUE QUAL UNITS DL VALUE QUAL UNITS DL

Total petroleum hydrocarbons

1 U mg/l 1

1 U mg/l 1

1 -

U = Not Detected J = Estimated Value

10/13/95 NADEP AVGAS PIPELINE SITE 12 13:34:46

Lab Sample Number:	B5D1300640	B5D1300640	B5D1300640	B5D1300640								
Site	NADEP-12	NADEP-12	NADEP-12	NADEP-12								
Locator	12G00802	12G00902	12G01002	12G01002D								
Collect Date:	12-APR-95	12-APR-95	12-APR-95	12-APR-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									
Bromomethane	1 U	ug/l	1									
Bromodichloromethane	1 U	ug/l	1									
Vinyl chloride	1 U	ug/l	1									
Chloroethane	1 U	ug/l	1									
Dichloromethane	1 U	ug/l	1									
Trichlorofluoromethane	1 U	ug/l	1									
1,1-Dichloroethene	1 U	ug/l	1									
1,1-Dichloroethane	1 U	ug/l	1									
trans-1,2-Dichloroethene	1 U	ug/l	1									
Chloroform	1 U	ug/l	1									
1,2-Dichloroethane	1 U	ug/l	1									
1,1,1-Trichloroethane	1 U	ug/l	1									
Carbon tetrachloride	1 U	ug/l	1									
1,2-Dichloropropane	1 U	ug/l	1									
cis-1,3-Dichloropropene	1 U	ug/l	1									
Trichloroethene	1 U	ug/l	1									
Dibromochloromethane	1 U	ug/l	1									
1,1,2-Trichloroethane	1 U	ug/l	1									
trans-1,3-Dichloropropene	1 U	ug/l	1									
Bromoform	1 U	ug/l	1									
1,1,2,2-Tetrachloroethane	1 U	ug/l	1									
Tetrachloroethene	1 U	ug/l	1									
Chlorobenzene	1 U	ug/l	1									
1,3-Dichlorobenzene	1 U	ug/l	1									
1,2-Dichlorobenzene	1 U	ug/l	1									
1,4-Dichlorobenzene	1 U	ug/l	1									
Benzene	1 U	ug/l	1									
Toluene	1 U	ug/l	1									
Chlorobenzene-602	-			-			-			-		
Ethylbenzene	1 U	ug/l	1									
Xylenes (total)	1 U	ug/l	1									
Methyl tert-butyl ether	1 U	ug/l	1									

601 mod.

Ethylene Dibromide	.02 U	ug/l	.02									
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METALS

Lead	14.2	ug/l	5	15.5	ug/l	5	8.5	ug/l	5	9.7	ug/l	5
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TRPH

10/13/95 NADEP AVGAS PIPELINE SITE 12 13:34:46

Lab Sample Number:  
 Site  
 Locator  
 Collect Date:

B5D1300640  
 NADEP-12  
 12G00802  
 12-APR-95  
 VALUE QUAL UNITS DL

B5D1300640  
 NADEP-12  
 12G00902  
 12-APR-95  
 VALUE QUAL UNITS DL

B5D1300640  
 NADEP-12  
 12G01002  
 12-APR-95  
 VALUE QUAL UNITS DL

B5D1300640  
 NADEP-12  
 12G01002D  
 12-APR-95  
 VALUE QUAL UNITS DL

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

10/13/95 NADEP AVGAS PIPELINE SITE 12 13:34:46

Lab Sample Number:	B5D1300640	B5D0300020	B5D1300640	B5D0300020								
Site	NADEP-12	NADEP-12	NADEP-12	NADEP-12								
Locator	12G01102	12G01201	12G01302	12G01401								
Collect Date:	12-APR-95	30-MAR-95	12-APR-95	30-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									
Bromomethane	1 U	ug/l	1									
Bromodichloromethane	1 U	ug/l	1									
Vinyl chloride	1 U	ug/l	1									
Chloroethane	1 U	ug/l	1									
Dichloromethane	1 U	ug/l	1									
Trichlorofluoromethane	1 U	ug/l	1									
1,1-Dichloroethane	1 U	ug/l	1									
1,1-Dichloroethane	1 U	ug/l	1									
trans-1,2-Dichloroethane	1 U	ug/l	1									
Chloroform	1 U	ug/l	1									
1,2-Dichloroethane	1 U	ug/l	1									
1,1,1-Trichloroethane	1 U	ug/l	1									
Carbon tetrachloride	1 U	ug/l	1									
1,2-Dichloropropane	1 U	ug/l	1									
cis-1,3-Dichloropropene	1 U	ug/l	1									
Trichloroethene	1 U	ug/l	1									
Dibromochloromethane	1 U	ug/l	1									
1,1,2-Trichloroethane	1 U	ug/l	1									
trans-1,3-Dichloropropene	1 U	ug/l	1									
Bromoform	1 U	ug/l	1									
1,1,2,2-Tetrachloroethane	1 U	ug/l	1									
Tetrachloroethene	1 U	ug/l	1									
Chlorobenzene	1 U	ug/l	1									
1,3-Dichlorobenzene	1 U	ug/l	1									
1,2-Dichlorobenzene	1 U	ug/l	1									
1,4-Dichlorobenzene	1 U	ug/l	1									
Benzene	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1	6.9	ug/l	1
Toluene	1 U	ug/l	1	1 U	ug/l	1	1.6	ug/l	1	13	ug/l	1
Chlorobenzene-602	-			-			-			-		
Ethylbenzene	1 U	ug/l	1	1 U	ug/l	1	1.1	ug/l	1	1.6	ug/l	1
Xylenes (total)	2	ug/l	1	1 U	ug/l	1	2.6	ug/l	1	1 U	ug/l	1
Methyl tert-butyl ether	1 U	ug/l	1									

601 mod.												
Ethylene Dibromide	.02 U	ug/l	.02									

METALS												
Lead	9.7	ug/l	5	5 U	ug/l	5	15	ug/l	5	21.3	ug/l	5

TRPH

10/13/95 NADEP AVGAS PIPELINE SITE 12 13:34:46

Lab Sample Number:  
Site  
Locator  
Collect Date:

B5D1300640  
NADEP-12  
12G01102  
12-APR-95

B5D0300020  
NADEP-12  
12G01201  
30-MAR-95

B5D1300640  
NADEP-12  
12G01302  
12-APR-95

B5D0300020  
NADEP-12  
12G01401  
30-MAR-95

VALUE QUAL UNITS DL VALUE QUAL UNITS DL VALUE QUAL UNITS DL VALUE QUAL UNITS DL

Total petroleum hydrocarbons

1 U mg/l 1

1 U mg/l 1

1 U mg/l 1

1.8 mg/l 1

U = Not Detected J = Estimated Value

Lab Sample Number:  
 Site  
 Locator  
 Collect Date:

B5D0300020  
 NADEP-12  
 12G01501  
 30-MAR-95

B5D0300020  
 NADEP-12  
 12G01601  
 30-MAR-95

B5D0300020  
 NADEP-12  
 12G01701  
 30-MAR-95

B5F1501090  
 NADEP AVGAS  
 12G01702  
 14-JUN-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	-	
Bromodichloromethane	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-Dichloroethane	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1	-	
1,1-Dichloroethane	1.7	ug/l	1	1 U	ug/l	1	1 U	ug/l	1	-	
trans-1,2-Dichloroethane	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-Dichloropropane	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-Dichloropropane	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	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-602	-			-			-			-	
Ethylbenzene	1 U	ug/l	1	1 U	ug/l	1	1 U	ug/l	1	-	
Xylenes (total)	1.1	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	-	

601 mod.

Ethylene Dibromide	.02 U	ug/l	.02	.02 U	ug/l	.02	.02 U	ug/l	.02	-	
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METALS

Lead	5 U	ug/l	5	5 U	ug/l	5	80.9	ug/l	5	5 U	ug/l	5
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TRPH

10/13/95 NADEP AVGAS PIPELINE SITE 12 13:34:46

Lab Sample Number:	B5D0300020	B5D0300020	B5D0300020	B5F1501090							
Site	NADEP-12	NADEP-12	NADEP-12	NADEP AVGAS							
Locator	12G01501	12G01601	12G01701	12G01702							
Collect Date:	30-MAR-95	30-MAR-95	30-MAR-95	14-JUN-95							
VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL

total petroleum hydrocarbons

1 U	mg/l	1	1 U	mg/l	1	1.3	mg/l	1	-
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U = Not Detected J = Estimated Value

Lab Sample Number: B5F1501090  
 Site NADEP AVGAS  
 Locator 12G01801  
 Collect Date: 14-JUN-95

B5D1300640  
 NADEP-12  
 12G0EB02  
 12-APR-95

B4J2700400  
 NADEP-12  
 TRIPBLANK  
 26-OCT-94

VALUE QUAL UNITS DL VALUE QUAL UNITS DL VALUE QUAL UNITS DL

EPA 601/602

Chloromethane	5.7	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
Bromodichloromethane	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	-		
1,1-Dichloroethane	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-Dichloroethane	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-Dichloropropene	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	1 U	ug/l	1	-		
1,2-Dichlorobenzene	1 U	ug/l	1	1 U	ug/l	1	-		
1,4-Dichlorobenzene	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-602	-			-			-		
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
Methyl tert-butyl ether	1 U	ug/l	1	1 U	ug/l	1	-		

601 mod.

Ethylene Dibromide	.02 U	ug/l	.02	.02 U	ug/l	.02	-		
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METALS

Lead	1 U	ug/l	1	5 U	ug/l	5	-		
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TRPH

Lab Sample Number:  
 Site  
 Locator  
 Collect Date:

B5F1501090  
 NADEP AVGAS  
 12G01801  
 14-JUN-95

DL

B5D1300640  
 NADEP-12  
 12G0EB02  
 12-APR-95

VALUE

QUAL UNITS

DL

B4J2700400  
 NADEP-12  
 TRIPBLANK  
 26-OCT-94

VALUE

QUAL UNITS

DL

Total petroleum hydrocarbons

1 U mg/l 1

1 U mg/l 1

-

U = Not Detected J = Estimated Value