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SITE ASSESSMENT REPORT FOR BOCA CHICA PIPELINE RUNWAY 7/25 SITE AND MARINA SITE NAS KEY WEST FL

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BLASLAND, BOUCK AND LEE

TECHNICAL REPORT

Site Assessment Report

Boca Chica Pipeline
Runway 7/25 Site and Marina Site
NAS Key West, Florida

Department of the Navy
Key West, Florida

October 2000

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Statement of Geologic Review

In accordance with Chapter 492.111 (3) of the Florida Statutes, this Site Assessment Report prepared for the Boca Chica Pipeline Runway 7/25 Site and Marina Site located at Naval Air Station Key West, Florida has been reviewed by a Professional Geologist registered in the state of Florida.

Approved for Submittal:

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October 23, 2000

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1. Introduction and Background Information

Blasland, Bouck & Lee, Inc. (BBL) prepared this Site Assessment Report (SAR) to document an investigation associated with discharges of jet fuel during removal of underground pipelines at two locations at the U.S. Naval Air Station (NAS) Key West, located in Boca Chica Key, Florida. The locations are: 1) north of Runway 7/25 and 2) just south of the marina on Midway Avenue. There is no Florida Department of Environmental Protection (FDEP) facility identification number for these sites.

1.1 Purpose

The purpose of the Site Assessments (SA) was to determine the degree and extent of potential soil and ground-water impacts by petroleum product resulting from the discharge of an unknown quantity of jet fuel, and to determine the factors controlling contaminant migration. BBL personnel performed the assessments in accordance with Florida Administrative Code (FAC) Chapter 62-770.

Pursuant to Contract Number N62467-99-D-2745, under Task Order 0008, the United States Navy (USN) authorized BBL to initiate SA activities at both sites on March 23, 2000. These activities were conducted in May 2000. This report presents a summary of SA activities, results of the soil and ground-water quality assessment, and recommendations for site rehabilitation.

1.2 Site Locations and Areas of Investigation

This SAR encompasses two sites at NAS Key West on Boca Chica Key:

<u>Runway 7/25 Site</u> - Two fuel pipelines were removed by the Navy from the Boca Chica Tank Farm to north of Runway 7/25. The study area encompasses only the area north of Runway 7/25 to the service road, since this area was reportedly found to have petroleum impacts during the pipeline closure. The Runway 7/25 Site is approximately 600 feet long from just north of Runway 7/25 to the service road perpendicular to Taxiway Bravo.

<u>Marina Site</u> - A fuel pipeline was removed west of Midway Avenue. This SAR encompasses an approximate 150-foot portion of the former pipeline route south of the marina, where petroleum impacts were detected during the pipeline closure.

The site locations are shown on **Figures 1-1** and **1-2**. The sites are located in Sections 29 and 30, Township 67 South, Range 29 East, as referenced on the Boca Chica Key, Florida U.S. Geological Survey (USGS) topographic quadrangle map (**Figure 1-1**). All of the surrounding property to the sites is owned by the USN. The elevation of the sites is approximately 4 feet above mean sea level (MSL).

According to the USGS 7.5-minute series topographic map for Boca Chica Key, Florida (1971), there are numerous surface water bodies within a one-quarter mile radius of each site. There are wetlands with mangroves located within 200 feet to the west and northwest of the Runway 7/25 Site and Boca Chica Channel is located less than 30 feet west of the Marina Site.

The underground utilities in the vicinity of the Runway 7/25 Site include fuel lines and electric lines (**Figure 1-3**). The underground utilities in the vicinity of the Marina Site include fuel, electric, and sewer lines (**Figure 1-4**).

1.3 Previous Investigations

1.3.1 Runway 7/25 Site

This site had two petroleum pipelines located to the west of the active fuel lines, which ran from the Boca Chica Tank Farm to the Truck Fill Stand. In June 1999, Navy Public Works Center (PWC), NAS Environmental Department, Pensacola, Florida removed the fuel lines at this site from approximately 15 feet north of Runway 7/25 to approximately 300 feet north of the service road. PWC abandoned the fuel lines in place under Runway 7/25. When the pipelines were cut just north of Runway 7/25, JP-4 fuel remaining in the pipeline was released to the ground. JP-4 was pumped from the excavation into 55-gallon drums. PWC estimated 200 gallons were removed, according to the Discharge Reporting Form dated June 7, 1999 (**Appendix A**). Impacted soil was also removed. PWC's Environmental Department was dissolved shortly after the pipeline removal and records of soil and ground-water removal have not been located.

1.3.2 Marina Site

This site had a petroleum pipeline located to the west/southwest of Midway Road, which PWC removed in January 1999. From approximately 100 feet south of the marina, petroleum contaminated soil was encountered during pipeline removal. Contaminated soil was removed until organic vapor analysis (OVA) readings were below 50 parts per million (ppm). The soil was excavated a distance of approximately 165 feet along Midway Avenue to just east of the center line of the road and west southwest until a sewer force main was encountered (**Figure 1-4**). PWC did not excavate west of the sewer line because they did not want to encroach on the sensitive habitat of the wetland vegetation. The soil was excavated to approximately 1 foot below the water table. Free product was removed from the ground water, according to the Incident Notification Form filed by the Navy on January 19, 1999 (**Appendix A**). As stated previously, PWC Environmental Department was dissolved in mid-1999, and pipeline closure records have not been located.

1.4 Regional Geology and Hydrogeology

The Florida Keys are located in Monroe County at the southern tip of the Florida Peninsula. Monroe County can be divided into two distinct zones: the portion on the mainland of Florida, and the Florida Keys, which stretch 135 miles from the mainland to the southwest. The Florida Keys are composed of numerous small islands (keys). The land area of the Florida Keys totals approximately 105 square miles.

The climate of the Florida Keys is subtropical to tropical. The Keys receive some of the lowest amounts of rainfall in Florida. The mean annual rainfall in Key West is 25 inches per year (Lane, 1986).

The Florida Keys are divided into the upper Keys and the lower Keys. The upper Keys, from Key Largo to Big Pine Key, are composed mainly of the Key Largo Limestone, a Pleistocene-age coral reef. The lower Keys, from Big Pine Key to Key West, are composed of the Miami Limestone, which is sometimes called the Miami Oolite. The Miami Limestone is typically a white, sandy oolitic (spherical calcareous grains) limestone reaching a maximum thickness of 40 feet. The Miami Limestone is underlain by the Key Largo Limestone, which is considered bedrock. The thickness of the Key Largo Limestone varies from approximately 75 feet to 200 feet. Its major constituents are the cemented remains of ancient coral reefs.

The Key Largo Limestone is underlain (in order) beneath the lower keys by the Tamiami Limestone of Miocene age, the Miocene age Hawthorn Formation/Tampa Limestone, the Oligocene Suwannee Limestone, and the Eocene Avon Park Limestone.

Two aquifer systems are present beneath Monroe County, the surficial aquifer system and the Floridan aquifer system. These aquifer systems are separated from one another by the Hawthorn confining zone. The top of the Floridan aquifer is estimated to be at least 800 feet below land surface (BLS). However, in south Florida the Tamiami Formation acts as a confining unit. The Tamiami Formation is composed of limestone, clay, and marl, and forms the upper part of the basal confining unit of the surficial aquifer. The depth of the Tamiami Formation in the lower Keys is estimated to be approximately 200 feet BLS.

The surficial aquifer system is present beneath all of the keys; however, on most of the keys the aquifer contains salt or brackish water. The water quality of the Floridan aquifer system is poor throughout all of Monroe County and decreases in quality to the south. Total dissolved solids concentrations range from 3,430 to 37,500 milligrams per liter (mg/L).

1.5 Potable Well Survey

There is no source of large quantities of potable ground water in the Florida Keys. Drinking water to the Florida Keys is supplied by wellfields in Dade County and is delivered by the Florida Keys Aqueduct Authority pipeline that runs from Dade County to Key West. Desalination plants that produce potable water from seawater provide backup capabilities. Small lenses of freshwater may exist beneath the larger keys, but these lenses can produce only very limited quantities of water.

A survey of wells within a one-half mile radius of the site was performed to identify potential users of ground water in the immediate area. Most of Boca Chica is owned by USN, except the US 1 corridor. Jack Teague of the Department of Health and Rehabilitation Services (HRS) stated that he was unaware of any drinking water wells on Boca Chica Key. HRS does not consider the aquifers beneath the Keys to be an approved potable water source. Gus Rios of FDEP in Marathon stated that the aquifers beneath the Keys are generally considered Class G-III quality, but are still classified as G-II aquifer (personal communication with Amanda Shearer on September 29, 1999). Several fire wells are present throughout NAS, but do not contain pumps.

1.6 Aquifer Classification

Information regarding the aquifer classification was obtained previously by BBL by collecting ground-water samples from three monitoring wells located at the Boca Chica Tank Farm site (BBL, 1996), and analyzing them for total dissolved solids (TDS) by EPA Method 160.1. Results of the TDS analysis indicate that ground-water samples collected from one shallow and one deep well contained TDS concentrations of 43,000 mg/L and 37,000 mg/L, respectively. However, one sample collected from a shallow well contained a TDS concentration of 9,100 mg/L. Rule 62-520.410(1) of the Florida Administrative Code (FAC) states that a Class G-III aquifer is one which has a TDS content of 10,000 mg/L or greater; or which has total TDS of 3,000 mg/L to 10,000 mg/L and either has been reclassified by the Environmental Regulation Commission as having no reasonable potential as a future source of drinking water, or has been designated by the FDEP as an exempted aquifer pursuant to Rule 62-28.130(3), FAC. Based on these TDS results and the fact that the ground water in the lower Florida Keys is not an approved ground water source (according to Jack Teague, HRS) the aquifer in the area should be classified as a Class G-III aquifer. Additionally, Gus Rios (FDEP Marathon) said that the surficial aquifer in the Keys is generally considered Class G-III quality. Therefore, ground-water contaminant target levels in this SAR should be Poor Quality Aquifer Criteria (Chapter 62-777, FAC).

2. Site Assessment – Runway 7/25 Site

2.1 General

Prior to installing soil borings and temporary and permanent monitoring wells at the site, an underground utility location check was performed by BBL and NAS personnel. Prior to drilling, each boring location was hand dug to four feet with a post-hole digger to check for utilities. All drilling was performed by a certified drilling contractor (Precision Drilling, Inc.).

Proper decontamination procedures were followed between each hole drilled.

All sampling was performed in accordance with BBL's Comprehensive Quality Assurance Plan (CompQAP) No. 880552G approved by FDEP. The laboratory used for analytical services also has approved CompQAPs on file with FDEP.

All laboratory analytical work was performed by Accutest, an FDEP-certified laboratory.

2.2 Soil Sampling and Analysis

Soil samples were collected on May 9 and 10, 2000, at locations SB-1 through SB-20 at 1 to 2-foot intervals in the vadose zone using a decontaminated stainless steel hand auger or post-hole digger. The soil samples were analyzed for headspace organic vapor readings using a Foxboro 128 organic vapor analyzer/flame ionization detector (OVA/FID), in accordance with the procedure in Chapter 62-770, FAC. None of the sample locations had a net OVA reading above 10 ppm, except sample SB-12 collected at the interval from 0 to 2 feet BLS, with a reading of 28 ppm. This sample was slightly moist; indicating it was probably collected within the zone of ground-water fluctuation. The sample had no noticeable petroleum odor. OVA readings were recorded in **Table 2-1** and are shown on **Figure 2-1**.

Because jet fuel was discharged at the site, the petroleum contaminants at the site are classified as constituents of the Kerosene Analytical Group, as defined in Chapter 62-770, FAC. Three soil samples were collected on May 10, 2000, for laboratory analysis of EPA Method 8100, 8260, 8310, and FL-PRO near the spill location. Samples SS-1 (0-1) from boring SB-12, SS-2 (0-1) from boring SB-7 and SS-3 (0-1) from boring SB-6 (with the numbers in parentheses being the sample depth interval) were collected for analysis. The laboratory analyses indicated that none of the parameters analyzed were above Chapter 62-777, FAC target levels for Commercial/Industrial Direct Exposure Use Assumptions (**Table 2-2**). A second soil sample collected from the same intervals at boring SB-12, SB-7, and SB-6 and labeled as above, were analyzed for leaching potential using the Synthetic Precipitation Leaching Procedure (SPLP). All parameters were below the Chapter 62-777, FAC target levels. The SPLP analyses are summarized on **Table 2-3**.

Note: The laboratory extracted the soil samples for polynuclear aromatic hydrocarbon (PAH) analyses beyond the holding time by approximately 1 week. Therefore, the PAH results presented in **Tables 2-2** and **2-3** are considered minimum values. A chemist at Accutest stated that PAHs are fairly stable and the data is probably indicative of site conditions. This situation was discussed with Mr. Jorge Caspary of the FDEP on June 5, 2000. The decision was made to allow Mr. Caspary to review the SAR before deciding if resampling of the soil was necessary.

Based on the field screening and laboratory analytical results, and the report by the Navy that contaminated soils were removed during pipeline closure, contaminated soil does not appear to be a concern at this site. The complete laboratory analytical reports with chain-of-custody and field sampling logs are provided in **Appendix B**.

2.3 Temporary Monitoring Well Installation, Sampling, and Analysis

Ten temporary monitoring wells were installed and sampled to essentially delineate the plume in one mobilization event and for determining optimum locations for permanent monitoring wells. BBL provided oversight to installation of the temporary wells and sample collection on May 9 and 10, 2000. The temporary wells were installed by advancing a 2.25-inch solid stem auger to 10 to 12 feet BLS. A one-inch diameter Schedule 40 PVC well screen was inserted in each boring, and Teflon® tubing was inserted in the well screen. Ground-water samples were collected from the temporary wells using a peristaltic pump with disposable Teflon® tubing. Following sampling, the temporary monitoring wells were removed.

Temporary monitoring wells PZ-1 through PZ-10 were installed at the locations shown on **Figure 2-2**. Ground-water samples were collected and analyzed for EPA Methods 602 (Volatile Organic Aromatics [VOAs]) and 8310 (PAHs) parameters. Additionally, samples PZ-6 through PZ-10 were analyzed for Total Recoverable Petroleum Hydrocarbons (TRPH) according to method FL-PRO. A trip blank was prepared by the laboratory and transported to and from the site in the sample cooler.

Ground-water samples labeled PZ-1 through PZ-10 correspond to soil sampling locations SB-1 through SB-10. Benzene was detected in the ground-water sample from PZ-9 above the Chapter 62-777, FAC target levels of 1 microgram per liter (µg/L), with a concentration of 14.4 ug/L. This concentration is also above the Chapter 62-777, FAC target level for Poor Quality Aquifer Criteria of 10 ug/L. Acenaphthene was detected in the sample from PZ-4 at a concentration of 22.4 ug/L, which is above the Chapter 62-777, FAC target level of 20 ug/L, but below the Poor Quality Aquifer Criteria of 200 ug/L. All other parameters were below Chapter 62-777, FAC target levels in the ground-water samples collected from the temporary monitoring wells.

The ground-water analytical results are summarized in **Table 2-4** and depicted on **Figure 2-2**. The complete laboratory analytical report is provided in **Appendix B**.

2.4 Monitoring Well Installation

The rationale for the placement of the monitoring wells was based on the observations made in the field during soil sampling and ground-water sampling from the temporary monitoring wells. Nine shallow monitoring wells (MW-1 through MW-9) were installed at the site to evaluate the extent of hydrocarbon impacts to ground water along the former pipeline route (see **Figure 2-2**). The wells were installed under the observation of BBL geologists and were constructed to allow for representative sampling of ground water and free product, if present, at the site.

Wells MW-1 through MW-9 were installed on May 10 and 11, 2000. All monitor wells were installed with a 6.25-inch inside diameter (I.D.) hollow-stem auger to a depth of 12 feet BLS. The wells were constructed with a 2-foot section of 2-inch diameter, Schedule 40 PVC solid casing connected flush to 10 feet of 2-inch diameter, 0.010-inch slot, Schedule 40 PVC mill-slotted screen. The annular space around the well screens was filled to 0.5 feet above the screened interval using 30/45 graded silica sand filter media during auger removal. Approximately 0.5 feet of fine sand was used as a plug to prevent grout from seeping into the filter pack. The remaining annular space in each well was then grouted to land surface with a neat cement slurry (Portland, Type I). All wells were fitted with locking caps and locks and contained within flush-mounted, bolt-down, traffic-bearing manholes.

A monitoring well completion summary is included in **Table 2-5**. Decontamination procedures outlined in BBL's FDEP-approved CompQAP were followed prior to and during each drilling event. A representative monitoring well construction detail for all of the wells is provided in **Appendix C**.

All wells were developed by purging and surging using a centrifugal pump and reinforced hose to remove fine-grained sediments. The hose was properly decontaminated and steam-cleaned prior to placement in each well. The wells were developed until the purge water was visually free of sand and silt. Based on the low OVA readings and field observations, development water was discharged onto the source area.

Free product was not detected in any of the soil borings or monitoring wells on site.

2.5 Ground-Water Sampling and Analysis

Ground-water samples were collected for laboratory analysis to assess the potential for the existence of dissolved petroleum hydrocarbons in the ground water at the site. Monitoring wells MW-1 through MW-9 were sampled on May 12, 2000. Appropriate quality assurance samples were collected and analyzed, including a duplicate sample from well MW-3 (labeled DUP-1), an equipment blank, and a trip blank which was transported to and from the site in the sample kit.

To ensure the presence of formation water in the wells, the water levels were measured in the wells, then the monitoring wells were purged of three to five well volumes until the pH, specific conductance, and temperature had stabilized as measured using a Hydac® water quality instrument. Stabilization was considered complete when consecutive measurements of each parameter varied no more than 5 percent. Dissolved oxygen and turbidity were also measured in each sample. The Hydac® was calibrated according to the manufacturer's directions prior to sampling the purge water. Purging was accomplished using pre-cleaned, dedicated polyethylene tubing and a peristaltic pump operating at a low flow rate of less than 1 liter per minute. Purge water was discharged onto the source area.

Once purging was completed, samples were collected using pre-cleaned, dedicated disposable Teflon® bailers. Copies of the field water sampling logs are included in **Appendix D**. All sampling was performed and equipment was decontaminated in accordance with BBL's FDEP-approved CompQAP.

All samples were collected and placed in laboratory-prepared (appropriately preserved) sample containers, stored under ice, and shipped via overnight courier in sealed coolers to Accutest. Because jet fuel was spilled at the site, the samples were analyzed for the following:

a. EPA Method 602 (VOAs, including methyl tert-butyl ether [MTBE]).
b. EPA Method 610 (PAHs).
c. FL-PRO (TRPH).

Additionally, a sample from MW-3 was analyzed for:

d. EPA Method 239.2 (Lead).
e. EPA Method 8011 (Ethylene Dibromide [EDB]).

Ground-water laboratory analytical results indicated only benzene above the Chapter 62-777, FAC target level of 1 ug/L in samples MW-2 and MW-9, with concentrations of 10 ug/L and 24.6 ug/L, respectively. Only the sample from MW-9 was above the Poor Quality Aquifer Criteria of 10 ug/L. MW-9 was installed at the same location as PZ-9, which as stated before, also indicated an elevated benzene concentration (14.4 ug/L).

Tables 2-6 and **2-7** summarize the laboratory analytical results for the May 12, 2000, sampling event. The complete laboratory reports and chain-of-custody records are provided in **Appendix D**. **Figure 2-2** illustrates the ground-water analytical results.

Ground-water analytical results from the temporary monitoring well samples and the permanent monitoring well samples indicate that petroleum hydrocarbons are present near the northern portion of the study area near MW-9 above the Poor Quality Aquifer Criteria target level for benzene. Based on the ground-water analytical results from nearby wells MW-7, MW-8, temporary well PZ-8, and MW-9, and the depth to ground water averaging 4 feet, the extent of impacted ground water above target levels probably encompasses an volume of less than 160 cubic feet around MW-9.

2.6 Site-Specific Geology

Lithologic data about the site were gathered from the soil cuttings during monitoring well installation. Lithologic descriptions are included **Table 2-1.**

Based on observations during advancement of the monitoring wells, the surficial aquifer material can be generally classified as unconsolidated dark brown, fine to medium-grained sand to approximately 3 feet BLS, underlain with tan oolitic limestone and minor brown sand to 12 feet BLS (the deepest unit drilled).

2.7 Aquifer Characteristics

Site specific aquifer characteristics were not determined for this site.

Numerous slug tests have been performed at NAS Key West on Boca Chica by BBL. Hydraulic conductivities for the upper surficial aquifer at the Boca Chica Tank Farm, Sites A-419, A-994, and A-422 range from 1.1×10^{-2} feet per minute (ft/min) to 9.1×10^{-4} ft/min (BBL, 1996, 1999, 2000). The transmissivity of the upper surficial aquifer at the same sites range from 79 to 260 square feet per day in the upper 10 to 12 feet of surficial aquifer.

2.8 Ground-Water Flow

Tops of casings of all monitor wells were surveyed to determine the elevations relative to an assumed elevation of 4 feet mean sea level (MSL). The water levels in all wells were measured on May 12, 2000. Measurements were recorded within an accuracy of 0.01 feet with a water level indicator. Ground-water elevations were determined by subtracting the depth to ground water from the relative top-of-casing elevation. The water table was encountered on site at a depth of approximately 4 feet BLS. **Table 2-8** presents the ground-water elevation data. Ground-water contour maps for May 12, 2000, are provided as **Figures 2-3** and **2-4**. Ground-water flow varies on site, apparently greatly influenced by tidal changes.

3. Site Assessment – Marina Site

3.1 General

Prior to installing soil borings and temporary and permanent monitoring wells at the site, an underground utility location check was performed by BBL and NAS personnel. Prior to drilling, each boring location was hand dug to four feet with a post-hole digger to check for utilities. All drilling was performed by Precision Drilling, Inc.

Proper decontamination procedures were followed between each hole drilled.

All sampling was performed in accordance with BBL's CompQAP.

All laboratory analytical work was performed by Accutest.

3.2 Soil and Sediment Sampling and Analysis

Soil samples were collected on May 11, 2000, at locations SB-1 through SB-7 at 1-foot intervals in the vadose zone using a decontaminated stainless steel hand auger or post-hole digger. The soil samples were analyzed for headspace organic vapor readings using a Foxboro 128 OVA/FID, in accordance with the procedure in Chapter 62-770, FAC. None of the sample locations had detectable OVA readings. OVA readings are recorded in **Table 3-1** and are shown on **Figure 3-1**.

Because jet fuel was discharged at the site, the petroleum contaminants at the site are classified as constituents of the Kerosene Analytical Group, as defined in Chapter 62-770, FAC. Three soil samples were collected on May 11, 2000, for laboratory analysis of EPA Method 8100, 8260, 8310, and FL-PRO near the center of the spill location and near the edges of the soil initial remedial action (IRA) area. Samples SS-1 (0-1) from boring SB-1, SS-2 (0-1) from boring SB-2 and SS-3 (0-1) from boring SB-3 (with the numbers in parentheses being the sample depth interval) were collected for analysis. The laboratory analyses indicated that none of the parameters analyzed were above Chapter 62-777, FAC target levels for Commercial/Industrial Direct Exposure Use Assumptions (**Table 3-2**). A second soil sample collected from the same intervals at boring SB-1, SB-2, and SB-3 and labeled as above, were analyzed for SPLP. All parameters were below the Chapter 62-777, FAC target levels. The SPLP analyses are summarized on **Table 3-3**.

Based on the field screening and laboratory analytical results, and the statement by the Navy that contaminated soils were removed during pipeline closure, contaminated soil does not appear to be a concern at this site. The complete laboratory analytical reports with chain-of-custody and field sampling logs are provided in **Appendix B**.

On May 11, 2000, two sediment samples were collected in the upper six inches of sediment in the Boca Chica Channel adjacent to the site. Samples SED-1 and SED-2 were collected with a decontaminated glass jar attached to an aluminum rod at the locations shown on **Figure 3-1**. The samples were placed in laboratory prepared jars and transported under ice to Accutest for analysis of EPA Method 8310 parameters for totals and SPLP. No PAHs were detected in the totals or SPLP analyses. **Tables 3-2** and **3-3** present the sample results. The complete analytical report is provided in **Appendix B**.

Note: The laboratory extracted the soil and sediment samples for PAH analyses beyond the holding time by approximately 1 week. Therefore, the PAH results presented in **Tables 3-2** and **3-3** are considered minimum values. A chemist at Accutest stated that PAHs are fairly stable and the data is probably indicative of site conditions. This

situation was discussed with Mr. Jorge Caspary of the FDEP on June 5, 2000. The decision was made to allow Mr. Caspary to review the SAR before deciding if resampling of the soil was necessary.

3.3 Temporary Monitoring Well Installation, Sampling, and Analysis

Five temporary monitoring wells were installed and sampled to essentially delineate the plume in one mobilization event and for determining optimum locations for a permanent monitoring well. BBL provided oversight to installation of the temporary wells and sample collection on May 11, 2000. The temporary wells were installed by advancing a 2.25-inch solid stem auger to 10 to 12 feet BLS. A one-inch diameter Schedule 40 PVC well screen was inserted in each boring, and Teflon® tubing was inserted in the well screen. Ground-water samples were collected from the temporary wells using a peristaltic pump with disposable Teflon® tubing. Following sampling, the temporary monitoring wells were removed.

Temporary monitoring wells PZ-1 through PZ-5 were installed at the locations shown on **Figure 3-2**. Ground-water samples were collected and analyzed for EPA Methods 602 and 8310 parameters. Additionally, samples PZ-1 through PZ-3 were analyzed for TRPH. A trip blank was prepared by the laboratory and transported to and from the site in the sample cooler.

Ground-water samples labeled PZ-1 through PZ-5 correspond to soil sampling locations SB-1 through SB-5. None of the parameters analyzed for VOAs or PAHs were above detection limits in any of the samples, except 0.81 ug/L toluene was detected in PZ-1. The toluene concentration was below the laboratory reporting limit of 1 ug/L. All TRPH concentrations were well below the Chapter 62-777, FAC target level.

The ground-water analytical results are summarized in **Table 3-4** and depicted on **Figure 3-2**. The complete laboratory analytical report is provided in **Appendix B**.

3.4 Monitoring Well Installation

The rationale for the placement of the monitoring well was based on the observations made in the field during soil sampling and ground-water sampling from the temporary monitoring wells. One shallow monitoring well (MW-1) was installed at the center of the spill area to confirm the results of the temporary ground-water sample PZ-1 along the former pipeline route (see **Figure 3-2**). The well was installed under the observation of BBL geologists and was constructed to allow for representative sampling of ground water and free product, if present, at the site.

Well MW-1 was installed on May 11, 2000 with a 6.25-inch inside diameter (I.D.) hollow-stem auger to a depth of 12 feet BLS. The well was constructed with a 2-foot section of 2-inch diameter, Schedule 40 PVC solid casing connected flush to 10 feet of 2-inch diameter, 0.010-inch slot, Schedule 40 PVC mill-slotted screen. The annular space around the well screen was filled to 0.5 feet above the screened interval using 30/45 graded silica sand filter media during auger removal. Approximately 0.5 feet of fine sand was used as a plug to prevent grout from seeping into the filter pack. The remaining annular space was grouted to land surface with a neat cement slurry (Portland, Type I). The well was fitted with a locking cap and lock and contained within a flush-mounted, bolt-down, traffic-bearing manhole.

A monitoring well completion summary is included in **Table 3-5**. Decontamination procedures outlined in BBL's FDEP-approved CompQAP were followed prior to and following the drilling event. A representative monitoring well construction detail is provided in **Appendix C**.

The well was developed by purging and surging using a centrifugal pump and reinforced hose to remove fine-grained sediments. The hose was properly decontaminated and steam-cleaned prior to placement in each well. The

well was developed until the purge water was visually free of sand and silt. Based on the low OVA readings and field data, development water was discharged onto the source area.

Free product was not detected in any of the soil borings or monitoring wells on site.

3.5 Ground-Water Sampling and Analysis

A ground-water sample was collected for laboratory analysis to assess the potential for the existence of dissolved petroleum hydrocarbons in the ground water at the site. Monitoring well MW-1 was sampled on May 12, 2000.

To ensure the presence of formation water in the well, the water level was measured then the monitoring well was purged of three to five well volumes until the pH, specific conductance, and temperature had stabilized as measured using a Hydac® water quality instrument. Stabilization was considered complete when consecutive measurements of each parameter varied no more than 5 percent. Dissolved oxygen and turbidity were also measured in each purge volume. The Hydac® was calibrated according to the manufacturer's directions prior to sampling the purge water. Purging was accomplished using pre-cleaned, dedicated polyethylene tubing and a peristaltic pump operating at a low flow rate of less than 1 liter per minute. Purge water was discharged onto the ground in the vicinity of the well.

Once purging was completed, a sample was collected using a pre-cleaned, dedicated disposable Teflon® bailer. A copy of the field water sampling log is included in **Appendix D**. The samples were placed in laboratory-prepared (appropriately preserved) sample containers, stored under ice, and shipped via overnight courier in sealed coolers to Accutest. Because jet fuel was spilled at the site, the samples were analyzed for the following:

a. EPA Method 602 (VOAs).
b. EPA Method 8100 (PAHs).
c. FL-PRO (TRPH).
d. EPA Method 239.2 (Lead).
e. EPA Method 8011 (Ethylene Dibromide [EDB]).

Ground-water laboratory analytical results indicated none of the parameters analyzed was above the Chapter 62-777, FAC target levels.

Table 3-6 summarizes the laboratory analytical results for the May 12, 2000 sampling event. The complete laboratory report and chain-of-custody record is provided in **Appendix D**. **Figure 3-2** illustrates the ground-water analytical results.

Ground-water analytical results from the temporary monitoring well samples and the permanent monitoring well sample indicate that dissolved petroleum hydrocarbons are not present on site above Chapter 62-777, FAC target levels.

3.6 Site-Specific Geology

Lithologic data about the site were gathered from the soil cuttings during monitoring well installation. Lithologic descriptions are included **Table 3-1**.

Based on observations during advancement of the monitoring well, the surficial aquifer material can be generally classified as unconsolidated gray/brown, fine to medium-grained sand to approximately 3 feet BLS, underlain with tan oolitic limestone, shell, coral and limestone fragments to 12 feet BLS (the deepest unit drilled).

3.7 Aquifer Characteristics

Site specific aquifer characteristics were not determined for this site. Refer to **Section 2.7** for a discussion of representative aquifer characteristic data.

3.8 Ground-Water Flow

A hydraulic gradient was not determined for this site because only one permanent monitoring well was installed. Due to the close proximity to Boca Chica Channel, it can be assumed that the area is tidally influenced and ground-water flow probably reverses directions depending on the tide.

4. Conclusions and Recommendations

4.1 Conclusions

These site assessments were conducted in accordance with Chapter 62-770, FAC to evaluate the presence and delineate the extent of petroleum hydrocarbons in the soil and ground water resulting from discharges from former jet fuel pipelines. The following summarizes the investigation findings:

- The sources of the petroleum discharges, the pipelines, have been removed.
- Kerosene Analytical Group constituents were discharged at both sites.
- Soil IRA and product removal was conducted at both sites during pipeline removal.
- No free product has been detected in any soil boring or monitoring well at either site following IRA.
- The ground-water table is generally encountered at approximately 4 feet BLS at both sites.
- No potable or irrigation wells exist on Boca Chica Key.
- Soils exceeding Commercial/Industrial direct exposure target levels were not detected at either site, based on analytical results.
- Dissolved petroleum constituents above Chapter 62-777, FAC target levels were not detected in ground water at the Marina Site.
- Dissolved petroleum constituents in ground water were detected in well MW-9 and at temporary well PZ-9 at the same location above the Chapter 62-777, FAC target level for benzene at the Runway 7/25 Site, with concentrations of 24.6 ug/L and 14.4 ug/L, respectively. The sample results at location MW-9/PZ-9 were also above the Poor Quality Aquifer Criteria target of 10 ug/L for benzene. Benzene was detected at a concentration of 10 ug/L in the sample from MW-2. Acenaphthene was detected in the sample from temporary well PZ-4 at a concentration of 22.4 ug/L, which is below the Poor Quality Aquifer Criteria target of 200 ug/L. Based on these results, the ground water in the vicinity of the former pipeline at the Runway 7/25 Site has had impacts by petroleum hydrocarbons in very limited areas.

4.2 Recommendations

The extent of petroleum hydrocarbons has been adequately defined at each site. Soils exceeding Commercial/Industrial direct exposure target levels were not detected at either the Runway 7/25 Site or the Marina Site.

Dissolved petroleum hydrocarbons above Chapter 62-777, FAC target levels are present in the ground water at the Runway 7/25 Site only. Free product has not been detected in the media at either site following IRA.

Marina Site - Based on the findings of the SA, **No Further Action** is recommended for the Marina Site.

Runway 7/25 Site - Because benzene was detected at one location at the Runway 7/25 Site, a **Natural Attenuation Monitoring Plan** is recommended as the appropriate strategy for site rehabilitation.

4.2.1 Natural Attenuation Monitoring Plan – Runway 7/25 Site

The proposed monitoring wells to be sampled, the sampling parameters, the sampling frequency, and duration are as follows:

Monitoring Wells	Contaminants of Concern	Frequency	Duration
MW-2, MW-7, MW-8, and MW-9	VOAs, PAHs	Semiannually	One to five years

If two consecutive sampling events indicate concentrations of benzene at 10 ug/L or less at all wells sampled, approval for a Site Rehabilitation Completion Order will be requested.

5. References

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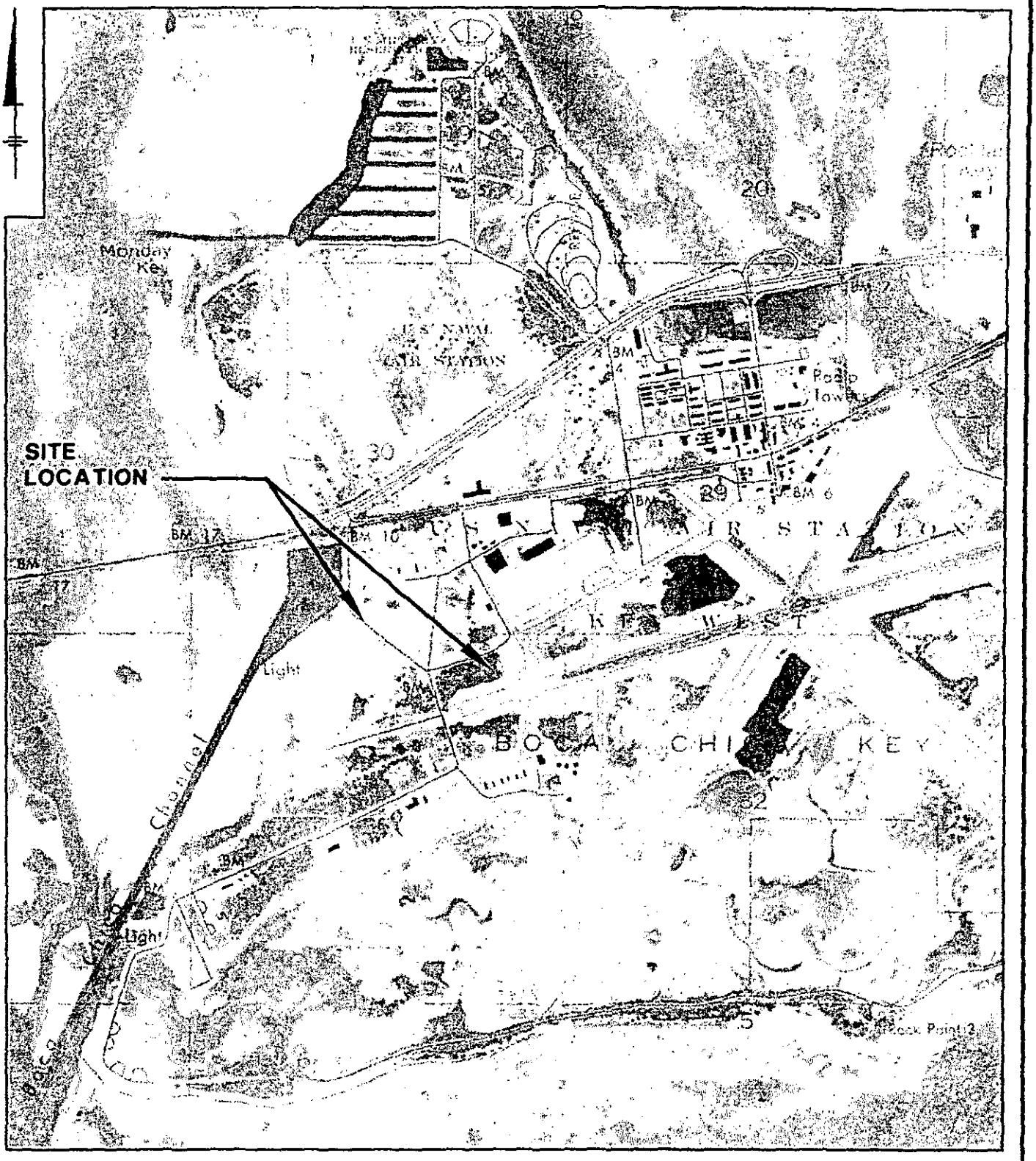
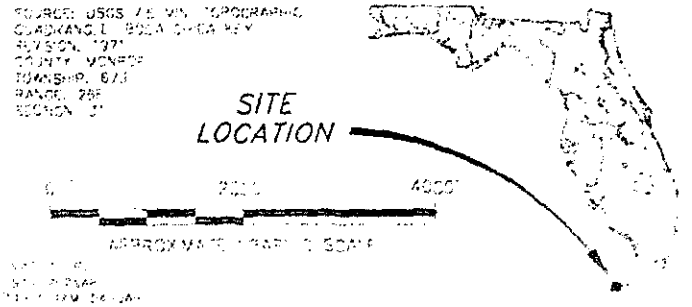
Figures



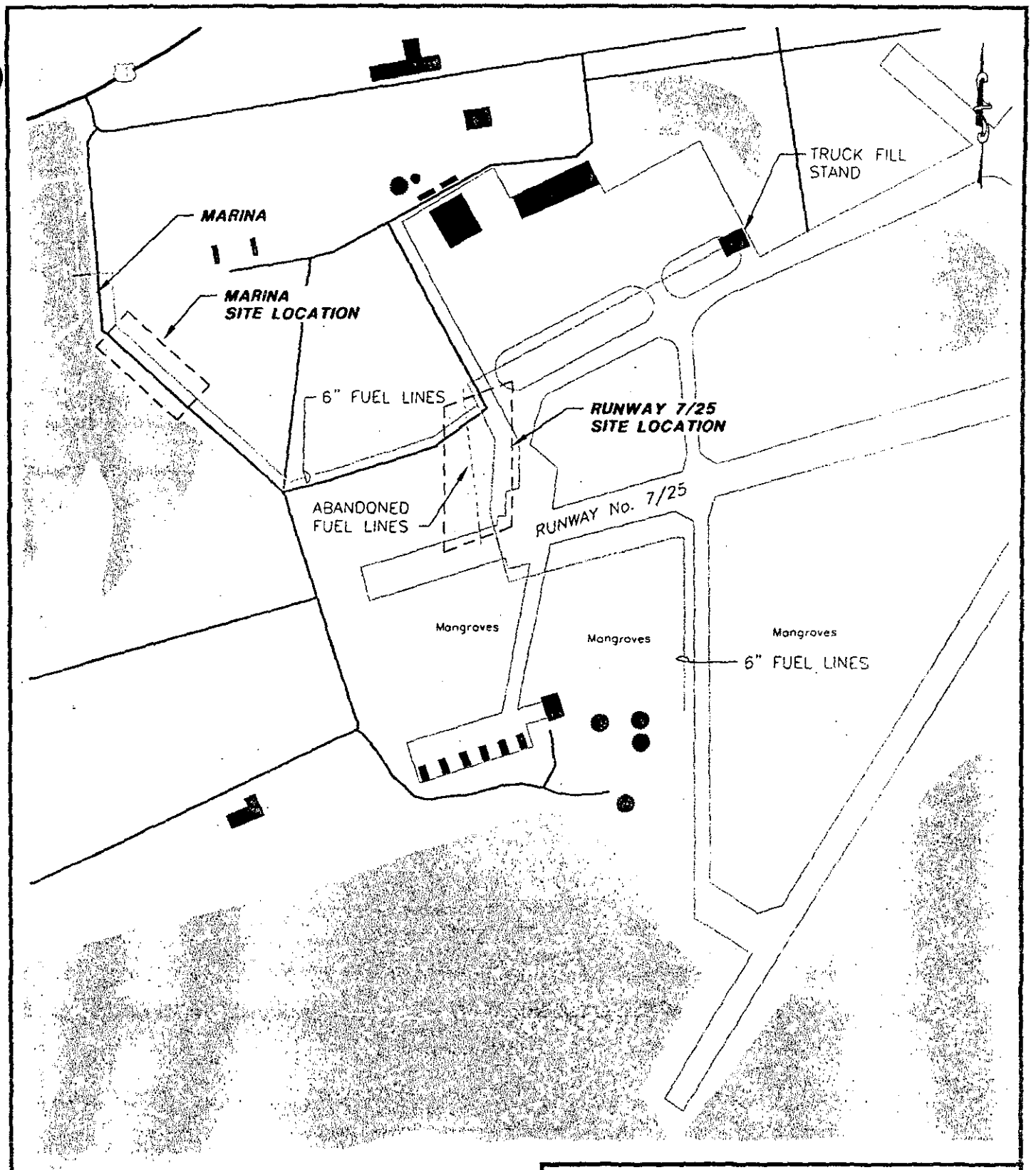


NAVAL AIR STATION KEY WEST
BOCA CHICA KEY, FLORIDA
BOCA CHICA PIPELINE SAR

SITE LOCATION

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 1-1

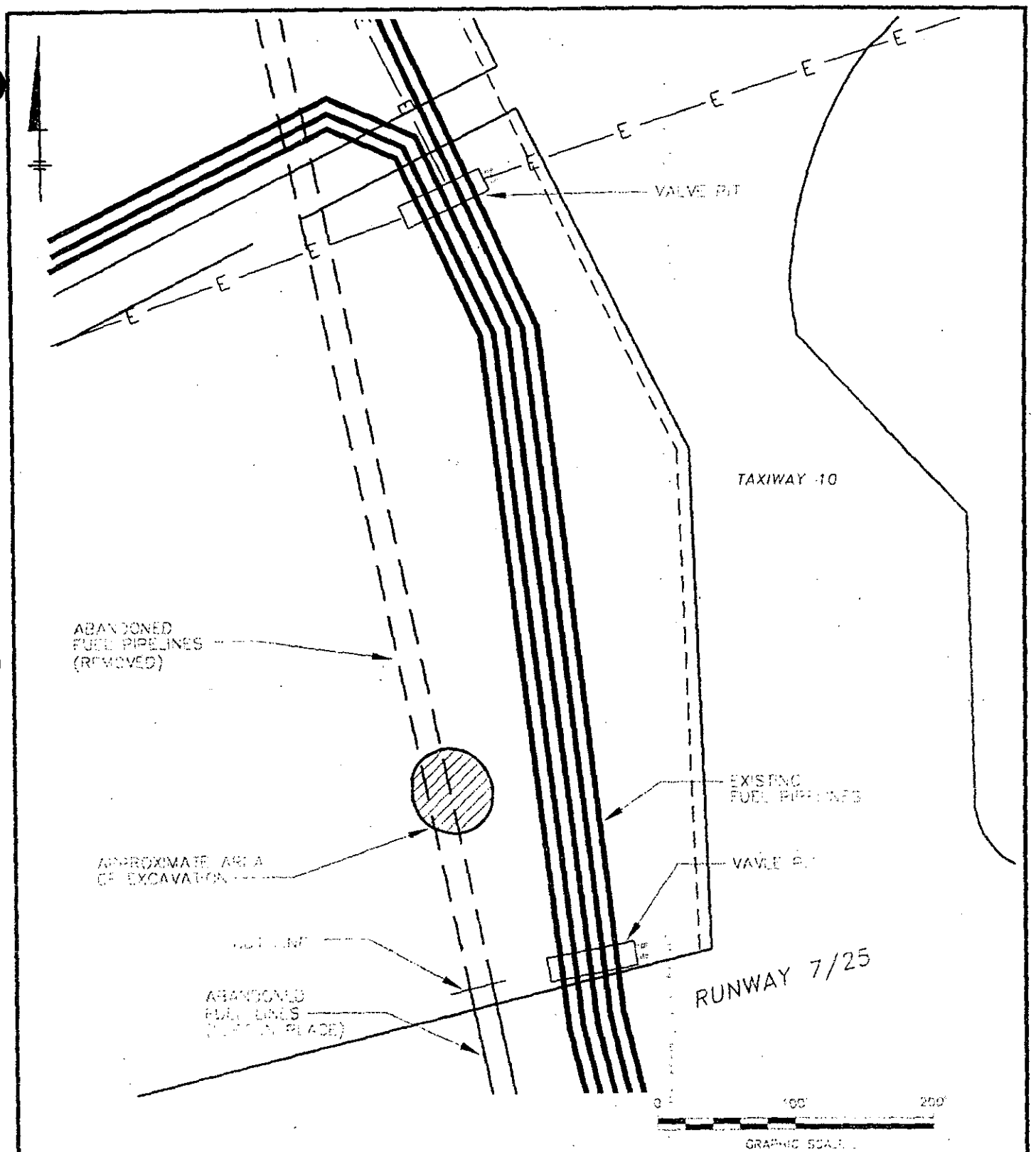


NAVAL AIR STATION KEY WEST
BOCA CHICA KEY, FLORIDA
BOCA CHICA PIPELINE SAR

SITE VICINITY MAP

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 1-2



LEGEND

E — ELECTRICAL LINE

TAXIWAY LIGHTING

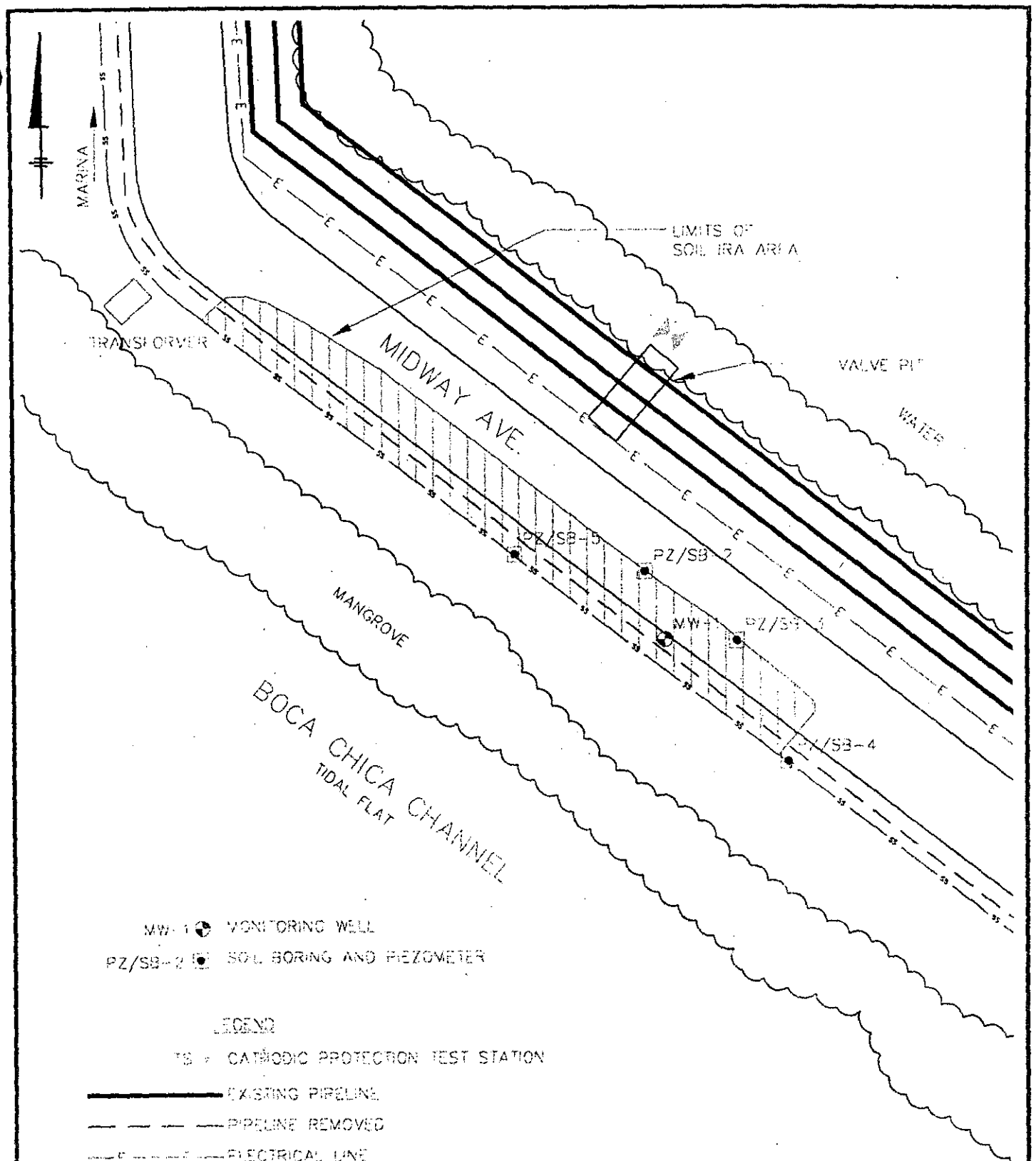
NAVAL AIR STATION KEY WEST
BOCA CHICA KEY, FLORIDA

BOCA CHICA PIPELINE SAR

UTILITY MAP
RUNWAY 7/25 SITE

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 1-3



MW-1 MONITORING WELL

PZ/SB-2 SOIL BORING AND PIEZOMETER

LEGEND

TS = CATHODIC PROTECTION TEST STATION

EXISTING PIPELINE

PIPELINE REMOVED

ELECTRICAL LINE

SEWER LINE

NOTE: ALL UTILITY LOCATIONS ARE APPROXIMATE.

0 30 60'

GRAPHIC SCALE

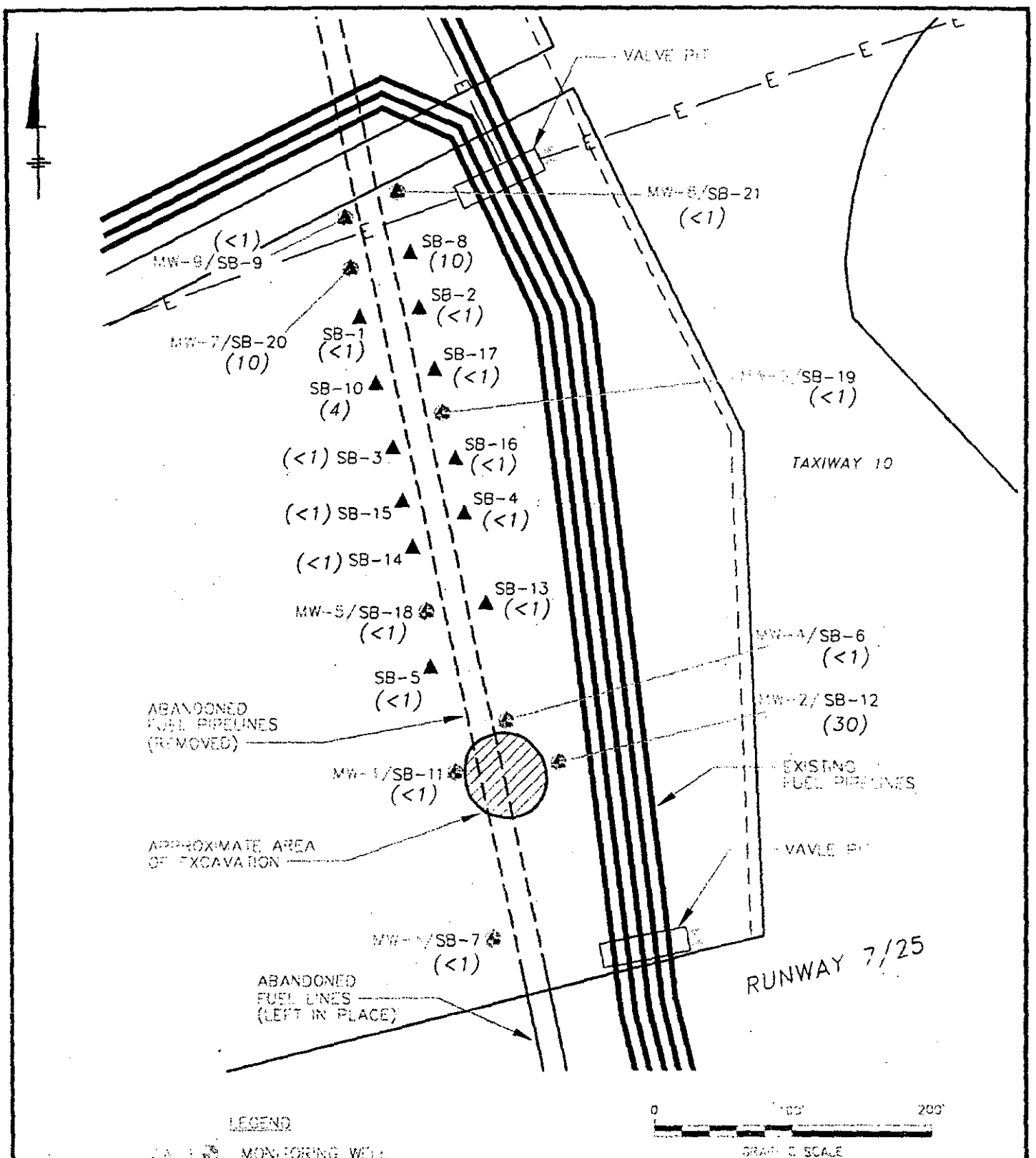
NAVAL AIR STATION KEY WEST
BOCA CHICA KEY, FLORIDA

BOCA CHICA PIPELINE SAR

UTILITY MAP
MARINA SITE

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 1-4



LEGEND

MW-1 MONITORING WELL

SB-11 SOIL BORING

E ELECTRICAL LINE

TAXIWAY LIGHTING

TS = CATHODIC PROTECTION TEST STATION

(4) HIGHEST OVA READING (ppm)

(ppm) = PARTS PER MILLION

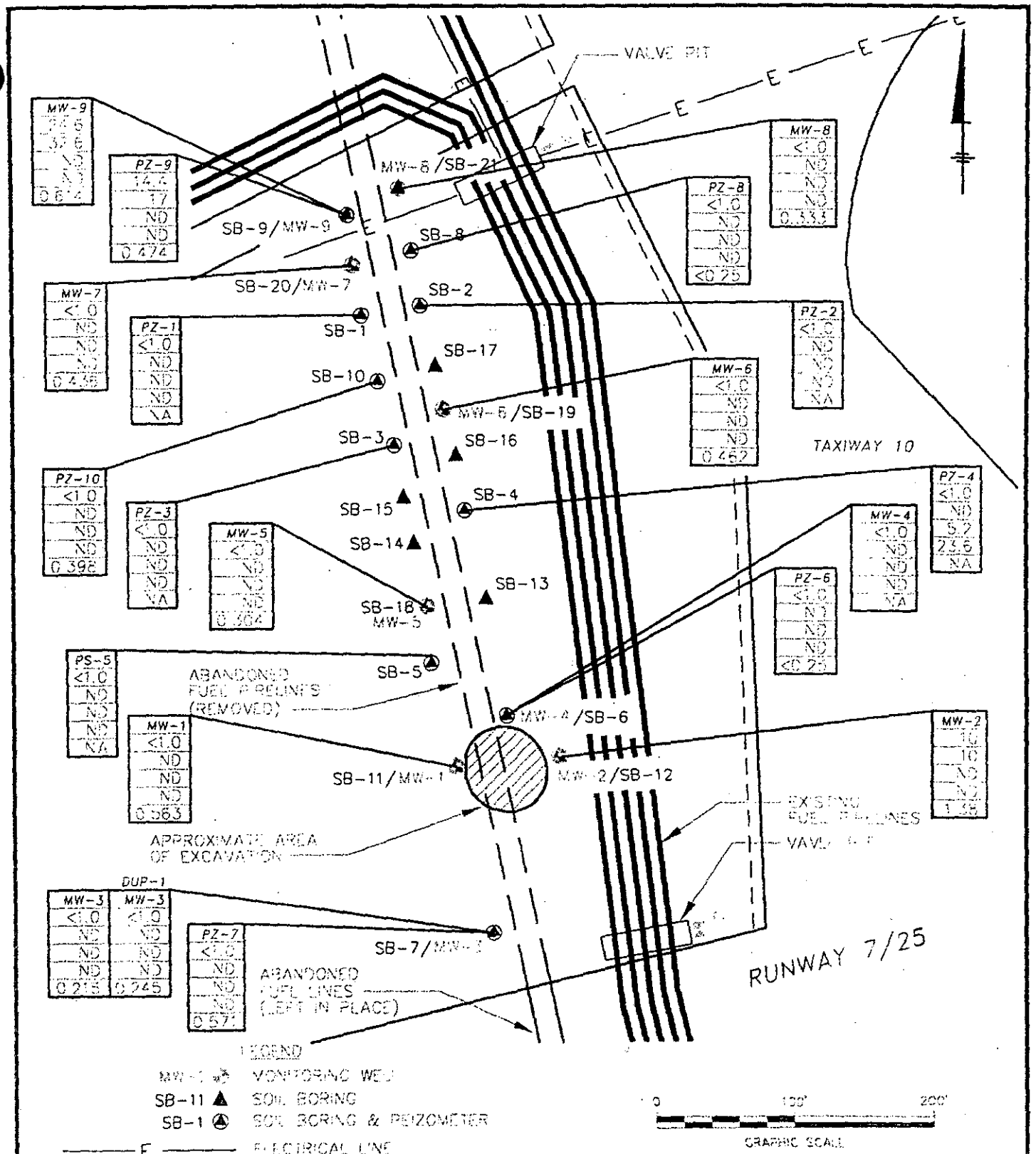
NAVAL AIR STATION KEY WEST
BOCA CHICA KEY, FLORIDA

BOCA CHICA PIPELINE SAR

SOIL BORING LOCATION MAP
RUNWAY 7/25 SITE

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 2-1



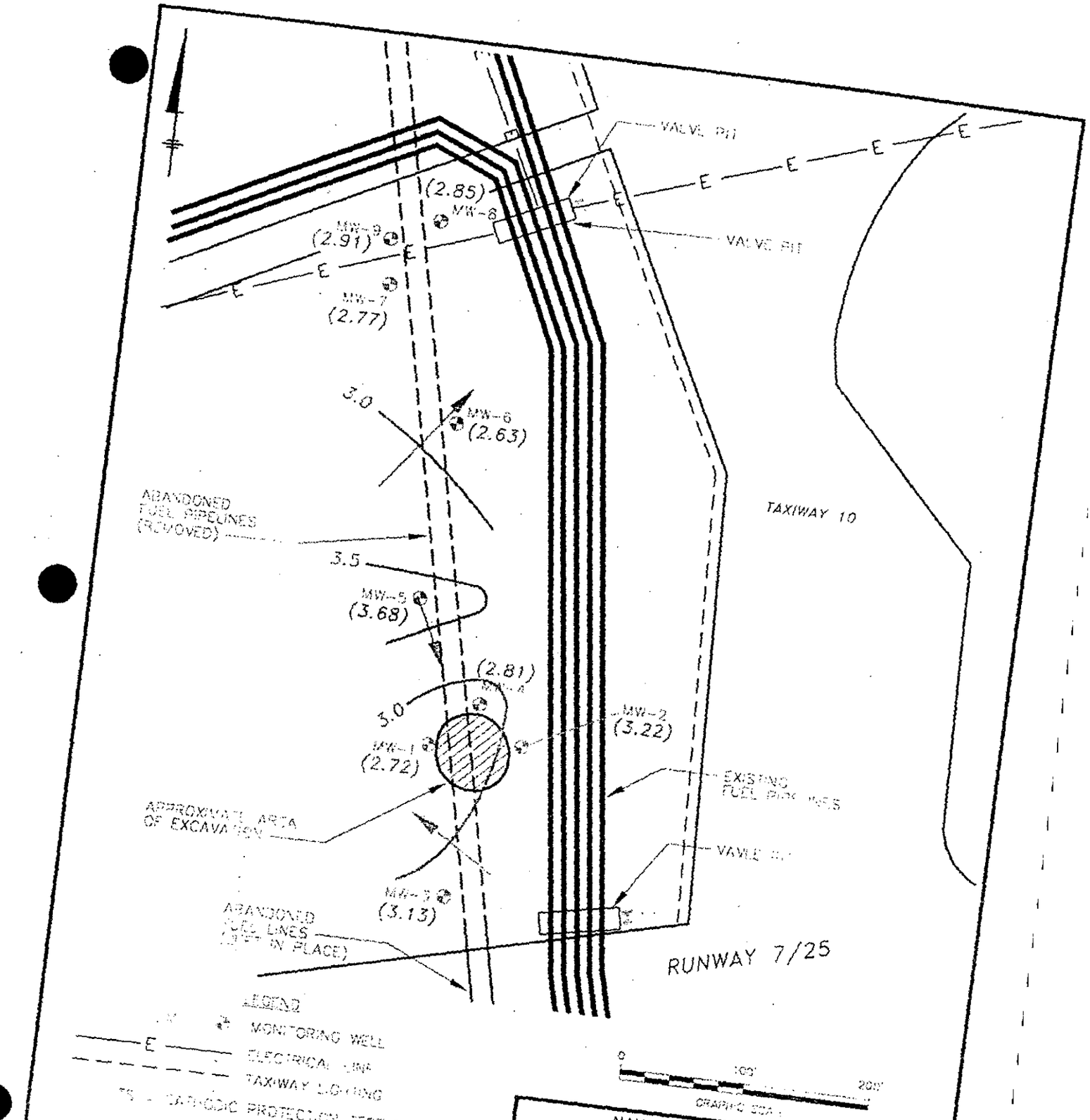
NAVAL AIR STATION KEY WEST
BOCA CHICA KEY, FLORIDA

BOCA CHICA PIPELINE SAR

GROUND WATER QUALITY MAP
RUNWAY 7/25 SITE

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 2-2



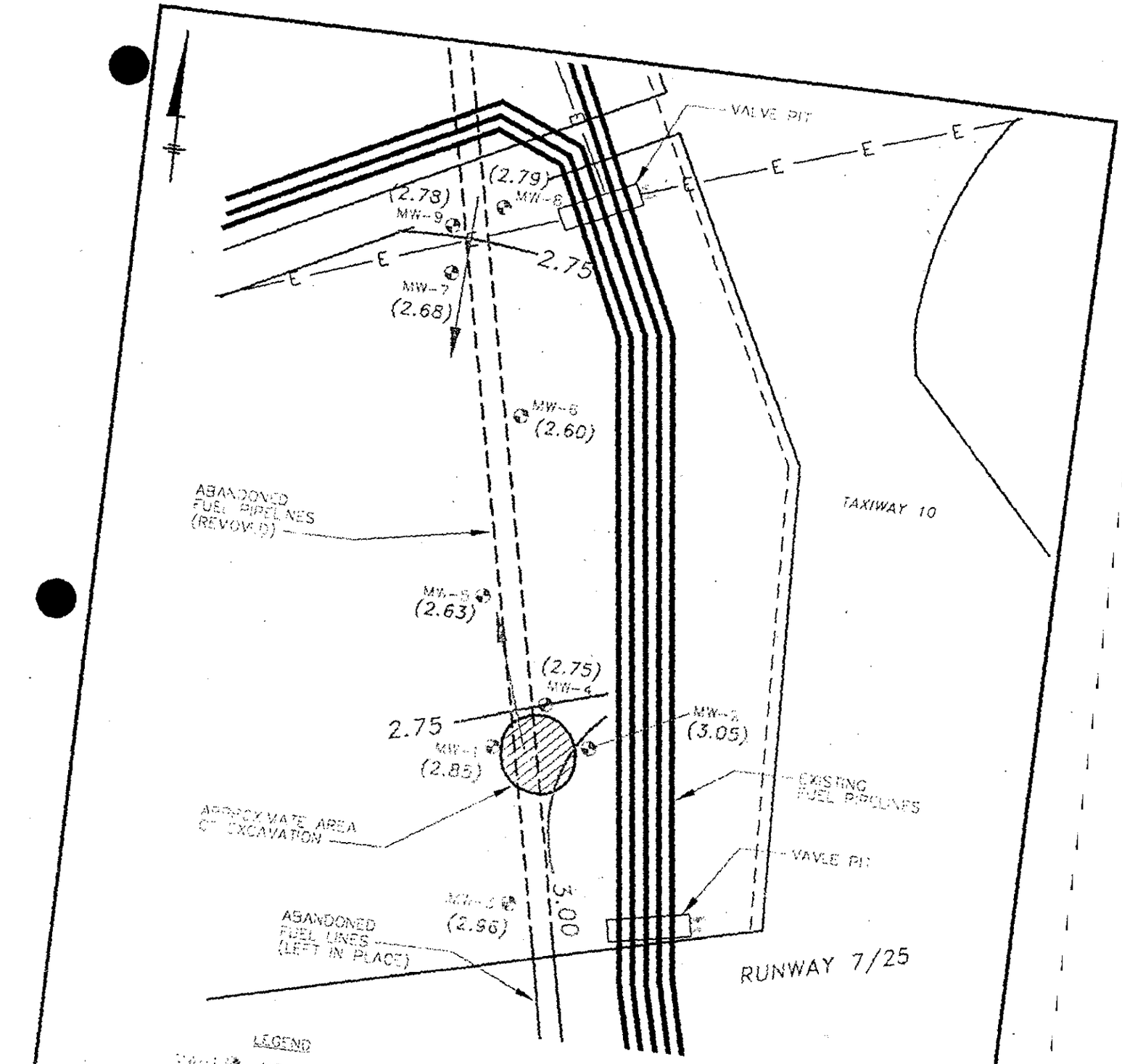
NAVAL AIR STATION KEY WEST
BOCA CHICA KEY, FLORIDA

BOCA CHICA PIPELINE SAR

HYDRAULIC GRADIENT MAP
RUNWAY 7/25 SITE
MID-TIDE - MAY 12, 2000

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 2-3



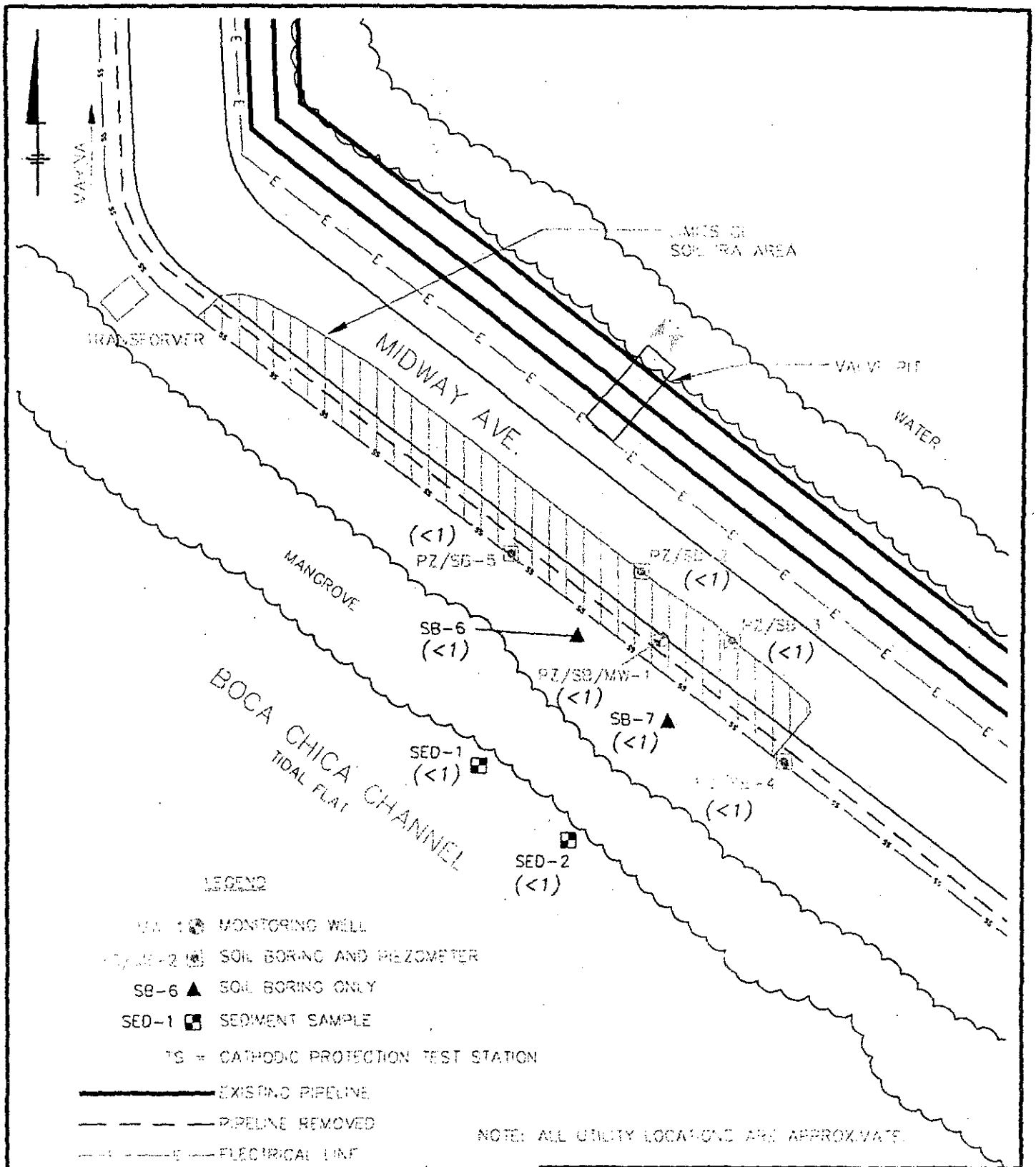
NAVAL AIR STATION KEY WEST
BOCA CHICA KEY, FLORIDA

BOCA CHICA PIPELINE SAR

HYDRAULIC GRADIENT MAP
RUNWAY 7/25 SITE
HIGH TIDE - MAY 12, 2000

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 2-4



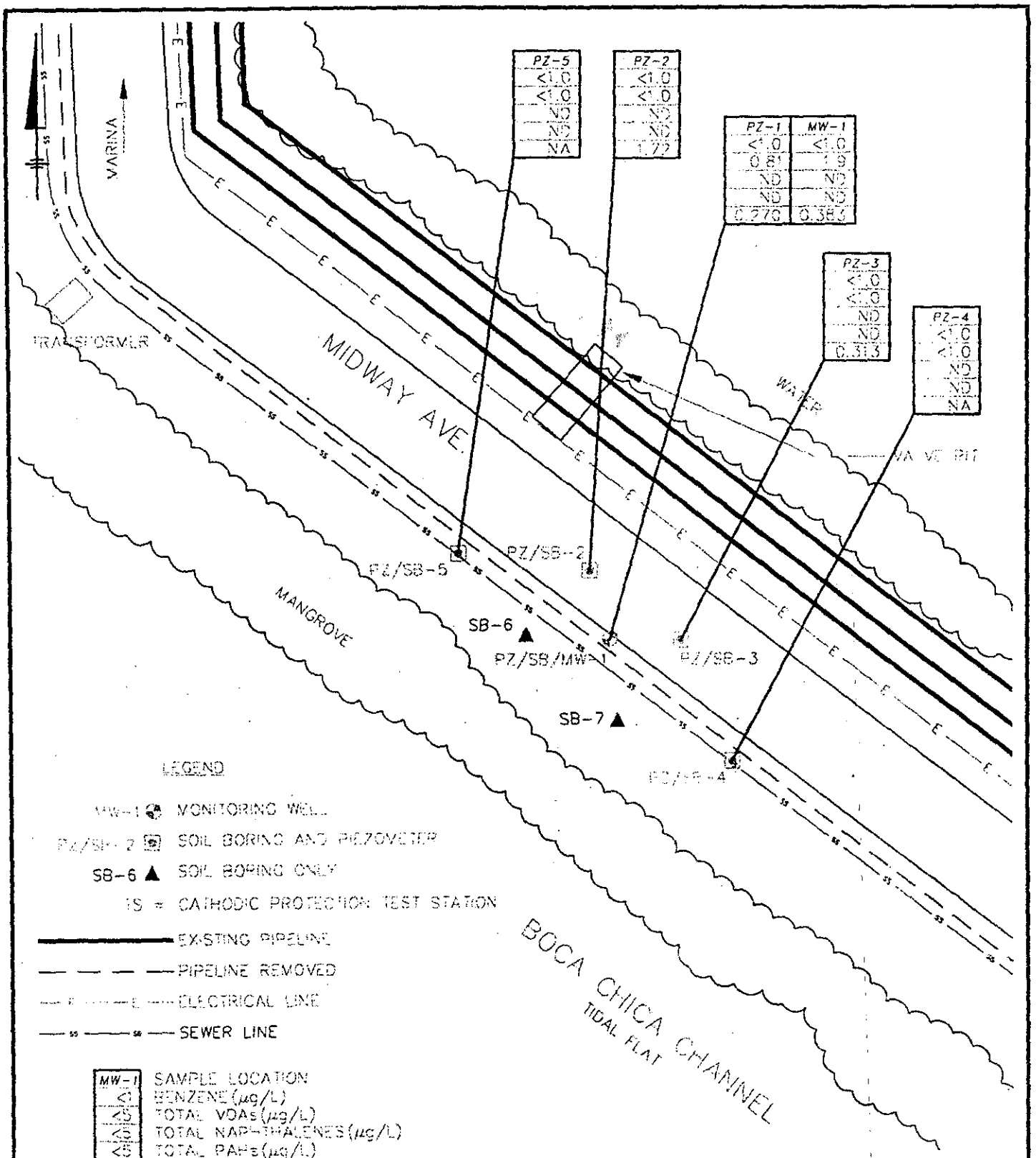
NAVAL AIR STATION KEY WEST
BOCA CHICA KEY, FLORIDA

BOCA CHICA PIPELINE SAR

SOIL BORING LOCATION MAP
MARINA SITE

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 3-1



NAVAL AIR STATION KEY WEST
BOCA CHICA KEY, FLORIDA

BOCA CHICA PIPELINE SAR

GROUND WATER QUALITY MAP
MARINA SITE

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 3-2

Tables

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Table 1

Summary of Organic Vapor Analysis

Runway 7/25 Site
Boca Chica Pipeline
NAS Key West, Florida

Boring/ Well	Date Sampled	Sample Depth (ft BLS)	Total Organic Vapors (ppm)	Total Methane Vapors (ppm)	Corrected Petroleum HC Vapors (ppm)	Notes
SB-1	5/9/00	0-1	<1	-	<1	Lithology (applies to all sampling locations): Sand: dark brown, medium to fine-grained, to approximately 3 feet BLS, underlain by oolitic limestone, and limestone fragments (<5 cm).
SB-2	5/9/00	1-2	<1	-	<1	
SB-3	5/9/00	0-2	<1	-	<1	
SB-4	5/9/00	0-2	<1	-	<1	
SB-5	5/9/00	0-2	<1	-	<1	
SB-6	5/9/00	1-2	<1	-	<1	Soil sample SS-3 collected at 0-1'. Wet. No odor. Slightly clayey. MW-4 installed.
SB-7	5/9/00	0-1	-	-	-	Soil sample SS-2 collected at 0-1'. Dry. No odor. MW-3 installed.
SB-8	5/9/00	0-1	<1	-	<1	
		1-2	10	<1	10	No odor.
SB-9	5/9/00	0-2	<1	-	<1	
SB-10	5/10/00	0-2	4	<1	4	No odor.
		2-3	<1	-	<1	
SB-11	5/10/00	0-2	<1	-	<1	MW-1 installed.
SB-12	5/10/00	0-2	30	2	28	Soil sample SS-1 collected at 0-1'. Slightly moist. No odor. MW-2 installed.
SB-13	5/10/00	0-2	<1	-	<1	
SB-14	5/10/00	0-1	<1	-	<1	
SB-15	5/10/00	0-1.5	<1	-	<1	Refusal at 1.5'. Moist.
SB-16	5/10/00	0-1	<1	-	<1	
SB-17	5/10/00	0-1	<1	-	<1	
SB-18	5/10/00	0-1	<1	-	<1	MW-5 installed.
		1-2	<1	-	<1	
SB-19	5/10/00	0-1	<1	-	<1	MW-6 installed.
		1-2	<1	-	<1	
SB-20	5/10/00	0-1	<1	-	<1	MW-7 installed
		1-2	10	<1	10	No odor.
SB-21	5/10/00	0-1	<1	-	<1	MW-8 installed.
		1-2	<1	-	<1	

ppm = parts per million ft = feet BLS = below land surface HC = hydrocarbon

Source: Blasland, Bouck, & Lee, Inc. 2000.

28a01130.DOC

Tab [illegible]

Summary of Detected Soil Analytical Parameters

Runway 7/25 Site
Boca Chica Pipeline
NAS Key West, Florida

Sample Date: May 10, 2000

Parameter	SS-1 (0-1)	SS-2 (0-1)	SS-3 (0-1)	Target Level
Benzo(a)anthracene*	167	<78	<87	5,000 (3)
Benzo(b)fluoranthene*	302	28.9	54.7	4,800 (3)
Benzo(g,h,i)perylene*	265	<78	55.7	41,000,000 (3)
Benzo(a)pyrene*	217	27.1	40.9	500 (3)
Benzo(k)fluoranthene*	110	<78	<87	52,000 (3)
Chrysene*	160	<78	32.6	450,000 (3)
Fluoranthene*	189	<390	<430	48,000,000 (3)
Indeno(1,2,3-cd)pyrene*	314	40.2	53.4	5,300 (3)
Pyrene*	195	<390	<430	37,000,000 (3)
Total Volatiles (1)	ND**	ND**	ND**	Varies
TRPH (2)	198	9.85	53.4	2,500 (3)

Notes:
All results in micrograms per kilogram (ug/Kg), except TRPH in milligrams per kilogram (mg/Kg)
*Soil samples for PAH analysis were extracted beyond holding time. Reported results are considered minimum values.
**Methylene chloride detected; suspected laboratory contaminant.
ND = not detected at laboratory detection limits (each parameter varies)
(1) Halogenated and Aromatic Volatiles
(2) Total Recoverable Petroleum Hydrocarbons
(3) Direct Exposure Commercial/Industrial Use

Sources: Blasland, Bouck, & Lee, Inc., 2000; Accutest, 2000.

Table 2-3

Summary of Soil Analytical Data
(Synthetic Precipitation Leaching Procedure)

Runway 7/25 Site
Boca Chica Pipeline
NAS Key West, Florida

Sample Date: May 10, 2000

Parameter	SS-1 (0-1)	SS-2 (0-1)	SS-3 (0-1)	Target Level
Total VOAs[1]	ND**	ND**	ND**	Varies
Total PAHs[2]*	ND	ND	ND	Varies
TRPH [3]	<2.5	<2.5	<2.5	5

Notes:
All results in micrograms per liter (ug/L), except TRPH in milligrams per liter (mg/L)
ND = not detected at laboratory detection limits (each parameter varies)
(1) Total Volatile Organic Aromatics
(2) Total Polynuclear Aromatic Hydrocarbons
(3) Total Recoverable Petroleum Hydrocarbons
*Samples for PAH analysis extracted past holding time.
** Acetone and methylene chloride detected; suspected laboratory contaminants.

Sources: Blasland, Bouck, & Lee, Inc. 2000; Accutest, 2000.

Tau[illegible]4

Analytical Results of Selected Parameters in Ground Water Samples from Temporary Piezometers

Runway 7/25 Site
Boca Chica Pipeline
NAS Key West, Florida

Sample Dates: May 9 and 10, 2000

Sample No.	Soil Boring Location	Benzene	Ethyl-benzene	Naphthalene	2-Methyl-naphthalene	Acenaphthene	Anthracene	TRPH[1]
PZ-1	SB-1	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	NA
PZ-2	SB-2	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	NA
PZ-3	SB-3	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	NA
PZ-4	SB-4	<1.0	<1.0	2.4	2.8	22.4	1.2	NA
PZ-5	SB-5	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	NA
PZ-6	SB-6	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<0.25
PZ-7	SB-7	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	0.571
PZ-8	SB-8	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<0.25
PZ-9	SB-9	**14.4**	2.6	<2.0	<2.0	<2.0	<2.0	0.474
PZ-10	SB-10	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	0.398
Chapter 62-777, FAC Target		1/10[a]	30/300[a]	20/200[a]	20/200[a]	20/200[a]	210/2100[a]	5/50,000[a]

Notes:
All results in micrograms per liter (ug/L), except TRPH is in milligrams per liter
(1) TRPH = Total Recoverable Petroleum Hydrocarbons
NA = not analyzed
(a) = Poor Quality Aquifer Criteria
Concentrations in bold exceed Poor Quality Aquifer Criteria target level.

Source: Blasland, Bouck, & Lee, Inc., 2000; Accutest, 2000.

Tab 5

Monitoring Well Completion Summary

Runway 7/25 Site
Boca Chica Pipeline
NAS Key West, Florida

Well	Date Installed	Purpose	Total Well Depth (ft BLS)	Diameter (in)	Well Casing Length (ft)	Screen Length (ft)	Screen Slot Size (in)	Sand Pack	Screen Interval (ft BLS)	Completion
MW-1	5/10/00	Perimeter	12	2	2	10	0.010	30/45	2-12	Flush
MW-2	5/10/00	Perimeter	12	2	2	10	0.010	30/45	2-12	Flush
MW-3	5/10/00	Source	12	2	2	10	0.010	30/45	2-12	Flush
MW-4	5/10/00	Source	12	2	2	10	0.010	30/45	2-12	Flush
MW-5	5/10/00	Source	12	2	2	10	0.010	30/45	2-12	Flush
MW-6	5/10/00	Source	12	2	2	10	0.010	30/45	2-12	Flush
MW-7	5/11/00	Source	12	2	2	10	0.010	30/45	2-12	Flush
MW-8	5/11/00	Source	12	2	2	10	0.010	30/45	2-12	Flush
MW-9	5/11/00	Source	12	2	2	10	0.010	30/45	2-12	Flush

Notes:
All monitoring wells are constructed of Schedule 40 PVC.
BLS = below land surface, in = inches, ft = feet

Source: Blasland, Bouck, & Lee, Inc., 2000.

Tau[illegible]

Summary of Ground Water Analytical Data
Purgeable Aromatics, EDB and Lead

Runway 7/25
Boca Chica Pipeline
NAS Key West, Florida

Sample Date: May 12, 2000

Well No.	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE[1]	EDB[2]	Lead
MW-1	<1.0	<1.0	<1.0	<3.0	<1.0	NA	NA
MW-2	10	<1.0	<1.0	<3.0	<1.0	NA	NA
MW-3	<1.0	<1.0	<1.0	<3.0	<1.0	<0.020	8.8
DUP-1 (MW-3)	<1.0	<1.0	<1.0	<3.0	<1.0	NA	NA
MW-4	<1.0	<1.0	<1.0	<3.0	<1.0	NA	NA
MW-5	<1.0	<1.0	<1.0	<3.0	<1.0	NA	NA
MW-6	<1.0	<1.0	<1.0	<3.0	<1.0	NA	NA
MW-7	<1.0	<1.0	<1.0	<3.0	<1.0	NA	NA
MW-8	<1.0	<1.0	<1.0	<3.0	<1.0	NA	NA
MW-9	**24.6**	<1.0	8.0	<3.0	<1.0	NA	NA
62-777, FAC Target Level	1/10[3]	40/400[3]	30/300[3]	20/200[3]	50/500[3]	0.02/0.20[3]	15/150[3]

Notes:
All results in micrograms per liter (ug/L)
(1) Methyl tert-butyl ether
(2) 1,2 dibromoethane
(3) Poor Quality Aquifer Criteria (Chapter 62-777, FAC)
Concentrations in bold exceed Poor Quality Aquifer target level.

Sources: Blasland, Bouck, & Lee, Inc., 2000; Accutest, 2000.

Tab 7

Summary of Ground Water Analytical Data
Polynuclear Aromatic Hydrocarbons and TRPH

Runway 7/25 Site
Boca Chica Pipeline
NAS Key West, Florida

Sample Date: May 12, 2000

Well No.	Total PAHs[1]	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	TRPH[2]
MW-1	ND	<5.0	<5.0	<5.0	0.563
MW-2	ND	<5.0	<5.0	<5.0	1.38
MW-3	ND	<5.0	<5.0	<5.0	0.215
DUP-1 (MW-3)	ND	<5.0	<5.0	<5.0	0.245
MW-4	ND	<5.5	<5.5	<5.5	NA
MW-5	ND	<5.5	<5.5	<5.5	0.304
MW-6	ND	<5.0	<5.0	<5.0	0.462
MW-7	ND	<5.0	<5.0	<5.0	0.436
MW-8	ND	<5.0	<5.0	<5.0	0.333
MW-9	ND	<5.5	<5.5	<5.5	0.614
62-777, FAC Target Level	Varies	20	20	20	5

Notes:
All results in micrograms per liter (ug/L), except TRPH in milligrams per liter (mg/L).
ND = not detected at laboratory detection limits (varies)
NA = not analyzed
(1) Polynuclear Aromatic Hydrocarbons (all except naphthalene and methylnaphthalenes)
(2) Total Recoverable Petroleum Hydrocarbons

Sources: Blasland, Bouck, & Lee, Inc., 2000; Accutest, 2000.

Tab 8

Tidal Influence on Water Levels

Runway 7/25 Site
Boca Chica Pipeline
NAS Key West, Florida

Well	TOC Elevation (ft MSL)	Depth to Water 7:15am 5/12/00	Depth to Water 12:30pm 5/12/00	Water Table Elevation 7:15am 5/12/00	Water Table Elevation 12:30pm 5/12/00
MW-1	3.64	0.92	0.79	2.72	2.85
MW-2	3.94	0.71	0.88	3.22	3.05
MW-3	3.74	0.61	0.78	3.13	2.96
MW-4	3.34	0.53	0.59	2.81	2.75
MW-5	4.19	0.51	1.56	3.68	2.63
MW-6	4.23	1.60	1.63	2.63	2.60
MW-7	4.15	1.38	1.47	2.77	2.68
MW-8	4.23	1.38	1.44	2.85	2.79
MW-9	4.23	1.32	1.45	2.91	2.78

Notes:
All depth to water measurements taken from top of casing in feet
ft MSL = feet mean sea level (relative)
TOC = top of casing
Benchmark assumed 4.00 ft MSL
Tides for Key West: 5/12/00: Low - 3:41 am; 4:13 pm High - 11:26 am; 8:57 pm

Source: Blasland, Bouck, & Lee, Inc., 2000; Marine Lab, Sarasota, 2000.

T....1

Summary of Organic Vapor Analysis

Marina Site
Boca Chica Pipeline
NAS Key West, Florida

Boring/ Well	Date Sampled	Sample Depth (ft BLS)	Total Organic Vapors (ppm)	Total Methane Vapors (ppm)	Corrected Petroleum HC Vapors (ppm)	Notes
SB-1	5/11/00	0-1 1-2	<1 <1	- -	<1 <1	Lithology (applies to all sampling locations): Sand: gray/brown, medium to fine-grained to 3 ft BLS, underlain with oolitic limestone, shell, coral, and limestone fragments (<5 cm). Soil sample SS-1 collected at 0-1'. No odor.
SB-2	5/11/00	0-1 1-2	<1 <1	- -	<1 <1	Soil sample SS-2 collected at 0-1'. No odor
SB-3	5/11/00	0-1 1-2	<1 <1	- -	<1 <1	Soil sample SS-3 collected at 0-1'. No odor.
SB-4	5/11/00	0-1 1-2	<1 <1	- -	<1 <1	
SB-5	5/11/00	0-1 1-2	<1 <1	- -	<1 <1	
SB-6	5/11/00	0-1 1-2	<1 <1	- -	<1 <1	
SB-7	5/11/00	0-1 1-2	<1 <1	- -	<1 <1	

ppm = parts per million ft = feet BLS = below land surface HC = hydrocarbon

Source: Blasland, Bouck, & Lee, Inc. 2000.

Tab

Summary of Detected Soil and Sediment Analytical Parameters

Marina Site
Boca Chica Pipeline
NAS Key West, Florida

Sample Date: May 11, 2000

Parameter	SS-1 (0-1)	SS-2 (0-1)	SS-3 (0-1)	Target Level	SED-1	SED-2
Total Volatiles [1]	ND**	ND**	ND**	Varies	NA	NA
PAHs[2]	ND	ND	ND	Varies	ND	ND
TRPH [3]	<9.5	<9.4	11.0	2,500 [4]	NA	NA

Notes:
All results in micrograms per kilogram (ug/Kg), except TRPH in milligrams per kilogram (mg/Kg)
*Soil samples for PAH analysis were extracted beyond holding time. Reported results are considered minimum values.
**Methylene chloride detected; suspected laboratory contaminant.
ND = not detected at laboratory detection limits (each parameter varies)
NA = not analyzed
(1) Halogenated and Aromatic Volatiles
(2) Polynuclear Aromatic Hydrocarbons
(3) Total Recoverable Petroleum Hydrocarbons
(4) Direct Exposure Commercial/Industrial Use

Sources: Blasland, Bouck, & Lee, Inc., 2000; Accutest, 2000.

Tab[illegible]3

Summary of Soil and Sediment Analytical Data
(Synthetic Precipitation Leaching Procedure)

Marina Site
Boca Chica Pipeline
NAS Key West, Florida

Sample Date: May 11, 2000

Parameter	SS-1 (0-1)	SS-2 (0-1)	SS-3 (0-1)	Target Level	SED-1	SED-2
Total VOAs(1)	ND**	ND**	ND**	Varies	NA	NA
Total PAHs(2)*	ND	ND	ND	Varies	ND	ND
TRPH (3)	<2.5	<2.5	<2.5	5	NA	NA

Notes:
All results in micrograms per liter (ug/L), except TRPH in milligrams per liter (mg/L)
ND = not detected at laboratory detection limits (each parameter varies)
(4) Total Volatile Organic Aromatics
(5) Total Polynuclear Aromatic Hydrocarbons
(6) Total Recoverable Petroleum Hydrocarbons
*Samples for PAH analysis extracted past holding time.
** Acetone and methylene chloride detected; suspected laboratory contaminants.

Sources: Blasland, Bouck, & Lee, Inc. 2000; Accutest, 2000.

Table 4

Analytical Results of Selected Parameters in Ground Water Samples from Temporary Piezometers

Marina Site
Boca Chica Pipeline
NAS Key West, Florida

Sample Dates: May 11, 2000

Sample No.	Soil Boring Location	Benzene	Total VOAs[1]	Total PAHs[2]	TRPH[3]
PZ-1	SB-1	<1.0	0.81*	ND	0.270
PZ-2	SB-2	<1.0	<1.0	ND	1.72
PZ-3	SB-3	<1.0	<1.0	ND	0.313
PZ-4	SB-4	<1.0	<1.0	ND	NA
PZ-5	SB-5	<1.0	<1.0	ND	NA
Chapter 62-777, FAC Target		1	Varies	Varies	5

Notes:
All results in micrograms per liter (ug/L), except TRPH is in milligrams per liter
* Toluene concentration was 0.81 ug/L.
(1) Total Volatile Organic Aromatics
(2) Total Polynuclear Aromatic Hydrocarbons
(3) TRPH = Total Recoverable Petroleum Hydrocarbons
ND = not detected at laboratory detection limits (varies).
NA = not analyzed

Source: Blasland, Bouck, & Lee, Inc., 2000; Accutest, 2000.

Monitoring Well Completion Summary

Marina Site
Boca Chica Pipeline
NAS Key West, Florida

Well	Date Installed	Purpose	Total Well Depth (ft BLS)	Diameter (in)	Well Casing Length (ft)	Screen Length (ft)	Screen Slot Size (in)	Sand Pack	Screen Interval (ft BLS)	Completion
MW-1	5/11/00	Source	12	2	2	10	0.010	30/45	2-12	Flush

Notes:
Monitoring well is constructed of Schedule 40 PVC.
BLS = below land surface, in = inches, ft = feet

Source: Blasland, Bouck, & Lee, Inc., 2000.

Tab 6

Summary of Ground Water Analytical Data

Marina Site
Boca Chica Pipeline
NAS Key West, Florida

Sample Date: May 12, 2000

Well No.	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE[1]	EDB[2]	Lead
MW-1	<1.0	1.9	<1.0	<3.0	<1.0	<0.020	<5.0
62-777, FAC Target Level	1	40	30	20	50	0.02	15

Well No.	Total PAHs[3]	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	TRPH[4]
MW-1	ND	<2.2	<2.2	<2.2	0.383
62-777, FAC Target Level	Varies	20	20	20	5

Notes:
All results in micrograms per liter (ug/L), except TRPH in milligrams per liter (mg/L).
ND = not detected at laboratory detection limits (varies)
(1) Methyl tert-butyl ether
(2) 1,2 dibromoethane
(3) Polynuclear Aromatic Hydrocarbons (all except naphthalene and methylnaphthalenes)
(4) Total Recoverable Petroleum Hydrocarbons

Sources: Blasland, Bouck, & Lee, Inc., 2000; Accutest, 2000.

Appendix A

DEP Form # 62-761.900(6)
Form Title Incident Notification Form
Effective Date July 13, 1998

Incident Notification Form

PLEASE PRINT OR TYPE

Instructions are on the reverse side. Please complete all applicable blanks

Facility ID Number (if registered): _____ 2. Date of form completion: 1/19/99

General information

Facility name: Naval Air Station Key West, Boca Chica Field
Facility Owner or Operator: Commanding Officer, Naval Air Station Key West
Contact Person: Mr Jim Simmen Telephone number: (305)293-2881 County: Monroe
Facility mailing address: PO Box 9007, Key West, FL 33040 (Code 1883)
Location of incident (facility street address): Perimeter Road at Marina, Boca Chica Field
Latitude and Longitude of incident (If known.) _____

Date of Discovery of incident: 1/15/99 month/day/year

5. Monitoring method that indicates a possible release or an incident: (check all that apply)

[ ] Liquid detector (automatic or manual)
[X] Vapor detector (automatic or manual)
[ ] Tightness test
[ ] Pressure test
[ ] Breach of integrity test
[X] Visual observation
[ ] Groundwater samples
[ ] Monitoring wells
[ ] Internal inspection
[ ] Odors in the vicinity
[ ] Automatic tank gauging
[ ] Manual tank gauging
[X] Closure
[ ] Inventory control
[ ] Statistical Inventory Reconciliation
[ ] Groundwater analytical samples
[ ] Soil analytical tests or samples
[ ] Other _____

6. Type of regulated substance stored in the storage system: (check one)

[ ] Diesel
[ ] Gasoline
[ ] Heating oil
[ ] Used\waste oil
[ ] Aviation gas
[X] Jet fuel
[ ] New/lube oil
[ ] Kerosene
[ ] Other _____
[ ] Hazardous substance - includes CERCLA substances, pesticides, ammonia, chlorine, and their derivatives, and mineral acids.
(write in name or Chemical Abstract Service (CAS) number) _____

7. Incident involves or originated from a: (check all that apply)

[ ] Tank
[ ] Piping sump
[ ] Unusual operating conditions
[ ] Release detection equipment
[ ] Dispensing equipment
[ ] Secondary containment system
[X] Pipe
[ ] Other
[ ] Overfill protection device
[ ] Dispenser Liners
[ ] Loss of >100 gallons to an impervious surface other than secondary containment
[ ] Loss of >500 gallons within secondary containment

8. Cause of the incident, if known: (check all that apply)

[ ] Overfill (<25 gallons)
[ ] Faulty Probe or sensor
[ ] Spill (<25 gallons)
[ ] Human error
[ ] Theft
[ ] Installation failure
[X] Corrosion
[ ] Other _____

9. Actions taken in response to the incident: The contaminated soil was removed along the pipeline in both directions until the hydrocarbon levels were below 50 ppm. Free product was removed from the groundwater.

Comments: The contaminated soil was not completely removed on the south side of the pipeline due to the proximity of a wetlands area and a sanitary sewer force main. The source of contamination and the most heavily contaminated soil was removed.

11. Agencies notified (as applicable):

[ ] Fire Department.
[X] Local Program
[X] DEP (district/person)

I. To the best of my knowledge and belief, all information submitted on this form is true, accurate, and complete.

James M. Simmen
Printed Name of Owner, Operator or Authorized Representative

Signature of Owner, Operator or Authorized Representative.

Boca Chica, Discharge Reports, EMA: Florida Keys

Discharge Reporting Form

PLEASE PRINT OR TYPE

DEP Form # (If Applicable): _____
Form Title: Discharge Reporting Form
Effective Date: _____
DEP Application No.: _____ (Check in DEP)

Instructions are on the reverse side. Please complete all applicable blanks

Facility ID Number (If registered): _____ 2. Date of form completion: JUNE 7, 1999

Owner/Operator Information
Facility name: U.S. NAVY - BOCA CHICA RUNWAY # 7
Facility Owner or Operator: COMMANDING OFFICER
Telephone number: (305) 293-2881 County: MONROE
Mailing address: PUBLIC WORKS DEPARTMENT, P.O. BOX 5007 CODE 1883US, KEY WEST, FL 33040
Location of discharge (facility street address): NORTHWEST CORNER OF RUNWAY # 7
Latitude and Longitude of discharge (If known.) _____

Date of receipt of test results or discovery of or suspected discharge: JUNE 7, 1999 month/day/year

8. Estimated number of gallons discharged: 200

Discharge affected: [ ] Air [ ] Soil [ ] Ground water [ ] Water well(s) [ ] Shoreline [ ] Surface water (water body name) _____

Method of discovery (check all that apply)

Liquid detector (automatic or manual)	[ ] Internal inspection	[ ] Closure
Vapor detector (automatic or manual)	[ ] Inventory control	[ ] Groundwater analytical samples
Tightness test	[ ] Monitoring wells	[ ] Soil analytical tests or samples
Pressure test	[ ] Automatic tank gauging	[✓] Visual observation
[ ] Statistical Inventory Reconciliation	[ ] Manual tank gauging	[ ] Other _____

Type of regulated substance discharged: (check one)

[ ] Unknown	[ ] Used/waste oil	[ ] New/lube oil
[ ] Gasoline	[ ] Aviation gas	[ ] Diesel
[ ] Heating oil	[✓] Jet fuel	[ ] Mineral acid

[ ] Hazardous substance - Include CERCLA substances, pesticides, ammonia, chlorine, and derivatives (Write in name or Chemical Abstract Service (CAS) number) _____
[ ] Other _____

Discharge originated from a: (check all that apply)

[ ] Dispensing system	[✓] Pipe	[ ] Barge	[ ] Pipeline	[ ] Vehicle
[ ] Tank	[ ] Piping	[ ] Tanker ship	[ ] Railroad tanker	[ ] Airplane
[ ] Unknown	[ ] Valve failure	[ ] Other Vessel	[ ] Tank truck	[ ] Drum

[ ] Other _____

Cause of the discharge: (check all that apply)

[ ] Loose connection	[ ] Puncture	[ ] Spill	[ ] Collision	[ ] Corrosion
[ ] Fire/explosion	[ ] Overfill	[ ] Human error	[ ] Vehicle Accident	[ ] Installation failure

[ ] Other LINE CLOSURE

Actions taken in response to the discharge: THE JP-4 WAS PUMPED FROM EXCAVATION INTO 55 GALLON DRUMS. THE SOIL WILL BE REMOVED.

Comments: _____

Agencies notified (as applicable):

State Warning Point (904) 488-1320	[ ] National Response Center 1-800-424-8802	[ ] Fire Department	[ ] County Tanks Program	[✓] DEP (District/Operator)

To the best of my knowledge and belief all information submitted on this form is true, accurate and complete.

James Simmons
Name of Owner, Operator or Authorized Representative

Signature of Owner, Operator or Authorized Representative

To: Amanda A Shaver
(407) 769-3392
From: Maria Nasko
(305) 293-2542

Appendix B

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

ACCUTEST

05/22/00

Technical Report for

Blasland, Bouck & Lee

NAS Key West

880.21

Accutest Job Number: F6501

Report to:

BBL
15741 Vinola Ct.
Montverde, FL 34756

ATTN: Amanda Shearer

Total number of pages in report: 26

Harry Behzadi, Ph.D.
Laboratory Director

Results relate only to the items tested.
This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

ACCUTEST

Sample Summary

Blasland, Bouck & Lee

Job No: F6501

NAS Key West
Project No: 880.21

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F6501-1	05/09/00	14:15 DP	05/11/00	AQ	Ground Water	PIPELINE PZ-8
F6501-2	05/09/00	14:40 DP	05/11/00	AQ	Ground Water	PIPELINE PZ-9
F6501-3	05/09/00	15:30 DP	05/11/00	AQ	Ground Water	R. PIPELINE PZ-1
F6501-4	05/09/00	16:30 DP	05/11/00	AQ	Ground Water	R. PIPELINE PZ-2
F6501-5	05/09/00	17:00 DP	05/11/00	AQ	Ground Water	R. PIPELINE PZ-3
F6501-6	05/09/00	17:30 DP	05/11/00	AQ	Ground Water	R. PIPELINE PZ-4
F6501-7	05/09/00	18:00 DP	05/11/00	AQ	Ground Water	R. PIPELINE PZ-5
F6501-8	05/09/00	18:30 DP	05/11/00	AQ	Ground Water	R. PIPELINE PZ-6
F6501-9	05/09/00	19:00 DP	05/11/00	AQ	Ground Water	R. PIPELINE PZ-7
F6501-10	05/09/00	00:00 DP	05/11/00	AQ	Trip Blank Water	TRIP-1

ACCUTEST

Report of Analysis

Client Sample ID:	PIPELINE PZ-8		
Lab Sample ID:	F6501-1	Date Sampled:	05/09/00
Matrix:	AQ - Ground Water	Date Received:	05/11/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015228.D	1	05/18/00	JG	n/a	n/a	GCD547
Run #2							

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	89%		69-125%
98-08-8	aaa-Trifluorotoluene	86%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	PIPELINE PZ-8		
Lab Sample ID:	F6501-1	Date Sampled:	05/09/00
Matrix:	AQ - Ground Water	Date Received:	05/11/00
Method:	EPA 8310	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA001290.D	1	05/15/00	CCJ	05/13/00	OP1550	GAA57
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	2.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	0.20	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	71%		45-130%
92-94-4	p-Terphenyl	93%		50-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	PIPELINE PZ-8		
Lab Sample ID:	F6501-1	Date Sampled:	05/09/00
Matrix:	AQ - Ground Water	Date Received:	05/11/00
Method:	FLORIDA-PRO	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08262.D	1	05/16/00	ME	05/13/00	OP1551	GOP376
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	0.25	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	91%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	PIPELINE PZ-9		
Lab Sample ID:	F6501-2	Date Sampled:	05/09/00
Matrix:	AQ - Ground Water	Date Received:	05/11/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015229.D	1	05/18/00	JG	n/a	n/a	GCD547
Run #2							

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	14.4	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	2.6	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		69-125%
98-08-8	aaa-Trifluorotoluene	94%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values. Confirmed by dual column analysis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	PIPELINE PZ-9		
Lab Sample ID:	F6501-2	**Date Sampled:**	05/09/00
Matrix:	AQ - Ground Water	**Date Received:**	05/11/00
Method:	EPA 8310	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA001291.D	1	05/15/00	CCJ	05/13/00	OP1550	GAA57
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	2.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	0.20	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	74%		45-130%
92-94-4	p-Terphenyl	87%		50-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	PIPELINE PZ-9		
Lab Sample ID:	F6501-2	Date Sampled:	05/09/00
Matrix:	AQ - Ground Water	Date Received:	05/11/00
Method:	FLORIDA-PRO	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08263.D	1	05/16/00	ME	05/13/00	OP1551	GOP376
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.474	0.25	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	84%		40-140%

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE PZ-1		
Lab Sample ID:	F6501-3	**Date Sampled:**	05/09/00
Matrix:	AQ - Ground Water	**Date Received:**	05/11/00
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015230.D	1	05/18/00	JG	n/a	n/a	GCD547
Run #2							

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		69-125%
98-08-8	aaa-Trifluorotoluene	94%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE PZ-1		
Lab Sample ID:	F6501-3	**Date Sampled:**	05/09/00
Matrix:	AQ - Ground Water	**Date Received:**	05/11/00
Method:	EPA 8310	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA001292.D	1	05/15/00	CCJ	05/13/00	OP1550	GAA57
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	2.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	0.20	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	69%		45-130%
92-94-4	p-Terphenyl	90%		50-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE PZ-2		
Lab Sample ID:	F6501-4	Date Sampled:	05/09/00
Matrix:	AQ - Ground Water	Date Received:	05/11/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015231.D	1	05/18/00	JG	n/a	n/a	GCD547
Run #2							

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	90%		69-125%
98-08-8	aaa-Trifluorotoluene	92%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE PZ-2		
Lab Sample ID:	F6501-4	Date Sampled:	05/09/00
Matrix:	AQ - Ground Water	Date Received:	05/11/00
Method:	EPA 8310	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA001293.D	1	05/15/00	CCJ	05/13/00	OP1550	GAA57
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	2.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	0.20	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	72%		45-130%
92-94-4	p-Terphenyl	81%		50-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE PZ-3		
Lab Sample ID:	F6501-5	**Date Sampled:**	05/09/00
Matrix:	AQ - Ground Water	**Date Received:**	05/11/00
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015232.D	1	05/18/00	JG	n/a	n/a	GCD547
Run #2							

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	88%		69-125%
98-08-8	aaa-Trifluorotoluene	89%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE PZ-3		
Lab Sample ID:	F6501-5	Date Sampled:	05/09/00
Matrix:	AQ - Ground Water	Date Received:	05/11/00
Method:	EPA 8310	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA001294.D	1	05/15/00	CCJ	05/13/00	OP1550	GAA57
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	2.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	0.20	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	70%		45-130%
92-94-4	p-Terphenyl	78%		50-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE PZ-4		
Lab Sample ID:	F6501-6	Date Sampled:	05/09/00
Matrix:	AQ - Ground Water	Date Received:	05/11/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015233.D	1	05/18/00	JG	n/a	n/a	GCD547
Run #2							

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	96%		69-125%
98-08-8	aaa-Trifluorotoluene	116%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE PZ-4		
Lab Sample ID:	F6501-6	**Date Sampled:**	05/09/00
Matrix:	AQ - Ground Water	**Date Received:**	05/11/00
Method:	EPA 8310	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA001295.D	1	05/15/00	CCJ	05/13/00	OP1550	GAA57
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	22.4	2.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	1.2	2.0	ug/l	J
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	0.20	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	2.4	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	2.8	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	71%		45-130%
92-94-4	p-Terphenyl	88%		50-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE PZ-5		
Lab Sample ID:	F6501-7	Date Sampled:	05/09/00
Matrix:	AQ - Ground Water	Date Received:	05/11/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015234.D	1	05/18/00	JG	n/a	n/a	GCD547
Run #2							

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	91%		69-125%
98-08-8	aaa-Trifluorotoluene	92%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE PZ-5		
Lab Sample ID:	F6501-7	Date Sampled:	05/09/00
Matrix:	AQ - Ground Water	Date Received:	05/11/00
Method:	EPA 8310	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA001296.D	1	05/15/00	CCJ	05/13/00	OP1550	GAA57
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	2.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	0.20	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	68%		45-130%
92-94-4	p-Terphenyl	84%		50-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE PZ-6		
Lab Sample ID:	F6501-8	Date Sampled:	05/09/00
Matrix:	AQ - Ground Water	Date Received:	05/11/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD015235.D	1	05/18/00	JG	n/a	n/a	GCD547
Run #2							

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	88%		69-125%
98-08-8	aaa-Trifluorotoluene	90%		72-125%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE PZ-6		
Lab Sample ID:	F6501-8	Date Sampled:	05/09/00
Matrix:	AQ - Ground Water	Date Received:	05/11/00
Method:	EPA 8310	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA001298.D	1	05/15/00	CCJ	05/13/00	OP1550	GAA57
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	2.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	0.20	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	
91-20-3	Naphthalene	ND	2.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	ug/l	
85-01-8	Phenanthrene	ND	2.0	ug/l	
129-00-0	Pyrene	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	70%		45-130%
92-94-4	p-Terphenyl	86%		50-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE PZ-6		
Lab Sample ID:	F6501-8	Date Sampled:	05/09/00
Matrix:	AQ - Ground Water	Date Received:	05/11/00
Method:	FLORIDA-PRO	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08264.D	1	05/16/00	ME	05/13/00	OP1551	GOP376
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	0.25	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	77%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE PZ-7		
Lab Sample ID:	F6501-9	Date Sampled:	05/09/00
Matrix:	AQ - Ground Water	Date Received:	05/11/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015236.D	1	05/18/00	JG	n/a	n/a	GCD547
Run #2							

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	91%		69-125%
98-08-8	aaa-Trifluorotoluene	94%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE PZ-7		
Lab Sample ID:	F6501-9	**Date Sampled:**	05/09/00
Matrix:	AQ - Ground Water	**Date Received:**	05/11/00
Method:	EPA 8310	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA001299.D	1	05/15/00	CCJ	05/13/00	OP1550	GAA57
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	2.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	2.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	ug/l	
218-01-9	Chrysene	ND	0.20	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	ug/l	
206-44-0	Fluoranthene	ND	2.0	ug/l	
86-73-7	Fluorene	ND	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	ug/l	

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE PZ-7		
Lab Sample ID:	F6501-9	**Date Sampled:**	05/09/00
Matrix:	AQ - Ground Water	**Date Received:**	05/11/00
Method:	FLORIDA-PRO	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	OP08265.D	1	05/16/00	ME	05/13/00	OP1551	GOP376
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.571	0.25	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	96%		40-140%

(a) Sample not preserved, adjusted to pH < 2 prior to extraction.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	TRIP-1		
Lab Sample ID:	F6501-10	**Date Sampled:**	05/09/00
Matrix:	AQ - Trip Blank Water	**Date Received:**	05/11/00
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015237.D	1	05/18/00	JG	n/a	n/a	GCD547
Run #2							

Purgeable Aromatics, Full List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	90%		69-125%
98-08-8	aaa-Trifluorotoluene	93%		72-125%

(a) Sample vial(s) contained significant headspace; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

CHAIN OF CUSTODY

4405 VINELAND ROAD • SUITE C-15
ORLANDO, FL 32811
TEL: 407-425-6700 • FAX: 407-425-0707

ACCUTEST JOB #: F650

ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: BBL
ADDRESS: 15741 Vinola Ct
CITY, STATE, ZIP: Montverde FL 34756
SEND REPORT TO: A. Sleeper
PHONE #: 407/469-3165

FACILITY INFORMATION

PROJECT NAME: Boca Chica Pipeline
LOCATION: NAS Key West
PROJECT NO.: 880.21.
FAX #: 407/469-3392

ANALYTICAL INFORMATION

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	602	610	FL PRO	LAB USE ONLY
1	Pipeline PZ-8	5/9/00	1415	DP	GW	6	X			X	X	2	2	2	
2	Pipeline PZ-9	"	1440		GW	6	X			X	X	2	2	2	
3	R. Pipeline PZ-1	"	1530		GW	4	X				X	2	2		
4	R. Pipeline PZ-2	"	1630		GW	4	X				X	2	2		
5	R. Pipeline PZ-3	"	1700		GW	4	X				X	2	2		
6	R. Pipeline PZ-4	"	1730		GW	4	X				X	2	2		
7	R. Pipeline PZ-5	"	1800		GW	4	X				X	2	2		
8	R. Pipeline PZ-6	"	1830		GW	6	X			X	X	2	2	2	
9	R. Pipeline PZ-7	"	1900		GW	6	X			X	X	2	2	2	
10	TRIP-1	"	—	—	DW	2						2			

DATA TURNAROUND INFORMATION

- [x] STANDARD
- [ ] 48 HOUR RUSH
- [ ] 24 HOUR EMERGENCY
- [ ] OTHER

APPROVED BY:

EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- [x] STANDARD
- [ ] COMMERCIAL "B"
- [ ] DISK DELIVERABLE
- [ ] STATE FORMS
- [ ] OTHER (SPECIFY)

COMMENTS/REMARKS

Kit 1 of 2
(2 Kits this C-O-C)
Must meet 62-777 FAC targets

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME: 5/10/00 12:00	RECEIVED BY: 1. [signature]	RELINQUISHED BY: 2.	DATE TIME:	RECEIVED BY: 2.
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3. 5/11/00 1000	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ 4.9 TEMPERATURE 6.7 C

ACCUTEST

06/19/00

Technical Report for

Blasland, Bouck & Lee

NAS Boca Chica

88021

Accutest Job Number: F6522

Report to:

BBL
15741 Vinola Ct.
Montverde, FL 34756

ATTN: Amanda Shearer

Total number of pages in report: 75

Harry Behzadi, Ph.D.
Laboratory Director

Results relate only to the items tested.
This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

ACCUTEST

Sample Summary

Blasland, Bouck & Lee

Job No: F6522

NAS Boca Chica
Project No: 88021

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
F6522-1	05/11/00	11:00 DPP	05/12/00	AQ	Ground Water	M. PIPELINE PZ-1
F6522-2	05/11/00	11:20 DPP	05/12/00	AQ	Ground Water	M. PIPELINE PZ-2
F6522-3	05/11/00	11:30 DPP	05/12/00	AQ	Ground Water	M. PIPELINE PZ-3
F6522-4	05/11/00	11:50 DPP	05/12/00	AQ	Ground Water	M. PIPELINE PZ-4
F6522-5	05/11/00	13:20 DPP	05/12/00	AQ	Ground Water	M. PIPELINE PZ-5
F6522-6	05/11/00	10:45 DPP	05/12/00	SO	Soil	M. PIPELINE SS-1 (0-1)
F6522-7	05/11/00	11:10 DPP	05/12/00	SO	Soil	M. PIPELINE SS-2 (0-1)
F6522-8	05/11/00	11:25 DPP	05/12/00	SO	Soil	M. PIPELINE SS-3 (0-1)
F6522-9	05/11/00	14:00 DPP	05/12/00	SO	Soil	M. PIPELINE SED-1
F6522-10	05/11/00	14:05 DPP	05/12/00	SO	Soil	M. PIPELINE SED-2
F6522-11	05/10/00	09:20 DPP	05/12/00	AQ	Ground Water	PZ-10 R. PIPELINE
F6522-12	05/10/00	10:00 DPP	05/12/00	SO	Soil	R. PIPELINE SS-1 (0-1)
F6522-13	05/10/00	11:45 DPP	05/12/00	SO	Soil	R. PIPELINE SS-2 (0-1)

ACCUTEST

Sample Summary
(continued)

Blasland, Bouck & Lee

Job No: F6522

NAS Boca Chica
Project No: 88021

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F6522-14	05/10/00	14:15 DPP	05/12/00	SO	Soil	R. PIPELINE SS-3 (0-1)

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE PZ-1		
Lab Sample ID:	F6522-1	Date Sampled:	05/11/00
Matrix:	AQ - Ground Water	Date Received:	05/12/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015266.D	1	05/19/00	JG	n/a	n/a	GCD547
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	0.81	1.0	ug/l	J
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	82%		69-125%
98-08-8	aaa-Trifluorotoluene	81%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values. Confirmed by dual-column analysis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE PZ-1		
Lab Sample ID:	F6522-1	Date Sampled:	05/11/00
Matrix:	AQ - Ground Water	Date Received:	05/12/00
Method:	EPA 8100	Percent Solids:	n/a
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11120.D	1	05/19/00	CCJ	05/18/00	OP1569	GIJ512
Run #2							

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	65%		40-125%
84-15-1	o-Terphenyl	77%		45-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE PZ-1		
Lab Sample ID:	F6522-1	Date Sampled:	05/11/00
Matrix:	AQ - Ground Water	Date Received:	05/12/00
Method:	FLORIDA-PRO	Percent Solids:	n/a
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08285.D	1	05/17/00	ME	05/16/00	OP1559	GOP377
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.270	0.25	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	87%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE PZ-2		
Lab Sample ID:	F6522-2	Date Sampled:	05/11/00
Matrix:	AQ - Ground Water	Date Received:	05/12/00
Method:	EPA 8100	Percent Solids:	n/a
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	IJ11151.D	2	05/20/00	CCJ	05/18/00	OP1569	GIJ513
Run #2							

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	10	ug/l	
208-96-8	Acenaphthylene	ND	10	ug/l	
120-12-7	Anthracene	ND	10	ug/l	
56-55-3	Benzo(a)anthracene	ND	10	ug/l	
50-32-8	Benzo(a)pyrene	ND	10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	10	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	10	ug/l	
218-01-9	Chrysene	ND	10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	10	ug/l	
206-44-0	Fluoranthene	ND	10	ug/l	
86-73-7	Fluorene	ND	10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	10	ug/l	
91-20-3	Naphthalene	ND	10	ug/l	
90-12-0	1-Methylnaphthalene	ND	10	ug/l	
91-57-6	2-Methylnaphthalene	ND	10	ug/l	
85-01-8	Phenanthrene	ND	10	ug/l	
129-00-0	Pyrene	ND	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	60%		40-125%
84-15-1	o-Terphenyl	75%		45-130%

(a) Dilution required due to matrix interference.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE PZ-2		
Lab Sample ID:	F6522-2	Date Sampled:	05/11/00
Matrix:	AQ - Ground Water	Date Received:	05/12/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD015267.D	1	05/19/00	JG	n/a	n/a	GCD547
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	85%		69-125%
98-08-8	aaa-Trifluorotoluene	80%		72-125%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE PZ-3		
Lab Sample ID:	F6522-3	Date Sampled:	05/11/00
Matrix:	AQ - Ground Water	Date Received:	05/12/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD015268.D	1	05/19/00	JG	n/a	n/a	GCD547
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	85%		69-125%
98-08-8	aaa-Trifluorotoluene	86%		72-125%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE PZ-2		
Lab Sample ID:	F6522-2	Date Sampled:	05/11/00
Matrix:	AQ - Ground Water	Date Received:	05/12/00
Method:	FLORIDA-PRO	Percent Solids:	n/a
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	OP08315.D	2	05/18/00	ME	05/16/00	OP1559	GOP378
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	1.72	0.50	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	75%		40-140%

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogenity.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE PZ-3		
Lab Sample ID:	F6522-3	Date Sampled:	05/11/00
Matrix:	AQ - Ground Water	Date Received:	05/12/00
Method:	EPA 8100	Percent Solids:	n/a
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11121.D	1	05/19/00	CCJ	05/18/00	OP1569	GIJ512
Run #2							

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	61%		40-125%
84-15-1	o-Terphenyl	78%		45-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE PZ-3		
Lab Sample ID:	F6522-3	Date Sampled:	05/11/00
Matrix:	AQ - Ground Water	Date Received:	05/12/00
Method:	FLORIDA-PRO	Percent Solids:	n/a
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	OP08308.D	1	05/18/00	ME	05/16/00	OP1559	GOP377
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.313	0.25	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		40-140%

(a) Sample not preserved, adjusted to pH < 2 prior to extraction.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE PZ-4		
Lab Sample ID:	F6522-4	Date Sampled:	05/11/00
Matrix:	AQ - Ground Water	Date Received:	05/12/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD015269.D	1	05/19/00	JG	n/a	n/a	GCD547
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	89%		69-125%
98-08-8	aaa-Trifluorotoluene	89%		72-125%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE PZ-4		
Lab Sample ID:	F6522-4	Date Sampled:	05/11/00
Matrix:	AQ - Ground Water	Date Received:	05/12/00
Method:	EPA 8100	Percent Solids:	n/a
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11122.D	1	05/19/00	CCJ	05/18/00	OP1569	GIJ512
Run #2							

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	80%		40-125%
84-15-1	o-Terphenyl	84%		45-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE PZ-5		
Lab Sample ID:	F6522-5	Date Sampled:	05/11/00
Matrix:	AQ - Ground Water	Date Received:	05/12/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD015270.D	1	05/19/00	JG	n/a	n/a	GCD547
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	86%		69-125%
98-08-8	aaa-Trifluorotoluene	82%		72-125%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE PZ-5		
Lab Sample ID:	F6522-5	Date Sampled:	05/11/00
Matrix:	AQ - Ground Water	Date Received:	05/12/00
Method:	EPA 8100	Percent Solids:	n/a
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11123.D	1	05/19/00	CCJ	05/18/00	OP1569	GIJ512
Run #2							

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	70%		40-125%
84-15-1	o-Terphenyl	83%		45-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-1 (0-1)		
Lab Sample ID:	F6522-6	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	87.4
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0013076.D	1	05/30/00	CJP	05/25/00	MS571	VG363
Run #2							

VOA TCL List

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
67-64-1	Acetone [a]	0.232			0.050	mg/l	
71-43-2	Benzene	ND	D018		0.0020	mg/l	
75-27-4	Bromodichloromethane	ND			0.0020	mg/l	
75-25-2	Bromoform	ND			0.0020	mg/l	
108-90-7	Chlorobenzene	ND	D021		0.0020	mg/l	
75-00-3	Chloroethane	ND			0.0020	mg/l	
67-66-3	Chloroform	ND	D022		0.0020	mg/l	
75-15-0	Carbon disulfide	ND			0.010	mg/l	
56-23-5	Carbon tetrachloride	ND	D019		0.0020	mg/l	
75-34-3	1,1-Dichloroethane	ND			0.0020	mg/l	
75-35-4	1,1-Dichloroethylene	ND	D029		0.0020	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028		0.0020	mg/l	
78-87-5	1,2-Dichloropropane	ND			0.0020	mg/l	
124-48-1	Dibromochloromethane	ND			0.0020	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND			0.0020	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND			0.0020	mg/l	
100-41-4	Ethylbenzene	ND			0.0020	mg/l	
591-78-6	2-Hexanone	ND			0.010	mg/l	
108-10-1	4-Methyl-2-pentanone	ND			0.010	mg/l	
74-83-9	Methyl bromide	ND			0.0050	mg/l	
74-87-3	Methyl chloride	ND			0.0050	mg/l	
75-09-2	Methylene chloride [a]	0.128			0.0050	mg/l	E
78-93-3	Methyl ethyl ketone	ND	D035		0.010	mg/l	
100-42-5	Styrene	ND			0.0020	mg/l	
71-55-6	1,1,1-Trichloroethane	ND			0.0020	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND			0.0020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND			0.0020	mg/l	
127-18-4	Tetrachloroethylene	ND	D039		0.0020	mg/l	
108-88-3	Toluene	ND			0.0020	mg/l	
79-01-6	Trichloroethylene	ND	D040		0.0020	mg/l	
75-01-4	Vinyl chloride	ND	D043		0.0050	mg/l	
1330-20-7	Xylene (total)	ND			0.0060	mg/l	

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-1 (0-1)		
Lab Sample ID:	F6522-6	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	87.4
Project:	NAS Boca Chica		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		80-120%
2037-26-5	Toluene-D8	94%		80-120%
460-00-4	4-Bromofluorobenzene	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	95%		69-128%

(a) Suspected laboratory contaminant.

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-1 (0-1)		
Lab Sample ID:	F6522-6	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	87.4
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H007789.D	1	06/03/00	RAW	n/a	n/a	VH90
Run #2							

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	66	ug/kg	
71-43-2	Benzene	ND	6.6	ug/kg	
75-27-4	Bromodichloromethane	ND	6.6	ug/kg	
75-25-2	Bromoform	ND	6.6	ug/kg	
108-90-7	Chlorobenzene	ND	6.6	ug/kg	
75-00-3	Chloroethane	ND	6.6	ug/kg	
67-66-3	Chloroform	ND	6.6	ug/kg	
75-15-0	Carbon disulfide	ND	13	ug/kg	
56-23-5	Carbon tetrachloride	ND	6.6	ug/kg	
75-34-3	1,1-Dichloroethane	ND	6.6	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	6.6	ug/kg	
107-06-2	1,2-Dichloroethane	ND	6.6	ug/kg	
78-87-5	1,2-Dichloropropane	ND	6.6	ug/kg	
124-48-1	Dibromochloromethane	ND	6.6	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	6.6	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	6.6	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	6.6	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	6.6	ug/kg	
100-41-4	Ethylbenzene	ND	6.6	ug/kg	
591-78-6	2-Hexanone	ND	13	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	13	ug/kg	
74-83-9	Methyl bromide	ND	6.6	ug/kg	
74-87-3	Methyl chloride	ND	6.6	ug/kg	
75-09-2	Methylene chloride	ND	13	ug/kg	
78-93-3	Methyl ethyl ketone	ND	13	ug/kg	
100-42-5	Styrene	ND	6.6	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	6.6	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.6	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	6.6	ug/kg	
127-18-4	Tetrachloroethylene	ND	6.6	ug/kg	
108-88-3	Toluene	ND	6.6	ug/kg	
79-01-6	Trichloroethylene	ND	6.6	ug/kg	
75-01-4	Vinyl chloride	ND	6.6	ug/kg	
1330-20-7	Xylene (total)	ND	20	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-1 (0-1)		
Lab Sample ID:	F6522-6	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	87.4
Project:	NAS Boca Chica		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		71-122%
2037-26-5	Toluene-D8	107%		73-128%
460-00-4	4-Bromofluorobenzene	112%		53-158%
17060-07-0	1,2-Dichloroethane-D4	121%		71-122%

(a) Sample analyzed beyond hold time; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-1 (0-1)		
Lab Sample ID:	F6522-6	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	EPA 8310	Percent Solids:	87.4
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA001755.D	1	06/15/00	NF	06/07/00	OP1649	GAA74
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
83-32-9	Acenaphthene	ND			0.0020	mg/l	
208-96-8	Acenaphthylene	ND			0.0020	mg/l	
120-12-7	Anthracene	ND			0.0020	mg/l	
56-55-3	Benzo(a)anthracene	ND			0.00020	mg/l	
50-32-8	Benzo(a)pyrene	ND			0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene	ND			0.00020	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND			0.00020	mg/l	
207-08-9	Benzo(k)fluoranthene	ND			0.00020	mg/l	
218-01-9	Chrysene	ND			0.00020	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND			0.00020	mg/l	
206-44-0	Fluoranthene	ND			0.0020	mg/l	
86-73-7	Fluorene	ND			0.0020	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND			0.00020	mg/l	
91-20-3	Naphthalene	ND			0.0020	mg/l	
90-12-0	1-Methylnaphthalene	ND			0.0020	mg/l	
91-57-6	2-Methylnaphthalene	ND			0.0020	mg/l	
85-01-8	Phenanthrene	ND			0.0020	mg/l	
129-00-0	Pyrene	ND			0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	78%		45-130%
92-94-4	p-Terphenyl	94%		50-150%

(a) Sample leached beyond hold time; reported results are considered minimum values.

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-1 (0-1)		
Lab Sample ID:	F6522-6	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	EPA 8310	Percent Solids:	87.4
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA001726.D	1	06/14/00	NF	06/06/00	OP1642	GAA73
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	380	ug/kg	
208-96-8	Acenaphthylene	ND	760	ug/kg	
120-12-7	Anthracene	ND	380	ug/kg	
56-55-3	Benzo(a)anthracene	ND	76	ug/kg	
50-32-8	Benzo(a)pyrene	ND	76	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	76	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	76	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	76	ug/kg	
218-01-9	Chrysene	ND	76	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	76	ug/kg	
206-44-0	Fluoranthene	ND	380	ug/kg	
86-73-7	Fluorene	ND	380	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	76	ug/kg	
91-20-3	Naphthalene	ND	380	ug/kg	
90-12-0	1-Methylnaphthalene	ND	380	ug/kg	
91-57-6	2-Methylnaphthalene	ND	380	ug/kg	
85-01-8	Phenanthrene	ND	380	ug/kg	
129-00-0	Pyrene	ND	380	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	67%		35-135%
92-94-4	p-Terphenyl	87%		50-150%

(a) Sample extracted beyond hold time; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-1 (0-1)		
Lab Sample ID:	F6522-6	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	FLORIDA-PRO	Percent Solids:	87.4
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08428.D	1	05/31/00	CCJ	05/30/00	OP1614	GOP384
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
	TPH (C8-C40)	ND			2.5	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	100%		40-140%

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-1 (0-1)		
Lab Sample ID:	F6522-6	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	FLORIDA-PRO	Percent Solids:	87.4
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	OP08571.D	1	06/07/00	CCJ	06/06/00	OP1643	GOP389
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	9.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	110%		40-140%

(a) Sample extracted beyond hold time; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-2 (0-1)		
Lab Sample ID:	F6522-7	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	89.2
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0013077.D	1	05/30/00	CJP	05/25/00	MS571	VG363
Run #2							

VOA TCL List

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
67-64-1	Acetone [a]	0.0430			0.050	mg/l	J
71-43-2	Benzene	ND	D018		0.0020	mg/l	
75-27-4	Bromodichloromethane	ND			0.0020	mg/l	
75-25-2	Bromoform	ND			0.0020	mg/l	
108-90-7	Chlorobenzene	ND	D021		0.0020	mg/l	
75-00-3	Chloroethane	ND			0.0020	mg/l	
67-66-3	Chloroform	ND	D022		0.0020	mg/l	
75-15-0	Carbon disulfide	ND			0.010	mg/l	
56-23-5	Carbon tetrachloride	ND	D019		0.0020	mg/l	
75-34-3	1,1-Dichloroethane	ND			0.0020	mg/l	
75-35-4	1,1-Dichloroethylene	ND	D029		0.0020	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028		0.0020	mg/l	
78-87-5	1,2-Dichloropropane	ND			0.0020	mg/l	
124-48-1	Dibromochloromethane	ND			0.0020	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND			0.0020	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND			0.0020	mg/l	
100-41-4	Ethylbenzene	ND			0.0020	mg/l	
591-78-6	2-Hexanone	ND			0.010	mg/l	
108-10-1	4-Methyl-2-pentanone	ND			0.010	mg/l	
74-83-9	Methyl bromide	ND			0.0050	mg/l	
74-87-3	Methyl chloride	ND			0.0050	mg/l	
75-09-2	Methylene chloride [a]	0.0671			0.0050	mg/l	
78-93-3	Methyl ethyl ketone	ND	D035		0.010	mg/l	
100-42-5	Styrene	ND			0.0020	mg/l	
71-55-6	1,1,1-Trichloroethane	ND			0.0020	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND			0.0020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND			0.0020	mg/l	
127-18-4	Tetrachloroethylene	ND	D039		0.0020	mg/l	
108-88-3	Toluene	ND			0.0020	mg/l	
79-01-6	Trichloroethylene	ND	D040		0.0020	mg/l	
75-01-4	Vinyl chloride	ND	D043		0.0050	mg/l	
1330-20-7	Xylene (total)	ND			0.0060	mg/l	

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-2 (0-1)		
Lab Sample ID:	F6522-7	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	89.2
Project:	NAS Boca Chica		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		80-120%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	97%		69-128%

(a) Suspected laboratory contaminant.

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-2 (0-1)		
Lab Sample ID:	F6522-7	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	89.2
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H007790.D	1	06/03/00	RAW	n/a	n/a	VH90
Run #2							

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	57	ug/kg	
71-43-2	Benzene	ND	5.7	ug/kg	
75-27-4	Bromodichloromethane	ND	5.7	ug/kg	
75-25-2	Bromoform	ND	5.7	ug/kg	
108-90-7	Chlorobenzene	ND	5.7	ug/kg	
75-00-3	Chloroethane	ND	5.7	ug/kg	
67-66-3	Chloroform	ND	5.7	ug/kg	
75-15-0	Carbon disulfide	ND	11	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.7	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.7	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.7	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.7	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.7	ug/kg	
124-48-1	Dibromochloromethane	ND	5.7	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.7	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.7	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.7	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.7	ug/kg	
100-41-4	Ethylbenzene	ND	5.7	ug/kg	
591-78-6	2-Hexanone	ND	11	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	11	ug/kg	
74-83-9	Methyl bromide	ND	5.7	ug/kg	
74-87-3	Methyl chloride	ND	5.7	ug/kg	
75-09-2	Methylene chloride	ND	11	ug/kg	
78-93-3	Methyl ethyl ketone	ND	11	ug/kg	
100-42-5	Styrene	ND	5.7	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.7	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.7	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.7	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.7	ug/kg	
108-88-3	Toluene	ND	5.7	ug/kg	
79-01-6	Trichloroethylene	ND	5.7	ug/kg	
75-01-4	Vinyl chloride	ND	5.7	ug/kg	
1330-20-7	Xylene (total)	ND	17	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-2 (0-1)		
Lab Sample ID:	F6522-7	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	89.2
Project:	NAS Boca Chica		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		71-122%
2037-26-5	Toluene-D8	100%		73-128%
460-00-4	4-Bromofluorobenzene	112%		53-158%
17060-07-0	1,2-Dichloroethane-D4	121%		71-122%

(a) Sample analyzed beyond hold time; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-2 (0-1)		
Lab Sample ID:	F6522-7	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	EPA 8310	Percent Solids:	89.2
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA001769.D	1	06/16/00	NF	06/07/00	OP1649	GAA75
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
83-32-9	Acenaphthene	ND			0.0020	mg/l	
208-96-8	Acenaphthylene	ND			0.0020	mg/l	
120-12-7	Anthracene	ND			0.0020	mg/l	
56-55-3	Benzo(a)anthracene	ND			0.00020	mg/l	
50-32-8	Benzo(a)pyrene	ND			0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene	ND			0.00020	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND			0.00020	mg/l	
207-08-9	Benzo(k)fluoranthene	ND			0.00020	mg/l	
218-01-9	Chrysene	ND			0.00020	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND			0.00020	mg/l	
206-44-0	Fluoranthene	ND			0.0020	mg/l	
86-73-7	Fluorene	ND			0.0020	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND			0.00020	mg/l	
91-20-3	Naphthalene	ND			0.0020	mg/l	
90-12-0	1-Methylnaphthalene	ND			0.0020	mg/l	
91-57-6	2-Methylnaphthalene	ND			0.0020	mg/l	
85-01-8	Phenanthrene	ND			0.0020	mg/l	
129-00-0	Pyrene	ND			0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	68%		45-130%
92-94-4	p-Terphenyl	78%		50-150%

(a) Sample leached beyond hold time; reported results are considered minimum values.

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-2 (0-1)		
Lab Sample ID:	F6522-7	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	EPA 8310	Percent Solids:	89.2
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA001727.D	1	06/14/00	NF	06/06/00	OP1642	GAA73
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	370	ug/kg	
208-96-8	Acenaphthylene	ND	750	ug/kg	
120-12-7	Anthracene	ND	370	ug/kg	
56-55-3	Benzo(a)anthracene	ND	75	ug/kg	
50-32-8	Benzo(a)pyrene	ND	75	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	75	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	75	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	75	ug/kg	
218-01-9	Chrysene	ND	75	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	75	ug/kg	
206-44-0	Fluoranthene	ND	370	ug/kg	
86-73-7	Fluorene	ND	370	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	75	ug/kg	
91-20-3	Naphthalene	ND	370	ug/kg	
90-12-0	1-Methylnaphthalene	ND	370	ug/kg	
91-57-6	2-Methylnaphthalene	ND	370	ug/kg	
85-01-8	Phenanthrene	ND	370	ug/kg	
129-00-0	Pyrene	ND	370	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	74%		35-135%
92-94-4	p-Terphenyl	100%		50-150%

(a) Sample extracted beyond hold time: reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-2 (0-1)		
Lab Sample ID:	F6522-7	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	FLORIDA-PRO	Percent Solids:	89.2
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08429.D	1	05/31/00	CCJ	05/30/00	OP1614	GOP384
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
	TPH (C8-C40)	ND			2.5	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	94%		40-140%

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-2 (0-1)		
Lab Sample ID:	F6522-7	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	FLORIDA-PRO	Percent Solids:	89.2
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	OP08572.D	1	06/07/00	CCJ	06/06/00	OP1643	GOP389
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	9.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	115%		40-140%

(a) Sample extracted beyond hold time; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-3 (0-1)		
Lab Sample ID:	F6522-8	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	90.5
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0013078.D	1	05/30/00	CJP	05/25/00	MS571	VG363
Run #2							

VOA TCL List

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
67-64-1	Acetone [a]	0.0409			0.050	mg/l	J
71-43-2	Benzene	ND	D018		0.0020	mg/l	
75-27-4	Bromodichloromethane	ND			0.0020	mg/l	
75-25-2	Bromoform	ND			0.0020	mg/l	
108-90-7	Chlorobenzene	ND	D021		0.0020	mg/l	
75-00-3	Chloroethane	ND			0.0020	mg/l	
67-66-3	Chloroform	ND	D022		0.0020	mg/l	
75-15-0	Carbon disulfide	ND			0.010	mg/l	
56-23-5	Carbon tetrachloride	ND	D019		0.0020	mg/l	
75-34-3	1,1-Dichloroethane	ND			0.0020	mg/l	
75-35-4	1,1-Dichloroethylene	ND	D029		0.0020	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028		0.0020	mg/l	
78-87-5	1,2-Dichloropropane	ND			0.0020	mg/l	
124-48-1	Dibromochloromethane	ND			0.0020	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND			0.0020	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND			0.0020	mg/l	
100-41-4	Ethylbenzene	ND			0.0020	mg/l	
591-78-6	2-Hexanone	ND			0.010	mg/l	
108-10-1	4-Methyl-2-pentanone	ND			0.010	mg/l	
74-83-9	Methyl bromide	ND			0.0050	mg/l	
74-87-3	Methyl chloride	ND			0.0050	mg/l	
75-09-2	Methylene chloride [a]	0.0636			0.0050	mg/l	
78-93-3	Methyl ethyl ketone	ND	D035		0.010	mg/l	
100-42-5	Styrene	ND			0.0020	mg/l	
71-55-6	1,1,1-Trichloroethane	ND			0.0020	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND			0.0020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND			0.0020	mg/l	
127-18-4	Tetrachloroethylene	ND	D039		0.0020	mg/l	
108-88-3	Toluene	ND			0.0020	mg/l	
79-01-6	Trichloroethylene	ND	D040		0.0020	mg/l	
75-01-4	Vinyl chloride	ND	D043		0.0050	mg/l	
1330-20-7	Xylene (total)	ND			0.0060	mg/l	

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-3 (0-1)		
Lab Sample ID:	F6522-8	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	90.5
Project:	NAS Boca Chica		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		80-120%
2037-26-5	Toluene-D8	92%		80-120%
460-00-4	4-Bromofluorobenzene	101%		80-120%
17060-07-0	1,2-Dichloroethane-D4	96%		69-128%

(a) Suspected laboratory contaminant.

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-3 (0-1)		
Lab Sample ID:	F6522-8	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	90.5
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H007791.D	1	06/03/00	RAW	n/a	n/a	VH90
Run #2							

VOA TCL List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	56	ug/kg	
71-43-2	Benzene	ND	5.6	ug/kg	
75-27-4	Bromodichloromethane	ND	5.6	ug/kg	
75-25-2	Bromoform	ND	5.6	ug/kg	
108-90-7	Chlorobenzene	ND	5.6	ug/kg	
75-00-3	Chloroethane	ND	5.6	ug/kg	
67-66-3	Chloroform	ND	5.6	ug/kg	
75-15-0	Carbon disulfide	ND	11	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.6	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.6	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.6	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.6	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.6	ug/kg	
124-48-1	Dibromochloromethane	ND	5.6	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.6	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.6	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.6	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.6	ug/kg	
100-41-4	Ethylbenzene	ND	5.6	ug/kg	
591-78-6	2-Hexanone	ND	11	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	11	ug/kg	
74-83-9	Methyl bromide	ND	5.6	ug/kg	
74-87-3	Methyl chloride	ND	5.6	ug/kg	
75-09-2	Methylene chloride	ND	11	ug/kg	
78-93-3	Methyl ethyl ketone	ND	11	ug/kg	
100-42-5	Styrene	ND	5.6	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.6	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.6	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.6	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.6	ug/kg	
108-88-3	Toluene	ND	5.6	ug/kg	
79-01-6	Trichloroethylene	ND	5.6	ug/kg	
75-01-4	Vinyl chloride	ND	5.6	ug/kg	
1330-20-7	Xylene (total)	ND	17	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-3 (0-1)		
Lab Sample ID:	F6522-8	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	90.5
Project:	NAS Boca Chica		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		71-122%
2037-26-5	Toluene-D8	102%		73-128%
460-00-4	4-Bromofluorobenzene	109%		53-158%
17060-07-0	1,2-Dichloroethane-D4	122%		71-122%

(a) Sample analyzed beyond hold time; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-3 (0-1)		
Lab Sample ID:	F6522-8	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	EPA 8310	Percent Solids:	90.5
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA001757.D	1	06/15/00	NF	06/07/00	OP1649	GAA74
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
83-32-9	Acenaphthene	ND			0.0020	mg/l	
208-96-8	Acenaphthylene	ND			0.0020	mg/l	
120-12-7	Anthracene	ND			0.0020	mg/l	
56-55-3	Benzo(a)anthracene	ND			0.00020	mg/l	
50-32-8	Benzo(a)pyrene	ND			0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene	ND			0.00020	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND			0.00020	mg/l	
207-08-9	Benzo(k)fluoranthene	ND			0.00020	mg/l	
218-01-9	Chrysene	ND			0.00020	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND			0.00020	mg/l	
206-44-0	Fluoranthene	ND			0.0020	mg/l	
86-73-7	Fluorene	ND			0.0020	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND			0.00020	mg/l	
91-20-3	Naphthalene	ND			0.0020	mg/l	
90-12-0	1-Methylnaphthalene	ND			0.0020	mg/l	
91-57-6	2-Methylnaphthalene	ND			0.0020	mg/l	
85-01-8	Phenanthrene	ND			0.0020	mg/l	
129-00-0	Pyrene	ND			0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	78%		45-130%
92-94-4	p-Terphenyl	83%		50-150%

(a) Sample leached beyond hold time; reported results are considered minimum values.

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-3 (0-1)		
Lab Sample ID:	F6522-8	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	EPA 8310	Percent Solids:	90.5
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA001730.D	1	06/14/00	NF	06/06/00	OP1642	GAA73
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	370	ug/kg	
208-96-8	Acenaphthylene	ND	740	ug/kg	
120-12-7	Anthracene	ND	370	ug/kg	
56-55-3	Benzo(a)anthracene	ND	74	ug/kg	
50-32-8	Benzo(a)pyrene	ND	74	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	74	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	74	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	74	ug/kg	
218-01-9	Chrysene	ND	74	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	74	ug/kg	
206-44-0	Fluoranthene	ND	370	ug/kg	
86-73-7	Fluorene	ND	370	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	74	ug/kg	
91-20-3	Naphthalene	ND	370	ug/kg	
90-12-0	1-Methylnaphthalene	ND	370	ug/kg	
91-57-6	2-Methylnaphthalene	ND	370	ug/kg	
85-01-8	Phenanthrene	ND	370	ug/kg	
129-00-0	Pyrene	ND	370	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	61%		35-135%
92-94-4	p-Terphenyl	80%		50-150%

(a) Sample extracted beyond hold time; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-3 (0-1)		
Lab Sample ID:	F6522-8	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	FLORIDA-PRO	Percent Solids:	90.5
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08430.D	1	05/31/00	CCJ	05/30/00	OP1614	GOP384
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
	TPH (C8-C40)	ND			2.5	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	98%		40-140%

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SS-3 (0-1)		
Lab Sample ID:	F6522-8	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	FLORIDA-PRO	Percent Solids:	90.5
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	OP08573.D	1	06/07/00	CCJ	06/06/00	OP1643	GOP389
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	11.0	9.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	115%		40-140%

(a) Sample extracted beyond hold time; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SED-1		
Lab Sample ID:	F6522-9	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	EPA 8310	Percent Solids:	50.2
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA001760.D	1	06/15/00	NF	06/07/00	OP1649	GAA74
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
83-32-9	Acenaphthene	ND			0.0020	mg/l	
208-96-8	Acenaphthylene	ND			0.0020	mg/l	
120-12-7	Anthracene	ND			0.0020	mg/l	
56-55-3	Benzo(a)anthracene	ND			0.00020	mg/l	
50-32-8	Benzo(a)pyrene	ND			0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene	ND			0.00020	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND			0.00020	mg/l	
207-08-9	Benzo(k)fluoranthene	ND			0.00020	mg/l	
218-01-9	Chrysene	ND			0.00020	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND			0.00020	mg/l	
206-44-0	Fluoranthene	ND			0.0020	mg/l	
86-73-7	Fluorene	ND			0.0020	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND			0.00020	mg/l	
91-20-3	Naphthalene	ND			0.0020	mg/l	
90-12-0	1-Methylnaphthalene	ND			0.0020	mg/l	
91-57-6	2-Methylnaphthalene	ND			0.0020	mg/l	
85-01-8	Phenanthrene	ND			0.0020	mg/l	
129-00-0	Pyrene	ND			0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	74%		45-130%
92-94-4	p-Terphenyl	91%		50-150%

(a) Sample leached beyond hold time; reported results are considered minimum values.

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SED-1		
Lab Sample ID:	F6522-9	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	EPA 8310	Percent Solids:	50.2
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA001731.D	1	06/14/00	NF	06/06/00	OP1642	GAA73
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	660	ug/kg	
208-96-8	Acenaphthylene	ND	1300	ug/kg	
120-12-7	Anthracene	ND	660	ug/kg	
56-55-3	Benzo(a)anthracene	ND	130	ug/kg	
50-32-8	Benzo(a)pyrene	ND	130	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	130	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	130	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	130	ug/kg	
218-01-9	Chrysene	ND	130	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	130	ug/kg	
206-44-0	Fluoranthene	ND	660	ug/kg	
86-73-7	Fluorene	ND	660	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	130	ug/kg	
91-20-3	Naphthalene	ND	660	ug/kg	
90-12-0	1-Methylnaphthalene	ND	660	ug/kg	
91-57-6	2-Methylnaphthalene	ND	660	ug/kg	
85-01-8	Phenanthrene	ND	660	ug/kg	
129-00-0	Pyrene	ND	660	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	64%		35-135%
92-94-4	p-Terphenyl	78%		50-150%

(a) Sample extracted beyond hold time; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SED-2		
Lab Sample ID:	F6522-10	Date Sampled:	05/11/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	EPA 8310	Percent Solids:	58.3
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA001761.D	1	06/15/00	NF	06/07/00	OP1649	GAA74
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
83-32-9	Acenaphthene	ND			0.0020	mg/l	
208-96-8	Acenaphthylene	ND			0.0020	mg/l	
120-12-7	Anthracene	ND			0.0020	mg/l	
56-55-3	Benzo(a)anthracene	ND			0.00020	mg/l	
50-32-8	Benzo(a)pyrene	ND			0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene	ND			0.00020	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND			0.00020	mg/l	
207-08-9	Benzo(k)fluoranthene	ND			0.00020	mg/l	
218-01-9	Chrysene	ND			0.00020	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND			0.00020	mg/l	
206-44-0	Fluoranthene	ND			0.0020	mg/l	
86-73-7	Fluorene	ND			0.0020	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND			0.00020	mg/l	
91-20-3	Naphthalene	ND			0.0020	mg/l	
90-12-0	1-Methylnaphthalene	ND			0.0020	mg/l	
91-57-6	2-Methylnaphthalene	ND			0.0020	mg/l	
85-01-8	Phenanthrene	ND			0.0020	mg/l	
129-00-0	Pyrene	ND			0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	79%		45-130%
92-94-4	p-Terphenyl	97%		50-150%

(a) Sample leached beyond hold time; reported results are considered minimum values.

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE SED-2		
Lab Sample ID:	F6522-10	**Date Sampled:**	05/11/00
Matrix:	SO - Soil	**Date Received:**	05/12/00
Method:	EPA 8310	**Percent Solids:**	58.3
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA001732.D	1	06/14/00	NF	06/06/00	OP1642	GAA73
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	570	ug/kg	
208-96-8	Acenaphthylene	ND	1100	ug/kg	
120-12-7	Anthracene	ND	570	ug/kg	
56-55-3	Benzo(a)anthracene	ND	110	ug/kg	
50-32-8	Benzo(a)pyrene	ND	110	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	110	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	110	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	110	ug/kg	
218-01-9	Chrysene	ND	110	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	110	ug/kg	
206-44-0	Fluoranthene	ND	570	ug/kg	
86-73-7	Fluorene	ND	570	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	110	ug/kg	
91-20-3	Naphthalene	ND	570	ug/kg	
90-12-0	1-Methylnaphthalene	ND	570	ug/kg	
91-57-6	2-Methylnaphthalene	ND	570	ug/kg	
85-01-8	Phenanthrene	ND	570	ug/kg	
129-00-0	Pyrene	ND	570	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	71%		35-135%
92-94-4	p-Terphenyl	90%		50-150%

(a) Sample extracted beyond hold time; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	PZ-10 R. PIPELINE		
Lab Sample ID:	F6522-11	Date Sampled:	05/10/00
Matrix:	AQ - Ground Water	Date Received:	05/12/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD015271.D	1	05/19/00	JG	n/a	n/a	GCD547
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	88%		69-125%
98-08-8	aaa-Trifluorotoluene	90%		72-125%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	PZ-10 R. PIPELINE		
Lab Sample ID:	F6522-11	Date Sampled:	05/10/00
Matrix:	AQ - Ground Water	Date Received:	05/12/00
Method:	FLORIDA-PRO	Percent Solids:	n/a
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08288.D	1	05/17/00	ME	05/16/00	OP1559	GOP377
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.398	0.25	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	94%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	PZ-10 R. PIPELINE		
Lab Sample ID:	F6522-11	**Date Sampled:**	05/10/00
Matrix:	AQ - Ground Water	**Date Received:**	05/12/00
Method:	EPA 610	**Percent Solids:**	n/a
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11144.D	1	05/20/00	CCJ	05/17/00	OP1547	GIJ512
Run #2							

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	87%		40-125%
84-15-1	o-Terphenyl	87%		45-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-1 (0-1)		
Lab Sample ID:	F6522-12	**Date Sampled:**	05/10/00
Matrix:	SO - Soil	**Date Received:**	05/12/00
Method:	SW846 8260B	**Percent Solids:**	85.0
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0013022.D	1	05/24/00	CJP	05/24/00	MS571	VG363
Run #2							

VOA TCL List

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
67-64-1	Acetone [a]	0.0602			0.050	mg/l	
71-43-2	Benzene	ND	D018		0.0020	mg/l	
75-27-4	Bromodichloromethane	ND			0.0020	mg/l	
75-25-2	Bromoform	ND			0.0020	mg/l	
108-90-7	Chlorobenzene	ND	D021		0.0020	mg/l	
75-00-3	Chloroethane	ND			0.0020	mg/l	
67-66-3	Chloroform	ND	D022		0.0020	mg/l	
75-15-0	Carbon disulfide	ND			0.010	mg/l	
56-23-5	Carbon tetrachloride	ND	D019		0.0020	mg/l	
75-34-3	1,1-Dichloroethane	ND			0.0020	mg/l	
75-35-4	1,1-Dichloroethylene	ND	D029		0.0020	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028		0.0020	mg/l	
78-87-5	1,2-Dichloropropane	ND			0.0020	mg/l	
124-48-1	Dibromochloromethane	ND			0.0020	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND			0.0020	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND			0.0020	mg/l	
100-41-4	Ethylbenzene	ND			0.0020	mg/l	
591-78-6	2-Hexanone	ND			0.010	mg/l	
108-10-1	4-Methyl-2-pentanone	ND			0.010	mg/l	
74-83-9	Methyl bromide	ND			0.0050	mg/l	
74-87-3	Methyl chloride	ND			0.0050	mg/l	
75-09-2	Methylene chloride [a]	0.0461			0.0050	mg/l	
78-93-3	Methyl ethyl ketone	ND	D035		0.010	mg/l	
100-42-5	Styrene	ND			0.0020	mg/l	
71-55-6	1,1,1-Trichloroethane	ND			0.0020	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND			0.0020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND			0.0020	mg/l	
127-18-4	Tetrachloroethylene	ND	D039		0.0020	mg/l	
108-88-3	Toluene	ND			0.0020	mg/l	
79-01-6	Trichloroethylene	ND	D040		0.0020	mg/l	
75-01-4	Vinyl chloride	ND	D043		0.0050	mg/l	
1330-20-7	Xylene (total)	ND			0.0060	mg/l	

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-1 (0-1)		
Lab Sample ID:	F6522-12	**Date Sampled:**	05/10/00
Matrix:	SO - Soil	**Date Received:**	05/12/00
Method:	SW846 8260B	**Percent Solids:**	85.0
Project:	NAS Boca Chica		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		80-120%
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	104%		80-120%
17060-07-0	1,2-Dichloroethane-D4	97%		69-128%

(a) Laboratory contaminant.

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-1 (0-1)		
Lab Sample ID:	F6522-12	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	85.0
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	H007437.D	1	05/16/00	CJP	n/a	n/a	VH79
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	7.0	ug/kg	
75-27-4	Bromodichloromethane	ND	7.0	ug/kg	
75-25-2	Bromoform	ND	7.0	ug/kg	
108-90-7	Chlorobenzene	ND	7.0	ug/kg	
75-00-3	Chloroethane	ND	7.0	ug/kg	
67-66-3	Chloroform	ND	7.0	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	14	ug/kg	
56-23-5	Carbon tetrachloride	ND	7.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	7.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	7.0	ug/kg	
106-93-4	1,2-Dibromoethane	ND	7.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	7.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	7.0	ug/kg	
124-48-1	Dibromochloromethane	ND	7.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	7.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	7.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	7.0	ug/kg	
541-73-1	m-Dichlorobenzene	ND	7.0	ug/kg	
95-50-1	o-Dichlorobenzene	ND	7.0	ug/kg	
106-46-7	p-Dichlorobenzene	ND	7.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	7.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	7.0	ug/kg	
100-41-4	Ethylbenzene	ND	7.0	ug/kg	
74-83-9	Methyl bromide	ND	7.0	ug/kg	
74-87-3	Methyl chloride	ND	7.0	ug/kg	
75-09-2	Methylene chloride [b]	15.3	14	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	7.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	7.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	7.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	7.0	ug/kg	
127-18-4	Tetrachloroethylene	ND	7.0	ug/kg	
108-88-3	Toluene	ND	7.0	ug/kg	
79-01-6	Trichloroethylene	ND	7.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	7.0	ug/kg	
75-01-4	Vinyl chloride	ND	7.0	ug/kg	
1330-20-7	Xylene (total)	ND	21	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-1 (0-1)		
Lab Sample ID:	F6522-12	**Date Sampled:**	05/10/00
Matrix:	SO - Soil	**Date Received:**	05/12/00
Method:	SW846 8260B	**Percent Solids:**	85.0
Project:	NAS Boca Chica		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		71-122%
2037-26-5	Toluene-D8	107%		73-128%
460-00-4	4-Bromofluorobenzene	122%		53-158%
17060-07-0	1,2-Dichloroethane-D4	110%		71-122%

(a) En Core sampler was not properly capped; results are considered minimum values.
(b) Suspected laboratory contaminant.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-1 (0-1)		
Lab Sample ID:	F6522-12	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	EPA 8100	Percent Solids:	85.0
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11206.D	1	05/30/00	ME	05/30/00	OP1615	GIJ515
Run #2							

BN PAH List

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
83-32-9	Acenaphthene	ND			0.050	mg/l	
208-96-8	Acenaphthylene	ND			0.050	mg/l	
120-12-7	Anthracene	ND			0.050	mg/l	
56-55-3	Benzo(a)anthracene	ND			0.050	mg/l	
50-32-8	Benzo(a)pyrene	ND			0.050	mg/l	
205-99-2	Benzo(b)fluoranthene	ND			0.050	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND			0.050	mg/l	
207-08-9	Benzo(k)fluoranthene	ND			0.050	mg/l	
218-01-9	Chrysene	ND			0.050	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND			0.050	mg/l	
206-44-0	Fluoranthene	ND			0.050	mg/l	
86-73-7	Fluorene	ND			0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND			0.050	mg/l	
91-20-3	Naphthalene	ND			0.050	mg/l	
90-12-0	1-Methylnaphthalene	ND			0.050	mg/l	
91-57-6	2-Methylnaphthalene	ND			0.050	mg/l	
85-01-8	Phenanthrene	ND			0.050	mg/l	
129-00-0	Pyrene	ND			0.050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	80%		40-125%
84-15-1	o-Terphenyl	81%		45-130%

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-1 (0-1)		
Lab Sample ID:	F6522-12	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	EPA 8310	Percent Solids:	85.0
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA001762.D	1	06/15/00	NF	06/07/00	OP1649	GAA74
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
83-32-9	Acenaphthene	ND			0.0020	mg/l	
208-96-8	Acenaphthylene	ND			0.0020	mg/l	
120-12-7	Anthracene	ND			0.0020	mg/l	
56-55-3	Benzo(a)anthracene	ND			0.00020	mg/l	
50-32-8	Benzo(a)pyrene	ND			0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene	ND			0.00020	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND			0.00020	mg/l	
207-08-9	Benzo(k)fluoranthene	ND			0.00020	mg/l	
218-01-9	Chrysene	ND			0.00020	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND			0.00020	mg/l	
206-44-0	Fluoranthene	ND			0.0020	mg/l	
86-73-7	Fluorene	ND			0.0020	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND			0.00020	mg/l	
91-20-3	Naphthalene	ND			0.0020	mg/l	
90-12-0	1-Methylnaphthalene	ND			0.0020	mg/l	
91-57-6	2-Methylnaphthalene	ND			0.0020	mg/l	
85-01-8	Phenanthrene	ND			0.0020	mg/l	
129-00-0	Pyrene	ND			0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	71%		45-130%
92-94-4	p-Terphenyl	80%		50-150%

(a) Sample leached beyond hold time; reported results are considered minimum values.

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-1 (0-1)		
Lab Sample ID:	F6522-12	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	EPA 8310	Percent Solids:	85.0
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA001748.D	2	06/15/00	NF	06/06/00	OP1642	GAA74
Run #2 [a]	AA001733.D	8	06/14/00	NF	06/06/00	OP1642	GAA73

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	780	ug/kg	
208-96-8	Acenaphthylene	ND	1600	ug/kg	
120-12-7	Anthracene	ND	780	ug/kg	
56-55-3	Benzo(a)anthracene	167	160	ug/kg	
50-32-8	Benzo(a)pyrene	217	160	ug/kg	
205-99-2	Benzo(b)fluoranthene	302	160	ug/kg	
191-24-2	Benzo(g,h,i)perylene	265	160	ug/kg	
207-08-9	Benzo(k)fluoranthene	110	160	ug/kg	J
218-01-9	Chrysene	160	160	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND [b]	630	ug/kg	
206-44-0	Fluoranthene	189	780	ug/kg	J
86-73-7	Fluorene	ND	780	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	314	160	ug/kg	
91-20-3	Naphthalene	ND	780	ug/kg	
90-12-0	1-Methylnaphthalene	ND	780	ug/kg	
91-57-6	2-Methylnaphthalene	ND	780	ug/kg	
85-01-8	Phenanthrene	ND	780	ug/kg	
129-00-0	Pyrene	195	780	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	47%	48%	35-135%
92-94-4	p-Terphenyl	59%	61%	50-150%

(a) Sample extracted beyond hold time; reported results are considered minimum values.
(b) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-1 (0-1)		
Lab Sample ID:	F6522-12	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	FLORIDA-PRO	Percent Solids:	85.0
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08434.D	1	05/31/00	CCJ	05/30/00	OP1614	GOP384
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
	TPH (C8-C40)	ND			2.5	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	96%		40-140%

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-1 (0-1)		
Lab Sample ID:	F6522-12	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	FLORIDA-PRO	Percent Solids:	85.0
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08489.D	15	06/03/00	CCJ	06/01/00	OP1629	GOP387
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	198	150	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-2 (0-1)		
Lab Sample ID:	F6522-13	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	85.4
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0013023.D	1	05/24/00	CJP	05/24/00	MS571	VG363
Run #2							

VOA TCL List

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
67-64-1	Acetone [a]	0.349			0.050	mg/l	
71-43-2	Benzene	ND	D018		0.0020	mg/l	
75-27-4	Bromodichloromethane	ND			0.0020	mg/l	
75-25-2	Bromoform	ND			0.0020	mg/l	
108-90-7	Chlorobenzene	ND	D021		0.0020	mg/l	
75-00-3	Chloroethane	ND			0.0020	mg/l	
67-66-3	Chloroform	ND	D022		0.0020	mg/l	
75-15-0	Carbon disulfide	ND			0.010	mg/l	
56-23-5	Carbon tetrachloride	ND	D019		0.0020	mg/l	
75-34-3	1,1-Dichloroethane	ND			0.0020	mg/l	
75-35-4	1,1-Dichloroethylene	ND	D029		0.0020	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028		0.0020	mg/l	
78-87-5	1,2-Dichloropropane	ND			0.0020	mg/l	
124-48-1	Dibromochloromethane	ND			0.0020	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND			0.0020	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND			0.0020	mg/l	
100-41-4	Ethylbenzene	ND			0.0020	mg/l	
591-78-6	2-Hexanone	ND			0.010	mg/l	
108-10-1	4-Methyl-2-pentanone	ND			0.010	mg/l	
74-83-9	Methyl bromide	ND			0.0050	mg/l	
74-87-3	Methyl chloride	ND			0.0050	mg/l	
75-09-2	Methylene chloride [a]	0.0359			0.0050	mg/l	
78-93-3	Methyl ethyl ketone	ND	D035		0.010	mg/l	
100-42-5	Styrene	ND			0.0020	mg/l	
71-55-6	1,1,1-Trichloroethane	ND			0.0020	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND			0.0020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND			0.0020	mg/l	
127-18-4	Tetrachloroethylene	ND	D039		0.0020	mg/l	
108-88-3	Toluene	ND			0.0020	mg/l	
79-01-6	Trichloroethylene	ND	D040		0.0020	mg/l	
75-01-4	Vinyl chloride	ND	D043		0.0050	mg/l	
1330-20-7	Xylene (total)	ND			0.0060	mg/l	

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-2 (0-1)		
Lab Sample ID:	F6522-13	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	85.4
Project:	NAS Boca Chica		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		80-120%
2037-26-5	Toluene-D8	102%		80-120%
460-00-4	4-Bromofluorobenzene	102%		80-120%
17060-07-0	1,2-Dichloroethane-D4	96%		69-128%

(a) Laboratory contaminant.

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-2 (0-1)		
Lab Sample ID:	F6522-13		
Matrix:	SO - Soil	Date Sampled:	05/10/00
Method:	SW846 8260B	Date Received:	05/12/00
Project:	NAS Boca Chica	Percent Solids:	85.4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H007438.D	1	05/16/00	CJP	n/a	n/a	VH79
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	5.8	ug/kg	
75-27-4	Bromodichloromethane	ND	5.8	ug/kg	
75-25-2	Bromoform	ND	5.8	ug/kg	
108-90-7	Chlorobenzene	ND	5.8	ug/kg	
75-00-3	Chloroethane	ND	5.8	ug/kg	
67-66-3	Chloroform	ND	5.8	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	5.8	ug/kg	
56-23-5	Carbon tetrachloride	ND	12	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.8	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.8	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.8	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.8	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.8	ug/kg	
124-48-1	Dibromochloromethane	ND	5.8	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.8	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.8	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.8	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.8	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.8	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.8	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.8	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.8	ug/kg	
100-41-4	Ethylbenzene	ND	5.8	ug/kg	
74-83-9	Methyl bromide	ND	5.8	ug/kg	
74-87-3	Methyl chloride	ND	5.8	ug/kg	
75-09-2	Methylene chloride a	ND	5.8	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	11.6	12	ug/kg	J
71-55-6	1,1,1-Trichloroethane	ND	5.8	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.8	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.8	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.8	ug/kg	
108-88-3	Toluene	ND	5.8	ug/kg	
79-01-6	Trichloroethylene	ND	5.8	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.8	ug/kg	
75-01-4	Vinyl chloride	ND	5.8	ug/kg	
1330-20-7	Xylene (total)	ND	18	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-2 (0-1)		
Lab Sample ID:	F6522-13	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	85.4
Project:	NAS Boca Chica		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%		71-122%
2037-26-5	Toluene-D8	103%		73-128%
460-00-4	4-Bromofluorobenzene	110%		53-158%
17060-07-0	1,2-Dichloroethane-D4	92%		71-122%

(a) Suspected laboratory contaminant.

D = Not detected
L = Reporting Limit
= [illegible]ates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-2 (0-1)		
Lab Sample ID:	F6522-13	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	EPA 8100	Percent Solids:	85.4
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11208.D	1	05/30/00	ME	05/30/00	OP1615	GIJ515
Run #2							

BN PAH List

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
83-32-9	Acenaphthene	ND			0.050	mg/l	
208-96-8	Acenaphthylene	ND			0.050	mg/l	
120-12-7	Anthracene	ND			0.050	mg/l	
56-55-3	Benzo(a)anthracene	ND			0.050	mg/l	
50-32-8	Benzo(a)pyrene	ND			0.050	mg/l	
205-99-2	Benzo(b)fluoranthene	ND			0.050	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND			0.050	mg/l	
207-08-9	Benzo(k)fluoranthene	ND			0.050	mg/l	
218-01-9	Chrysene	ND			0.050	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND			0.050	mg/l	
206-44-0	Fluoranthene	ND			0.050	mg/l	
86-73-7	Fluorene	ND			0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND			0.050	mg/l	
91-20-3	Naphthalene	ND			0.050	mg/l	
90-12-0	1-Methylnaphthalene	ND			0.050	mg/l	
91-57-6	2-Methylnaphthalene	ND			0.050	mg/l	
85-01-8	Phenanthrene	ND			0.050	mg/l	
129-00-0	Pyrene	ND			0.050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	81%		40-125%
84-15-1	o-Terphenyl	86%		45-130%

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-2 (0-1)		
Lab Sample ID:	F6522-13	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	EPA 8310	Percent Solids:	85.4
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA001763.D	1	06/15/00	NF	06/07/00	OP1649	GAA74
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
83-32-9	Acenaphthene	ND			0.0020	mg/l	
208-96-8	Acenaphthylene	ND			0.0020	mg/l	
120-12-7	Anthracene	ND			0.0020	mg/l	
56-55-3	Benzo(a)anthracene	ND			0.00020	mg/l	
50-32-8	Benzo(a)pyrene	ND			0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene	ND			0.00020	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND			0.00020	mg/l	
207-08-9	Benzo(k)fluoranthene	ND			0.00020	mg/l	
218-01-9	Chrysene	ND			0.00020	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND			0.00020	mg/l	
206-44-0	Fluoranthene	ND			0.0020	mg/l	
86-73-7	Fluorene	ND			0.0020	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND			0.00020	mg/l	
91-20-3	Naphthalene	ND			0.0020	mg/l	
90-12-0	1-Methylnaphthalene	ND			0.0020	mg/l	
91-57-6	2-Methylnaphthalene	ND			0.0020	mg/l	
85-01-8	Phenanthrene	ND			0.0020	mg/l	
129-00-0	Pyrene	ND			0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	76%		45-130%
92-94-4	p-Terphenyl	83%		50-150%

(a) Sample leached beyond hold time; reported results are considered minimum values.

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-2 (0-1)		
Lab Sample ID:	F6522-13	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	EPA 8310	Percent Solids:	85.4
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA001734.D	1	06/14/00	NF	06/06/00	OP1642	GAA73
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	390	ug/kg	
208-96-8	Acenaphthylene	ND	780	ug/kg	
120-12-7	Anthracene	ND	390	ug/kg	
56-55-3	Benzo(a)anthracene	ND	78	ug/kg	
50-32-8	Benzo(a)pyrene	27.1	78	ug/kg	J
205-99-2	Benzo(b)fluoranthene	28.9	78	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	ND	78	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	78	ug/kg	
218-01-9	Chrysene	ND	78	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	78	ug/kg	
206-44-0	Fluoranthene	ND	390	ug/kg	
86-73-7	Fluorene	ND	390	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	40.2	78	ug/kg	J
91-20-3	Naphthalene	ND	390	ug/kg	
90-12-0	1-Methylnaphthalene	ND	390	ug/kg	
91-57-6	2-Methylnaphthalene	ND	390	ug/kg	
85-01-8	Phenanthrene	ND	390	ug/kg	
129-00-0	Pyrene	ND	390	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	64%		35-135%
92-94-4	p-Terphenyl	79%		50-150%

(a) Sample extracted beyond hold time; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-2 (0-1)		
Lab Sample ID:	F6522-13	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	FLORIDA-PRO	Percent Solids:	85.4
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08435.D	1	05/31/00	CCJ	05/30/00	OP1614	GOP384
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
	TPH (C8-C40)	ND			2.5	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	92%		40-140%

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-2 (0-1)		
Lab Sample ID:	F6522-13		
Matrix:	SO - Soil	Date Sampled:	05/10/00
Method:	FLORIDA-PRO	Date Received:	05/12/00
Project:	NAS Boca Chica	Percent Solids:	85.4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08477.D	1	06/02/00	CCJ	06/01/00	OP1629	GOP386
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	9.85	9.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-3 (0-1)		
Lab Sample ID:	F6522-14		
Matrix:	SO - Soil	Date Sampled:	05/10/00
Method:	SW846 8260B	Date Received:	05/12/00
Project:	NAS Boca Chica	Percent Solids:	77.0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0013024.D	1	05/24/00	CJP	05/24/00	MS571	VG363
Run #2							

VOA TCL List

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
67-64-1	Acetone a	0.0758			0.050	mg/l	
71-43-2	Benzene	ND	D018		0.0020	mg/l	
75-27-4	Bromodichloromethane	ND			0.0020	mg/l	
75-25-2	Bromoform	ND			0.0020	mg/l	
108-90-7	Chlorobenzene	ND	D021		0.0020	mg/l	
75-00-3	Chloroethane	ND			0.0020	mg/l	
67-66-3	Chloroform	ND	D022		0.0020	mg/l	
75-15-0	Carbon disulfide	ND			0.0020	mg/l	
56-23-5	Carbon tetrachloride	ND	D019		0.010	mg/l	
75-34-3	1,1-Dichloroethane	ND			0.0020	mg/l	
75-35-4	1,1-Dichloroethylene	ND	D029		0.0020	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028		0.0020	mg/l	
78-87-5	1,2-Dichloropropane	ND			0.0020	mg/l	
124-48-1	Dibromochloromethane	ND			0.0020	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND			0.0020	mg/l	
156-60-5	trans-1,2-Dichloroethylene	ND			0.0020	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND			0.0020	mg/l	
100-41-4	Ethylbenzene	ND			0.0020	mg/l	
591-78-6	2-Hexanone	ND			0.0020	mg/l	
108-10-1	4-Methyl-2-pentanone	ND			0.010	mg/l	
74-83-9	Methyl bromide	ND			0.010	mg/l	
74-87-3	Methyl chloride	ND			0.0050	mg/l	
75-09-2	Methylene chloride a	0.0440			0.0050	mg/l	
78-93-3	Methyl ethyl ketone	ND	D035		0.0050	mg/l	
100-42-5	Styrene	ND			0.010	mg/l	
71-55-6	1,1,1-Trichloroethane	ND			0.0020	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND			0.0020	mg/l	
79-00-5	1,1,2-Trichloroethane	ND			0.0020	mg/l	
127-18-4	Tetrachloroethylene	ND	D039		0.0020	mg/l	
108-88-3	Toluene	ND			0.0020	mg/l	
79-01-6	Trichloroethylene	ND	D040		0.0020	mg/l	
75-01-4	Vinyl chloride	ND	D043		0.0020	mg/l	
1330-20-7	Xylene (total)	ND			0.0050	mg/l	
					0.0060	mg/l	

ND = Not detected

[illegible] = Maximum Contamination Level (not available)

[illegible] indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-3 (0-1)		
Lab Sample ID:	F6522-14	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	77.0
Project:	NAS Boca Chica		

VOA TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		80-120%
2037-26-5	Toluene-D8	95%		80-120%
460-00-4	4-Bromofluorobenzene	103%		80-120%
17060-07-0	1,2-Dichloroethane-D4	97%		69-128%

(a) Laboratory contaminant.

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R: PIPELINE SS-3 (0-1)		
Lab Sample ID:	F6522-14	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	77.0
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	H007439.D	1	05/16/00	CJP	n/a	n/a	VH79
Run #2							

VOA 8021 List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	5.8	ug/kg	
75-27-4	Bromodichloromethane	ND	5.8	ug/kg	
75-25-2	Bromoform	ND	5.8	ug/kg	
108-90-7	Chlorobenzene	ND	5.8	ug/kg	
75-00-3	Chloroethane	ND	5.8	ug/kg	
67-66-3	Chloroform	ND	5.8	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	12	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.8	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.8	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.8	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.8	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.8	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.8	ug/kg	
124-48-1	Dibromochloromethane	ND	5.8	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.8	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.8	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.8	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.8	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.8	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.8	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.8	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.8	ug/kg	
100-41-4	Ethylbenzene	ND	5.8	ug/kg	
74-83-9	Methyl bromide	ND	5.8	ug/kg	
74-87-3	Methyl chloride	ND	5.8	ug/kg	
75-09-2	Methylene chloride [a]	10.4	12	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	5.8	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.8	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.8	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.8	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.8	ug/kg	
108-88-3	Toluene	ND	5.8	ug/kg	
79-01-6	Trichloroethylene	ND	5.8	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.8	ug/kg	
75-01-4	Vinyl chloride	ND	5.8	ug/kg	
1330-20-7	Xylene (total)	ND	18	ug/kg	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-3 (0-1)		
Lab Sample ID:	F6522-14	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	SW846 8260B	Percent Solids:	77.0
Project:	NAS Boca Chica		

VOA 8021 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		71-122%
2037-26-5	Toluene-D8	104%		73-128%
460-00-4	4-Bromofluorobenzene	111%		53-158%
17060-07-0	1,2-Dichloroethane-D4	95%		71-122%

(a) Suspected laboratory contaminant.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-3 (0-1)		
Lab Sample ID:	F6522-14	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	EPA 8100	Percent Solids:	77.0
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11209.D	1	05/30/00	ME	05/30/00	OP1615	GIJ515
Run #2							

BN PAH List

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
83-32-9	Acenaphthene	ND			0.050	mg/l	
208-96-8	Acenaphthylene	ND			0.050	mg/l	
120-12-7	Anthracene	ND			0.050	mg/l	
56-55-3	Benzo(a)anthracene	ND			0.050	mg/l	
50-32-8	Benzo(a)pyrene	ND			0.050	mg/l	
205-99-2	Benzo(b)fluoranthene	ND			0.050	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND			0.050	mg/l	
207-08-9	Benzo(k)fluoranthene	ND			0.050	mg/l	
218-01-9	Chrysene	ND			0.050	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND			0.050	mg/l	
206-44-0	Fluoranthene	ND			0.050	mg/l	
86-73-7	Fluorene	ND			0.050	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND			0.050	mg/l	
91-20-3	Naphthalene	ND			0.050	mg/l	
90-12-0	1-Methylnaphthalene	ND			0.050	mg/l	
91-57-6	2-Methylnaphthalene	ND			0.050	mg/l	
85-01-8	Phenanthrene	ND			0.050	mg/l	
129-00-0	Pyrene	ND			0.050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	76%		40-125%
84-15-1	o-Terphenyl	77%		45-130%

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-3 (0-1)		
Lab Sample ID:	F6522-14	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	EPA 8310	Percent Solids:	77.0
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA001764.D	1	06/15/00	NF	06/07/00	OP1649	GAA74
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
83-32-9	Acenaphthene	ND			0.0020	mg/l	
208-96-8	Acenaphthylene	ND			0.0020	mg/l	
120-12-7	Anthracene	ND			0.0020	mg/l	
56-55-3	Benzo(a)anthracene	ND			0.00020	mg/l	
50-32-8	Benzo(a)pyrene	ND			0.00020	mg/l	
205-99-2	Benzo(b)fluoranthene	ND			0.00020	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND			0.00020	mg/l	
207-08-9	Benzo(k)fluoranthene	ND			0.00020	mg/l	
218-01-9	Chrysene	ND			0.00020	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND			0.00020	mg/l	
206-44-0	Fluoranthene	ND			0.0020	mg/l	
86-73-7	Fluorene	ND			0.0020	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND			0.00020	mg/l	
91-20-3	Naphthalene	ND			0.0020	mg/l	
90-12-0	1-Methylnaphthalene	ND			0.0020	mg/l	
91-57-6	2-Methylnaphthalene	ND			0.0020	mg/l	
85-01-8	Phenanthrene	ND			0.0020	mg/l	
129-00-0	Pyrene	ND			0.0020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	78%		45-130%
92-94-4	p-Terphenyl	84%		50-150%

(a) Sample leached beyond hold time; reported results are considered minimum values.

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID: R. PIPELINE SS-3 (0-1)
Lab Sample ID: F6522-14
Matrix: SO - Soil
Method: EPA 8310
Project: NAS Boca Chica

Date Sampled: 05/10/00
Date Received: 05/12/00
Percent Solids: 77.0

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AA001749.D	1	06/15/00	NF	06/06/00	OP1642	GAA74
Run #2 [a]	AA001735.D	4	06/15/00	NF	06/06/00	OP1642	GAA73

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	430	ug/kg	
208-96-8	Acenaphthylene	ND	870	ug/kg	
120-12-7	Anthracene	ND	430	ug/kg	
56-55-3	Benzo(a)anthracene	ND	87	ug/kg	
50-32-8	Benzo(a)pyrene	40.9	87	ug/kg	J
205-99-2	Benzo(b)fluoranthene	54.7	87	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	55.7	87	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	87	ug/kg	
218-01-9	Chrysene	32.6	87	ug/kg	J
53-70-3	Dibenzo(a,h)anthracene	ND	87	ug/kg	
206-44-0	Fluoranthene	ND	430	ug/kg	
86-73-7	Fluorene	ND	430	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	53.4	87	ug/kg	J
91-20-3	Naphthalene	ND	430	ug/kg	
90-12-0	1-Methylnaphthalene	ND	430	ug/kg	
91-57-6	2-Methylnaphthalene	ND	430	ug/kg	
85-01-8	Phenanthrene	ND	430	ug/kg	
129-00-0	Pyrene	ND	430	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	64%	62%	35-135%
92-94-4	p-Terphenyl	83%	82%	50-150%

(a) Sample extracted beyond hold time; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-3 (0-1)		
Lab Sample ID:	F6522-14	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	FLORIDA-PRO	Percent Solids:	77.0
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08436.D	1	05/31/00	CCJ	05/30/00	OP1614	GOP384
Run #2							

CAS No.	Compound	Result	HW#	MCL	RL	Units	Q
	TPH (C8-C40)	ND			2.5	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	86%		40-140%

ND = Not detected
MCL = Maximum Contamination Level (not available)
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE SS-3 (0-1)		
Lab Sample ID:	F6522-14	Date Sampled:	05/10/00
Matrix:	SO - Soil	Date Received:	05/12/00
Method:	FLORIDA-PRO	Percent Solids:	77.0
Project:	NAS Boca Chica		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08478.D	1	06/02/00	CCJ	06/01/00	OP1629	GOP386
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	53.4	11	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	102%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

CHAIN OF CUSTODY

ACCUTEST

4405 VINELAND ROAD • SUITE C-15
ORLANDO, FL 32811
TEL: 407-425-6700 • FAX: 407-425-0707

ACCUTEST JOB #: F6522
ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: BSC
ADDRESS: 15741 Vihola Ct
CITY, STATE, ZIP: Montverde FL 34756
SEND REPORT TO: A. Shearer
PHONE #:

FACILITY INFORMATION

PROJECT NAME: NAS, Boca Chica
LOCATION: M. Pipeline
PROJECT NO.: 88021
FAX #:

ANALYTICAL INFORMATION

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	602 (BTEX/MTBE)	8100	FL PRO	8260/SPLP	8310/SPLP	FL PRO/SPLP	~~8021 (BTEX/MTBE)~~	ENCORE	LAB USE ONLY
1	M. Pipeline PZ-1	5/11/00	1100	APP	GW		X			X	X	2	2	2						
2	M. Pipeline PZ-2		1120				X			X	X	2	2	2						
3	M. Pipeline PZ-3		1130				X			X	X	2	2	2						
4	M. Pipeline PZ-4		1150				X			X	X	2	2							
5	M. Pipeline PZ-5		1320				X			X	X	2	2							
6	M. Pipeline SS-1 (0-1)		1045		SO						X				1	1	1		3	
7	M. Pipeline SS-2 (0-1)		1110								X				1	1	1		3	
8	M. Pipeline SS-3 (0-1)		1125								X				1	1	1		3	
9	M. Pipeline SED-1		1400		SO						X					~~12~~ 11				
10	M. Pipeline SED-2		1405		SO						X					1				

DATA TURNAROUND INFORMATION

- (X) STANDARD
- ☐ 48 HOUR RUSH
- ☐ 24 HOUR EMERGENCY
- ☐ OTHER

APPROVED BY:

EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- (X) STANDARD
- ☐ COMMERCIAL "B"
- ☐ DISK DELIVERABLE
- ☐ STATE FORMS
- ☐ OTHER (SPECIFY)

COMMENTS/REMARKS

All analysis must meet 62777 standards.

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1.	5/11/00 16	Mike Sewell	2.		2.
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3. 5/12/00 0900	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE

ACCUTEST

CHAIN OF CUSTODY

4405 VINELAND ROAD • SUITE C-15
ORLANDO, FL 32811
TEL: 407-425-6700 • FAX: 407-425-0707

ACCUTEST JOB #: F-6422

ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: BGL

ADDRESS: 15741 Vinoka Ct

CITY, STATE, ZIP: Montverde FL 34756

SEND REPORT TO: A. Shertzer

PHONE #:

FACILITY INFORMATION

PROJECT NAME: NAS Boca Chica

LOCATION: R. Pipeline

PROJECT NO.: 88021

FAX #:

ANALYTICAL INFORMATION

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	4mL 602	1L 610	1L 1ZORRO	8021 (ENCORE)	FL PRO	FL PRO - SPLP	8260/SPLP	8100/SPLP	8310/SPLP	LAB USE ONLY
11	PZ-10 R. Pipeline	5-10-00	920	[illegible]	GW	5	1			2	2	1	2	2							
12	R. Pipeline SS-1(0-1)	↓	1000	↓	SO	8					X				3	1	1	1	1	1	
13	R. Pipeline SS-2(0-1)	↓	1145	↓	SO	8					X				3	1	1	1	1	1	
14	R. Pipeline SS-3(0-1)	↓	1415	↓	SO	8					X				3	1	1	1	1	1	

DATA TURNAROUND INFORMATION

- (✓) STANDARD
- ☐ 48 HOUR RUSH
- ☐ 24 HOUR EMERGENCY
- ☐ OTHER

APPROVED BY:

EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- (✓) STANDARD
- ☐ COMMERCIAL "B"
- ☐ DISK DELIVERABLE
- ☐ STATE FORMS
- ☐ OTHER (SPECIFY)

COMMENTS/REMARKS

All samples must meet 62-777 standards

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1.		1. [signature]	2. [signature]	5/11/00 1600	2.
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE °C

BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

SOIL/SEDIMENT SAMPLING LOG

Project No. 808.21 Page 1 of 3

Site Location R. Pipeline

Sample I.D. No: SS-1 Coded/Replicate No.

Date 5-10-00 Time of Sampling: Begin 1000 End

Weather Sunny 85°

Site Description Running pipeline at Dept. of Navy

SAMPLING DATA

Collection Method hand augered

Depth 0'-1' Moisture Content slightly moist

Color brown Odor none

Description medium to fine grain

Analyses Required (Order of Collection)	Container Description
8021	Encore
FL PRO	250 mL
FL PRO SPLP	250 mL
8260 - SPLP	250 mL
8100 SPLP	250 mL
8310 SPLP	250 mL

Sample Monitoring (TIP, OVA, HNU, etc.) OVA 30ppm
filtered OVA 2ppm

Remarks from Soil boring SB-12

(Visitors, Field Decon)

(QC Sample Locations/Time)

Sampler(s) (Signatures)

BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

SOIL/SEDIMENT SAMPLING LOG

Project No. 808.71 Page 2 of 3

Site Location R. Pipeline

Sample I.D. No. SS-2 Coded/Replicate No.

Date 5-10-00 Time of Sampling: Begin 1145 End

Weather Sunny

Site Description sand: fine-medium grained, minor rock (coral, limerock) fragments, no odor, dry.

SAMPLING DATA

Collection Method hand augered

Depth 0-1' Moisture Content dry

Color brown Odor

Description Runway pipeline at Dept of Navy

Analyses Required (Order of Collection)	Container Description
8021 (BTEX/MTBE)	encore
FL PRO	250mL
FL PRO/SPLP	250mL
8250/SPLP	250mL
8100/SPLP	250mL
8310/SPLP	250mL

Sample Monitoring (TIP, OVA, HNU, etc.) OVA

Remarks from soil boring SB-7

(Visitors, Field Decon)

(QC Sample Locations/Time)

Sampler(s) (Signatures)

BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

SOIL/SEDIMENT SAMPLING LOG

Project No. 8508.21 Page 3 of 3

Site Location R. Pipeline

Sample I.D. No. SS-3 Coded/Replicate No.

Date 5-10-00 Time of Sampling: Begin 1415 End

Weather Sunny

Site Description / Runway Pipeline at Dept. of navy

SAMPLING DATA

Collection Method hand augered

Depth 0-1 Moisture Content wet

Color clayey brown Odor none

Description clayey sands, minor rock (coral/limerock) fragments, no odor

Analyses Required (Order of Collection)	Container Description
8021 (BTEX/MTBE)	Encore
FL PRO	250mL
FL PRO/SPLP	250mL
8250/SPLP	250mL
8100/SPLP	250mL
8310/SPLP	250mL

Sample Monitoring (TIP, OVA, HNU, etc.) —

Remarks from soil borg SB-6

(Visitors, Field Decon)

(QC Sample Locations/Time)

Sampler(s) (Signatures)

BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

SOIL/SEDIMENT SAMPLING LOG

Project No. 880.21 Page 1 of 3

Site Location (Marina) M. Pipeline

Sample I.D. No. M. Pipeline SS-1 (0-1) Coded/Replicate No.

Date 5/11/00 Time of Sampling: Begin End 10:45a

Weather hot, clear

Site Description

SAMPLING DATA

Collection Method hand auger - encore for VOAs

Depth 0-1' Moisture Content dry

Color gray/brown Odor no

Description

Analyses Required (Order of Collection)	Container Description
Total CPA 8260 / SPLP	encore for total
8310 / SPLP	glass jar
FL-PRO / SPLP	" "

Sample Monitoring (TIP, OVA, HNU, etc.) <1 ppm

Remarks

(Visitors, Field Decon)

(QC Sample Locations/Time)

Sampler(s) (Signatures) D. Press

BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

SOIL/SEDIMENT SAMPLING LOG

Project No. 98.021 Page ____ of ____

Site Location Marina Site

Sample I.D. No. M. Pipeline Sed - 1 Coded/Replicate No. ____

Date 5/11/00 Time of Sampling: Begin ____ End ____

Weather hot, clear

Site Description Pecan seds. ~ 2' off shore

SAMPLING DATA

Collection Method glass beaker on aluminum rod

Depth ~ 6" Moisture Content wet

Color brown/black coloreous seds Odor Organic

Description

Analysis Required (Order of Collection)	Container Description
EPA 8310 Total + SPLP	glass jar

Sample Monitoring (TIP, OVA, HNU, etc.)

Remarks

(Visitors, Field Decon)

(QC Sample Locations/Time)

Sampler(s) (Signatures) DPP

BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

SOIL/SEDIMENT SAMPLING LOG

Project No. 880.21

Page ____ of ____

Site Location Marion site

Sample I.D. No. M. Pipeline S+D-2

Coded/Replicate No. ____

Date 5/11/00

Time of Sampling: Begin ____ End ____

Weather hot, clear

Site Description lagoon sediments ~ 2' off shore

SAMPLING DATA

Collection Method glass beaker on aluminum rod

Depth ~ 6"

Moisture Content wet

Color brown/white calcareous sediments

Odor organic

Description

Analyses Required (Order of Collection)	Container Description
EPA 8310 Total + SPLP	glass jar

Sample Monitoring (TIP, OVA, HNU, etc.)

Remarks

(Visitors, Field Decon)

(QC Sample Locations/Time)

Sampler(s) (Signatures) DPP

BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

SOIL/SEDIMENT SAMPLING LOG

Project No. 880.21 Page 2 of 3

Site Location (Mining) M. Pipeline

Sample I.D. No. M. Pipeline SS-2 (0-1) Coded/Replicate No.

Date 5/11/00 Time of Sampling: Begin End 11:10 am

Weather hot, clear

Site Description

SAMPLING DATA

Collection Method hand auger encore for VOAs

Depth 0-1' Moisture Content dry

Color gray/brown Odor NO

Description

Analyses Required (Order of Collection)	Container Description
Totals 8260 / SPLP	encore for totals
8310 / SPLP	glass jar
PL-PRO / SPLP	" "

Sample Monitoring (TIP, OVA, HNU, etc.) <1 ppm

Remarks

(Visitors, Field Decon)

(QC Sample Locations/Time)

Sampler(s) (Signatures) D. Press

BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

SOIL/SEDIMENT SAMPLING LOG

Project No. 880.21 Page 3 of 3

Site Location Marina pipeline

Sample I.D. No. M.Pipe SS-3 (0-1) Coded/Replicate No.

Date 5/11/00 Time of Sampling: Begin End 11:25 am

Weather hot, clear

Site Description

SAMPLING DATA

Collection Method hand auger encore for VOAs

Depth 0-1' Moisture Content dry

Color gray/brown Odor no

Description

Analyses Required (Order of Collection)	Container Description
Totals 8260 / SPLP	encore for total
" 8310 / SPLP	glass jar
" FL-PRO / SPLP	" "

Sample Monitoring (TIP, OVA, HNU, etc.) 1-1 ppm

Remarks

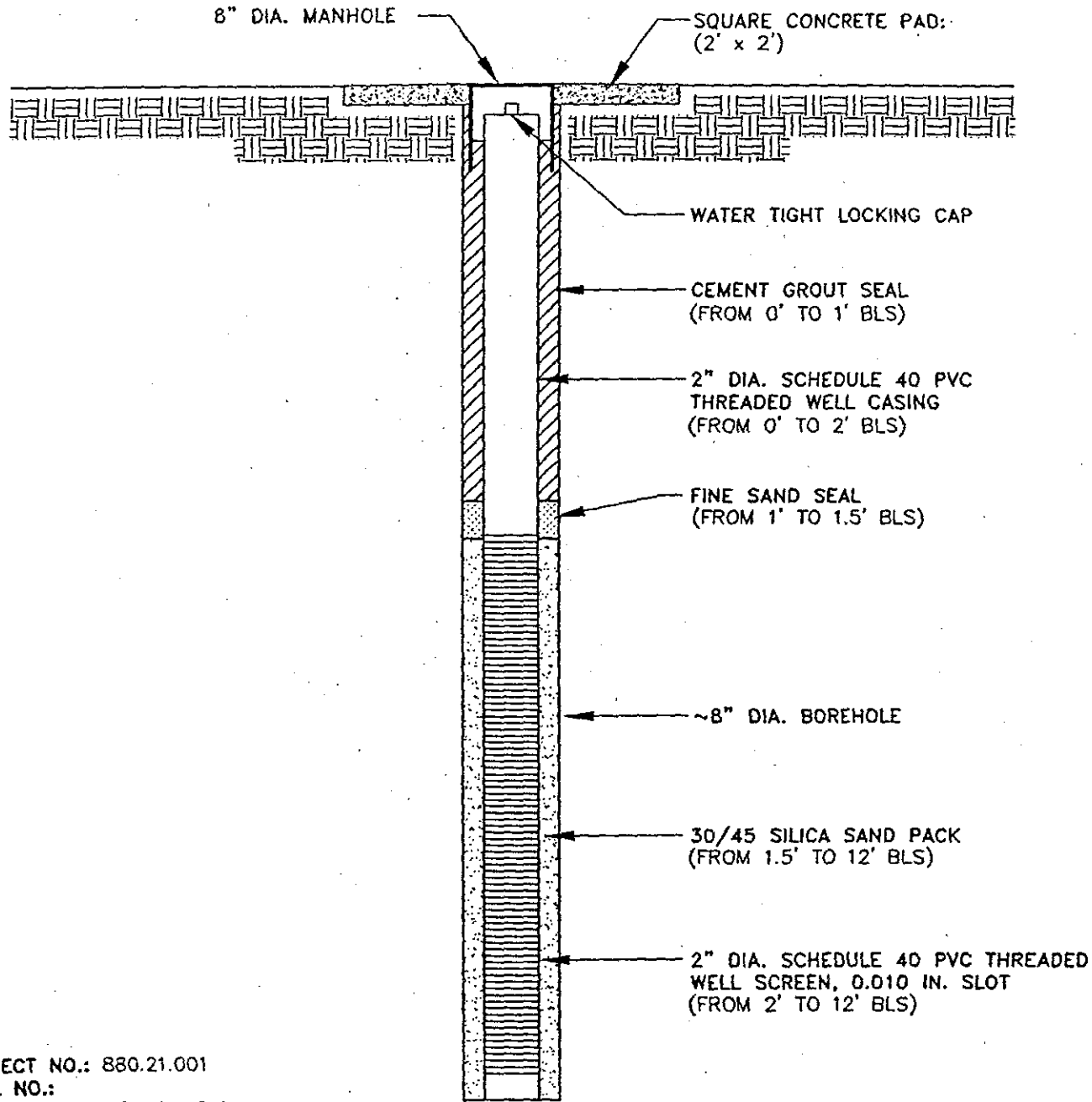
(Visitors, Field Decon)

(QC Sample Locations/ Time)

Sampler(s) (Signatures) D. Press

Appendix C

BLASLAND, BOUCK & LEE, INC.
engineers & scientists



PROJECT NO.: 880.21.001
WELL NO.:
BY: AMANDA SHEARER, P.G.
DATE: MAY 10–11, 2000
CASING ELEVATION:
DEPTH TO WATER UPON COMPLETION:
UNIT MONITORED: UPPER SURFICIAL

DRILLER: PRECISION DRILLING
DRILLING METHOD: HOLLOW STEM AUGER
TOTAL DEPTH: 12 FEET
SAMPLE TYPE:
SAMPLE INTERVAL:

(DRAWING NOT TO SCALE)

NAVAL AIR STATION KEY WEST
BOCA CHICA KEY, FLORIDA
BOCA CHICA PIPELINE SAR

SHALLOW MONITORING WELL CONSTRUCTION DETAIL

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

APPENDIX C

P: STD-PC2/AP
9/27/00 TAM-S4-JAR
880\88021\001\88021N02.DWG

Appendix D

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

ACCUTEST

05/31/00

Technical Report for

Blasland, Bouck & Lee

NAS Key West

880.21/M. Pipeline

Accutest Job Number: F6535

Report to:

BBL
15741 Vinola Ct.
Montverde, FL 34756

ATTN: Amanda Shearer

Total number of pages in report: 37

Harry Behzadi, Ph.D.
Laboratory Director

Results relate only to the items tested.
This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

ACCUTEST

Sample Summary

Blasland, Bouck & Lee

Job No: F6535

NAS Key West
Project No: 880.21/M. Pipeline

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F6535-1	05/12/00	09:40 RP	05/13/00	AQ	Ground Water	R PIPELINE MW-1
F6535-2	05/12/00	09:00 RP	05/13/00	AQ	Ground Water	R PIPELINE MW-2
F6535-3	05/12/00	08:20 RP	05/13/00	AQ	Ground Water	R PIPELINE MW-3
F6535-4	05/12/00	09:20 RP	05/13/00	AQ	Ground Water	R PIPELINE MW-4
F6535-5	05/12/00	10:00 RP	05/13/00	AQ	Ground Water	R PIPELINE MW-5
F6535-6	05/12/00	10:20 RP	05/13/00	AQ	Ground Water	R PIPELINE MW-6
F6535-7	05/12/00	10:50 RP	05/13/00	AQ	Ground Water	R PIPELINE MW-7
F6535-8	05/12/00	11:10 RP	05/13/00	AQ	Ground Water	R PIPELINE MW-8
F6535-9	05/12/00	11:30 RP	05/13/00	AQ	Ground Water	R PIPELINE MW-9
F6535-10	05/12/00	00:00 RP	05/13/00	AQ	Field Blank Water	EQUIP BLANK-1
F6535-11	05/12/00	00:00 RP	05/13/00	AQ	Field Blank Water	DUP-1
F6535-12	05/12/00	00:00 RP	05/13/00	AQ	Trip Blank Water	TRIP BLANK

ACCUTEST

Report of Analysis

Client Sample ID:	R. PIPELINE MW-1		
Lab Sample ID:	F6535-1	**Date Sampled:**	05/12/00
Matrix:	AQ - Ground Water	**Date Received:**	05/13/00
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015312.D	1	05/23/00	RA	n/a	n/a	GCD549
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	91%		69-125%
98-08-8	aaa-Trifluorotoluene	93%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-1		
Lab Sample ID:	F6535-1	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	EPA 8100	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11124.D	1	05/19/00	CCJ	05/18/00	OP1569	GIJ512
Run #2							

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	95%		40-125%
84-15-1	o-Terphenyl	85%		45-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-1		
Lab Sample ID:	F6535-1	**Date Sampled:**	05/12/00
Matrix:	AQ - Ground Water	**Date Received:**	05/13/00
Method:	FLORIDA-PRO	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08289.D	1	05/17/00	ME	05/16/00	OP1559	GOP377
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.563	0.25	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	92%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-2		
Lab Sample ID:	F6535-2	**Date Sampled:**	05/12/00
Matrix:	AQ - Ground Water	**Date Received:**	05/13/00
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015314.D	1	05/23/00	RA	n/a	n/a	GCD549
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	10.0	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%		69-125%
98-08-8	aaa-Trifluorotoluene	114%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values. Confirmed by dual column analysis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-2		
Lab Sample ID:	F6535-2	**Date Sampled:**	05/12/00
Matrix:	AQ - Ground Water	**Date Received:**	05/13/00
Method:	EPA 8100	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11152.D	1	05/20/00	CCJ	05/18/00	OP1569	GIJ513
Run #2							

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	86%		40-125%
84-15-1	o-Terphenyl	88%		45-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-2		
Lab Sample ID:	F6535-2	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	FLORIDA-PRO	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	OP08309.D	1	05/18/00	ME	05/16/00	OP1559	GOP377
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	1.38	0.28	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	69%		40-140%

(a) Sample not preserved, adjusted to pH < 2 prior to extraction.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-3		
Lab Sample ID:	F6535-3	**Date Sampled:**	05/12/00
Matrix:	AQ - Ground Water	**Date Received:**	05/13/00
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD015341.D	1	05/23/00	RA	n/a	n/a	GCD549
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	77%		69-125%
98-08-8	aaa-Trifluorotoluene	81%		72-125%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-3		
Lab Sample ID:	F6535-3	**Date Sampled:**	05/12/00
Matrix:	AQ - Ground Water	**Date Received:**	05/13/00
Method:	EPA 504.1	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN07289.D	1	05/26/00	SKW	n/a	n/a	GMN293
Run #2							

CAS No.	Compound	Result	RL	Units	Q
106-93-4	1,2-Dibromoethane	ND	0.020	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-3		
Lab Sample ID:	F6535-3	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	EPA 8100	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11125.D	1	05/19/00	CCJ	05/18/00	OP1569	GIJ512
Run #2							

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	95%		40-125%
84-15-1	o-Terphenyl	92%		45-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-3		
Lab Sample ID:	F6535-3	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	FLORIDA-PRO	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08291.D	1	05/17/00	ME	05/16/00	OP1559	GOP377
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.215	0.25	mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	92%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-3		
Lab Sample ID:	F6535-3	**Date Sampled:**	05/12/00
Matrix:	AQ - Ground Water	**Date Received:**	05/13/00
		Percent Solids:	n/a
Project:	NAS Key West		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method
Lead	8.8	5.0	ug/l	1	05/16/00	05/19/00	SJL	EPA 200.7

RL = Reporting Limit

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-4		
Lab Sample ID:	F6535-4	**Date Sampled:**	05/12/00
Matrix:	AQ - Ground Water	**Date Received:**	05/13/00
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015316.D	1	05/23/00	RA	n/a	n/a	GCD549
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	91%		69-125%
98-08-8	aaa-Trifluorotoluene	94%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-5		
Lab Sample ID:	F6535-5	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015317.D	1	05/23/00	RA	n/a	n/a	GCD549
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	0.53	1.0	ug/l	J
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	89%		69-125%
98-08-8	aaa-Trifluorotoluene	94%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.Confirmed by dual column analysis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-5		
Lab Sample ID:	F6535-5	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	EPA 8100	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11128.D	1	05/19/00	CCJ	05/18/00	OP1569	GIJ512
Run #2							

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.5	ug/l	
208-96-8	Acenaphthylene	ND	5.5	ug/l	
120-12-7	Anthracene	ND	5.5	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.5	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.5	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.5	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.5	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.5	ug/l	
218-01-9	Chrysene	ND	5.5	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.5	ug/l	
206-44-0	Fluoranthene	ND	5.5	ug/l	
86-73-7	Fluorene	ND	5.5	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.5	ug/l	
91-20-3	Naphthalene	ND	5.5	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.5	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.5	ug/l	
85-01-8	Phenanthrene	ND	5.5	ug/l	
129-00-0	Pyrene	ND	5.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	85%		40-125%
84-15-1	o-Terphenyl	93%		45-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-5		
Lab Sample ID:	F6535-5	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	FLORIDA-PRO	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08292.D	1	05/17/00	ME	05/16/00	OP1559	GOP377
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.304	0.28	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	95%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-6		
Lab Sample ID:	F6535-6	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015318.D	1	05/23/00	RA	n/a	n/a	GCD549
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	90%		69-125%
98-08-8	aaa-Trifluorotoluene	95%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-6		
Lab Sample ID:	F6535-6	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	EPA 8100	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11129.D	1	05/19/00	CCJ	05/18/00	OP1569	GIJ512
Run #2							

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	84%		40-125%
84-15-1	o-Terphenyl	93%		45-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-6		
Lab Sample ID:	F6535-6	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	FLORIDA-PRO	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08294.D	1	05/17/00	ME	05/16/00	OP1559	GOP377
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.462	0.28	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	89%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-7		
Lab Sample ID:	F6535-7	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD015319.D	1	05/23/00	RA	n/a	n/a	GCD549
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	83%		69-125%
98-08-8	aaa-Trifluorotoluene	81%		72-125%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-7		
Lab Sample ID:	F6535-7	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	EPA 8100	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11130.D	1	05/20/00	CCJ	05/18/00	OP1569	GIJ512
Run #2							

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	94%		40-125%
84-15-1	o-Terphenyl	105%		45-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-7		
Lab Sample ID:	F6535-7	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	FLORIDA-PRO	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08295.D	1	05/17/00	ME	05/16/00	OP1559	GOP377
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.436	0.25	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	93%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-8		
Lab Sample ID:	F6535-8	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015320.D	1	05/23/00	RA	n/a	n/a	GCD549
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	84%		69-125%
98-08-8	aaa-Trifluorotoluene	83%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-8		
Lab Sample ID:	F6535-8	**Date Sampled:**	05/12/00
Matrix:	AQ - Ground Water	**Date Received:**	05/13/00
Method:	EPA 8100	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11131.D	1	05/20/00	CCJ	05/18/00	OP1569	GIJ512
Run #2							

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	94%		40-125%
84-15-1	o-Terphenyl	91%		45-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-9		
Lab Sample ID:	F6535-9	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015321.D	1	05/23/00	RA	n/a	n/a	GCD549
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	24.6	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	8.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		69-125%
98-08-8	aaa-Trifluorotoluene	96%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values. Confirmed by dual column analysis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-9		
Lab Sample ID:	F6535-9	**Date Sampled:**	05/12/00
Matrix:	AQ - Ground Water	**Date Received:**	05/13/00
Method:	EPA 8100	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11132.D	1	05/20/00	CCJ	05/18/00	OP1569	GIJ512
Run #2							

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.5	ug/l	
208-96-8	Acenaphthylene	ND	5.5	ug/l	
120-12-7	Anthracene	ND	5.5	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.5	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.5	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.5	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.5	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.5	ug/l	
218-01-9	Chrysene	ND	5.5	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.5	ug/l	
206-44-0	Fluoranthene	ND	5.5	ug/l	
86-73-7	Fluorene	ND	5.5	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.5	ug/l	
91-20-3	Naphthalene	ND	5.5	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.5	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.5	ug/l	
85-01-8	Phenanthrene	ND	5.5	ug/l	
129-00-0	Pyrene	ND	5.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	89%		40-125%
84-15-1	o-Terphenyl	87%		45-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-9		
Lab Sample ID:	F6535-9	**Date Sampled:**	05/12/00
Matrix:	AQ - Ground Water	**Date Received:**	05/13/00
Method:	FLORIDA-PRO	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08297.D	1	05/17/00	ME	05/16/00	OP1559	GOP377
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.614	0.28	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	92%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	EQUIP BLANK-1		
Lab Sample ID:	F6535-10	**Date Sampled:**	05/12/00
Matrix:	AQ - Field Blank Water	**Date Received:**	05/13/00
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD015323.D	1	05/23/00	RA	n/a	n/a	GCD549
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	90%		69-125%
98-08-8	aaa-Trifluorotoluene	90%		72-125%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	EQUIP BLANK-1		
Lab Sample ID:	F6535-10	**Date Sampled:**	05/12/00
Matrix:	AQ - Field Blank Water	**Date Received:**	05/13/00
Method:	EPA 8100	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11133.D	1	05/20/00	CCJ	05/18/00	OP1569	GIJ512
Run #2							

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	86%		40-125%
84-15-1	o-Terphenyl	89%		45-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	DUP-1		
Lab Sample ID:	F6535-11	**Date Sampled:**	05/12/00
Matrix:	AQ - Field Blank Water	**Date Received:**	05/13/00
Method:	EPA 601/602	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015324.D	1	05/23/00	RA	n/a	n/a	GCD549
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	83%		69-125%
98-08-8	aaa-Trifluorotoluene	84%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	DUP-1		
Lab Sample ID:	F6535-11	**Date Sampled:**	05/12/00
Matrix:	AQ - Field Blank Water	**Date Received:**	05/13/00
Method:	EPA 8100	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ11135.D	1	05/20/00	CCJ	05/18/00	OP1569	GIJ512
Run #2							

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	92%		40-125%
84-15-1	o-Terphenyl	86%		45-130%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	DUP-1		
Lab Sample ID:	F6535-11	Date Sampled:	05/12/00
Matrix:	AQ - Field Blank Water	Date Received:	05/13/00
Method:	FLORIDA-PRO	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08298.D	1	05/17/00	ME	05/16/00	OP1559	GOP377
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.245	0.25	mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	94%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	TRIP BLANK		
Lab Sample ID:	F6535-12	Date Sampled:	05/12/00
Matrix:	AQ - Trip Blank Water	Date Received:	05/13/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CD015325.D	1	05/23/00	RA	n/a	n/a	GCD549
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	90%		69-125%
98-08-8	aaa-Trifluorotoluene	86%		72-125%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

CHAIN OF CUSTODY

ACCUTEST

4405 VINELAND ROAD • SUITE C-15
ORLANDO, FL 32811
TEL: 407-425-6700 • FAX: 407-425-0707

ACCUTEST JOB #: F653

ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: BBL
ADDRESS: 15741 Vinola ct
CITY, STATE, ZIP: Montverde FL 34756
SEND REPORT TO: A. Slayer
PHONE #:

FACILITY INFORMATION

PROJECT NAME: NAS Boca Chica
LOCATION: M. Pipeline
PROJECT NO.: 880.21
FAX #:

ANALYTICAL INFORMATION

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	602 (BTEX/MTBE)	8100	FL-PRO	EDB	DPP							LAB USE ONLY
1	R Pipeline MW-1	5/12/00	0940	RAP/DPP	GW	6	2			2	2	2	2	2	~~2~~	1	DPP						
2	MW-2		0900	RAP/DPP		6	2			2	2	2	2	2									
3	MW-3		0820	RAP/DPP		9	2	1		2	4	2	2	2	2	1							
4	MW-4		0920	RAP/DPP		4	2		(R)	2		2	2	~~2~~	(4)								
5	MW-5		1000	RAP/DPP		6	2			2	2	2	2	2									
6	MW-6		1020	RAP/DPP		6	2			2	2	2	2	2		*	1 Broken 8100, 1 Broken FL PRO						
7	MW-7		1050	RAP/DPP		6	2			2	2	2	2	2		**	1 Broken FL PRO						
8	MW-8		1110	RAP/DPP		6	2			2	2	2	2	2									
9	MW-9		1130	RAP/DPP		6	2			2	2	2	2	2									
10	Equip-Blank			RAP/DPP		4	2				2	2	2										
11/12	DUP-1 / TRIP BLANK			RAP/DPP		6	2			2	2	2	2	2									

DATA TURNAROUND INFORMATION

- [x] STANDARD
- [ ] 48 HOUR RUSH
- [ ] 24 HOUR EMERGENCY
- [ ] OTHER

APPROVED BY:

EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- [x] STANDARD
- [ ] COMMERCIAL "B"
- [ ] DISK DELIVERABLE
- [ ] STATE FORMS
- [ ] OTHER (SPECIFY)

COMMENTS/REMARKS

All samples must meet 62-777 standards

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1. Ryan Pancer	5/12/00 1400	Robyn Isa	2.		2.
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3. 5/13/00 1400	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE Cooler TEMPERATURE 17.0/17.1 °C

FLORIDA

Water Samples Log
Effective Date

Petroleum or Petroleum Products
Water Sampling Log

R. Pipeline

DEP FACILITY NO.:	WELL NO.: MW-1	SAMPLE ID: MW-1	DATE: 5/12/00
SITE NAME: Dept. of the Navy	SITE LOCATION: Key West, FL		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 12.11	DEPTH TO WATER (ft): .92	WELL CAPACITY (gal/ft): .16

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =
= (12.11 - .92) x .16 = 1.8

PURGE METHOD: Teflon tubing, Masterflex pump	PURGING INITIATED AT: 0837	PURGING ENDED AT: 0850
	PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 5.4

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	µS/cm COND. ~~(umhos)~~	COLOR	ODOR	APPEARANCE	DO mg/L	OTHER Turb
1	1.8	7.18	26.3	7.85	gray	No	cloudy	8.52	955
2	3.6	7.12	25.6	8.09	dark gray	No	V. cloudy	8.62	995
3	5.4	7.10	26.1	8.06	dark gray	No	V. cloudy	8.60	999

SAMPLING DATA

SAMPLED BY/ AFFILIATION: BBL	SAMPLER(S) SIGNATURE(S):	
SAMPLING METHOD(S): disp. bailer, Teflon	SAMPLING INITIATED AT: 0940	SAMPLING ENDED AT:

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

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
		2x40ml	HCl			502
		2x1L	NaOH			610 (8100)
		2x1L	H_2SO_4			FL PRO

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)
VOL. CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

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

incl. w/ lab
Job # F6535

FLORIDA

Form Title: Petroleum or Petroleum Products Water Sampling Log
Effective Date:

R. Pipeline

Petroleum or Petroleum Products Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: MW-2	SAMPLE ID: MW-2	DATE: 5/12/00
SITE NAME: Dept. of the Navy	SITE LOCATION: Key West, FL		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.66	DEPTH TO WATER (ft): .71	WELL CAPACITY (gal/ft): .16

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =
= (11.66 - .71) x .16 = 1.75

PURGE METHOD: pump	PURGING INITIATED AT: 0800	PURGING ENDED AT: 0812
	PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 5.25

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	mS/cm COND. ~~(µmhos)~~	COLOR	ODOR	APPEARANCE	mg/L DO	OTHER Turb.
1	1.75	7.46	25.8	1.84	White	No	cloudy	8.59	999 +
2	3.5	7.37	25.7	1.77	"	"	"	8.56	999 2
3	5.25	7.29	25.7	1.69	"	"	"	8.55	999 L

SAMPLING DATA

SAMPLED BY / AFFILIATION: BBL	SAMPLER(S) SIGNATURE(S):	
SAMPLING METHOD(S): disp. bailer, Teflon	SAMPLING INITIATED AT: 0900	SAMPLING ENDED AT:

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

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
		2x40ml	HCl			602
		1L	NaOH			610 (8100)
		2xL	H_2SO_4			FL PRO

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)
WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

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

FLORIDA

Form Title: Petroleum or Petroleum Products Water Sampling Log
Effective Date: _____

Petroleum or Petroleum Products
Water Sampling Log

R. Pipeline

FDEP FACILITY NO.:	WELL NO.: MW-3	SAMPLE ID: MW-3	DATE: 5/12/09
SITE NAME: Dept. of the Navy	SITE LOCATION: Key West, FL		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.83	DEPTH TO WATER (ft): 6.61	WELL CAPACITY (gal/ft): .16

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

= (11.83 - 6.61) x .16 = 1.80

PURGE METHOD: pump	PURGING INITIATED AT: 0743	PURGING ENDED AT: 0755
	PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 5.4

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	mS/cm COND. (µmhos)	COLOR	ODOR	APPEARANCE	Turb ~~OTHER~~	DO mg/l
1	1.8	7.63	25.7	15.2	White	No	cloudy	810	8.27
2	3.6	7.50	25.6	12.4	White/gray	No	cloudy	999+	8.24
3	5.4	7.43	25.7	12.3	White/gray	No	cloudy	980	8.22

SAMPLING DATA

SAMPLED BY / AFFILIATION: BBL	SAMPLER(S) SIGNATURE(S):	
SAMPLING METHOD(S): disp. bailer, Teflon	SAMPLING INITIATED AT: 0920	SAMPLING ENDED AT: AR

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

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
		2x40ml	HCl			601/602
		2xL	none			610 (SAD)
		2xL	H_2SO_4			FLPRO
		2x40mL	none			EDB
		500mL				Fe

REMARKS: DUP-1 taken 602/610/FLPRO

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

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

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

FLORIDA

Water Sampling Log

Effective Date

Petroleum or Petroleum Products
Water Sampling Log

R. Pipeline

FDEP FACILITY NO.:	WELL NO.: MW-4	SAMPLE ID: MW-4	DATE: 5/12/98
SITE NAME: Dept. of the Navy	SITE LOCATION: Key West, FL		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.63	DEPTH TO WATER (ft): .53	WELL CAPACITY (gal/ft): .16

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

= (11.63 - .53) x .16 = 1.78

PURGE METHOD: pump	PURGING INITIATED AT: 0820	PURGING ENDED AT: 0832
	PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 5.33

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	mS/cm ~~COND. (umhos)~~	COLOR	ODOR	APPEARANCE	DO (mg/L)	OTHER Turb.
1	1.78	7.13	26.0	1.58	White	No	cloudy	8.54	999+
2	3.56	7.10	25.9	1.54	Wh:te/gray	No	cloudy	8.45	999+
3	5.33	7.09	25.8	1.55	Gray/White	NO	cloudy	8.40	999+

SAMPLING DATA

SAMPLED BY / AFFILIATION: BBL	SAMPLER(S) SIGNATURE(S):	
SAMPLING METHOD(S): disp. bailer (Teflon)	SAMPLING INITIATED AT: 0920	SAMPLING ENDED AT:

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

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
		2 x 40ml	HCl			602
		2 x 1L	none			610

REMARKS:

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

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

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FLORIDA

Water Sampling Log

Effective Date

Petroleum or Petroleum Products
Water Sampling Log

R. Pipeline

FDEP FACILITY NO.:	WELL NO.: MW-5	SAMPLE ID: MW-5	DATE: 5/12/09
SITE NAME: Dept. of the Navy	SITE LOCATION: Key West, FL		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.87	DEPTH TO WATER (ft): 1.51	WELL CAPACITY (gal/ft): .16

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

= 11.87 - 1.51 x .16 = 1.66

PURGE METHOD: Teflon lined Peristaltic pump	PURGING INITIATED AT: 0907	PURGING ENDED AT: 0920
	PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 5 gal

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	mS/cm ~~COND. (µmhos)~~	COLOR	ODOR	APPEARANCE	DO mg/L	OTHER Turb
1	1.66	7.54	26.7	37.0	H. brown	No	sl. cloudy	8.14	254
2	3.32	7.48	26.6	37.0	H. brown/white	No	sl. cloudy	7.87	179
3	5.00	7.47	26.4	36.9				7.72	167

SAMPLING DATA

SAMPLED BY / AFFILIATION: EBL	SAMPLER(S) SIGNATURE(S):	
SAMPLING METHOD(S): disp. bailer, Teflon tubing	SAMPLING INITIATED AT: 1000	SAMPLING ENDED AT:

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

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
		2x 40mL	HCl			602
		2x 1L	none			610 (9/10)
		2x 1L	H_2SO_4			FL PRO

REMARKS:

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

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

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FLORIDA

Water Sampling Log
Effective Date:

A. Dipalche

Petroleum or Petroleum Products
Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: MW-6	SAMPLE ID: MW-6	DATE: 5/12/00
SITE NAME: Dept. of the Navy	SITE LOCATION: Key West, FL		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.9	DEPTH TO WATER (ft): 1.6	WELL CAPACITY (gal/ft): .16

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

= (11.9 - 1.6) x .16 = 1.65

PURGE METHOD: Peristaltic, Teflon tubing pump	PURGING INITIATED AT: 0925	PURGING ENDED AT: 0936
	PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 4.94

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	mS/cm COND. ~~(µmhos)~~	COLOR	ODOR	APPEARANCE	DO	OTHER Turb.
1	1.65	7.45	27.1	44.9	gray	No	cloudy	7.34	999+
2	3.3	7.47	27.0	43.2	"	"	"	7.21	999+
3	4.94	7.47	27.1	42.7	"	"	"	7.51	999+

SAMPLING DATA

SAMPLED BY / AFFILIATION: BBL	SAMPLER(S) SIGNATURE(S):	
SAMPLING METHOD(S): disp. bailer (Teflon)	SAMPLING INITIATED AT: 1020	SAMPLING ENDED AT:

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

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
		2x40ml	HCl			602
		2x1L	NONE			610 (8100)
		2x1L	H_2SO_4			FL PRO

REMARKS:

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

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

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

FLORIDA

Form Title: Petroleum or Petroleum Products Water Sampling Log
Effective Date:

Petroleum or Petroleum Products
Water Sampling Log

R. Pipeline

FDEP FACILITY NO.:	WELL NO.: MW-7	SAMPLE ID: MW-7	DATE: 5/17/00
SITE NAME: Dept. of the Navy	SITE LOCATION: Key West, FL		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.75	DEPTH TO WATER (ft): 1.38	WELL CAPACITY (gal/ft): .16

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

= (11.75 – 1.38) x .16 = 1.66

PURGE METHOD: Peristaltic teflon tubing pump	PURGING INITIATED AT: 1015	PURGING ENDED AT: 1025
	PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 4.98

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. ~~(umhos)~~ mS/cm	COLOR	ODOR	APPEARANCE	DO mg/L	OTHER Turb
1	1.66	7.56	27.4	29.8	Whitish gray	None	V. cloudy	7.45	999+
2	3.32	7.49	27.7	32.0	"	"	"	7.36	999+
3	4.98	7.41	27.3	33.1	"	"	"	7.22	999+

SAMPLING DATA

SAMPLED BY / AFFILIATION: BBL	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): disp. bailer (Teflon)	SAMPLING INITIATED AT:	SAMPLING ENDED AT: 1050

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

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
		2x40ml	HCl			602
		2x1L	none			610 (8100)
		2x1L	H_2SO_4			FL PRO

REMARKS:

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

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

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FLORIDA

Form Title: Petroleum or Petroleum Products Water Sampling Log
Effective Date:

R. Pipelle

Petroleum or Petroleum Products
Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: MW-8	SAMPLE ID: MW-8	DATE: 5/12/00
SITE NAME: Dept. of the Navy		SITE LOCATION: Key West, FL	

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.8	DEPTH TO WATER (ft): 1.38	WELL CAPACITY (gal/ft): .16

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

= (11.8 – 1.38) x .16 = 1.67

PURGE METHOD: Peristaltic Teflon tubing purge	PURGING INITIATED AT: 0940	PURGING ENDED AT: 0950
	PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 5.01

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	mS/cm COND. ~~umhos~~	COLOR	ODOR	APPEARANCE	DO	OTHER Turb
1	1.67	8.24	27.3	2.82	wh. t/gray	N	cloudy	8.25	99.7
2	3.34	8.04	27.4	2.45	"	"	"	8.18	92.1
3	5.0	8.01	27.4	2.36	"	"	"	8.16	6.52

SAMPLING DATA

SAMPLED BY/ AFFILIATION: EBL	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): disp. bailer (teflon)	SAMPLING INITIATED AT:	SAMPLING ENDED AT: 1110

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

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
		2x40ml	HCl			602
		2x1L	NaOH			610
		2x1L	H_2SO_4			FL PRO

REMARKS:

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

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

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

ACCUTEST

Report of Analysis

Client Sample ID:	R PIPELINE MW-8		
Lab Sample ID:	F6535-8	**Date Sampled:**	05/12/00
Matrix:	AQ - Ground Water	**Date Received:**	05/13/00
Method:	FLORIDA-PRO	**Percent Solids:**	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08296.D	1	05/17/00	ME	05/16/00	OP1559	GOP377
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.333	0.28	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	92%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

FLORIDA

Water Sample Log
Collection Date

R. Pipeline

Petroleum or Petroleum Products
Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: MW-9	SAMPLE ID: MW-9	DATE: 5/12/00
SITE NAME: Dept. of the Navy	SITE LOCATION: Key West, FL		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.85	DEPTH TO WATER (ft): 1.32	WELL CAPACITY (gal/ft): .16

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

= (11.85 - 1.32) x .16 = 1.68

PURGE METHOD: Peristaltic, tubing for pump	PURGING INITIATED AT: 0955	PURGING ENDED AT: 1006
	PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 5.05

WELL VOLS. PURGED	CUMUL VOLUME PURGED (gal)	pH	TEMP. (°C)	mS/cm COND. (~~µmhos~~)	COLOR	ODOR	APPEARANCE	DO (mg/l)	OTHER Turb
1	1.68	7.89	27.3	18.9	None	None	clear	8.07	391
2	3.36	7.70	27.5	15.0	"	"	"	7.84	425
3	5.05	7.67	27.5	14.8	"	"	"	7.91	94

SAMPLING DATA

SAMPLED BY / AFFILIATION: GBL	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): disp. bailer (Teflon)	SAMPLING INITIATED AT:	SAMPLING ENDED AT: 1130

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

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

REMARKS:

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

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

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

FLORIDA

Water Sampling Log
Effective Date

M Petrine

Petroleum or Petroleum Products
Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: MW-1	SAMPLE ID: MW-1	DATE: 5/12/00
SITE NAME: Dept. of the Navy	SITE LOCATION: Key West, FL		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.75	DEPTH TO WATER (ft): 2.44	WELL CAPACITY (gal/ft): .16

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =
= (11.75 - 2.44) x .16 = 1.5

PURGE METHOD: Peristaltic teflon tubing pump	PURGING INITIATED AT: ~~1445~~ 1117	PURGING ENDED AT: ~~1450~~ 1127
	PURGE RATE (gpm): .5	TOTAL VOLUME PURGED (gal): 4.5

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	mS/cm COND. (umhos)	COLOR	ODOR	APPEARANCE	DO (mg/l)	OTHER Turb.
1		7.35	29.1	40.7	gray	None	cloudy	7.11	813
2		7.30	~~40.3~~ 29.3	40.3	"	"	sl. cloudy	7.10	999
3		7.29	29.2	40.8	"	"	"	6.97	999

SAMPLING DATA

SAMPLED BY / AFFILIATION: BBL	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): disp. bailer (Teflon)	SAMPLING INITIATED AT: 1145	SAMPLING ENDED AT: ~~1210~~ DCB

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

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
		2 x 40ml	HCl			602
		2 x 1L	none			510
		2 x 1L	H_2SO_4			
		2 x 40ml	none			
		500ml				

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)
WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

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

ACCUTEST

05/31/00

Technical Report for

Blasland, Bouck & Lee

NAS Key West

880.21m pipe line

Accutest Job Number: F6536

Report to:

BBL
15741 Vinola Ct.
Montverde, FL 34756

ATTN: Amanda Shearer

Total number of pages in report: 8

David A. Gunz for

Harry Behzadi, Ph.D.
Laboratory Director

Results relate only to the items tested.
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ACCUTEST

Sample Summary

Blasland, Bouck & Lee

Job No: F6536

NAS Key West
Project No: 880.21m pipe line

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F6536-1	05/12/00	11:45 RP	05/13/00	AQ	Ground Water	M. PIPELINE

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE		
Lab Sample ID:	F6536-1	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	EPA 601/602	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	CD015342.D	1	05/23/00	RA	n/a	n/a	GCD550
Run #2							

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
108-88-3	Toluene	1.9	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	3.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	76%		69-125%
98-08-8	aaa-Trifluorotoluene	80%		72-125%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values. Confirmed by dual column analysis.

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE		
Lab Sample ID:	F6536-1	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	EPA 504.1	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN07290.D	1	05/26/00	SKW	n/a	n/a	GMN293
Run #2							

CAS No.	Compound	Result	RL	Units	Q
106-93-4	1,2-Dibromoethane	ND	0.020	ug/l	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE		
Lab Sample ID:	F6536-1	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	EPA 8310	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AA001363.D	1	05/19/00	CCJ	05/18/00	OP1571	GAA60
Run #2							

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	2.2	ug/l	
208-96-8	Acenaphthylene	ND	2.2	ug/l	
120-12-7	Anthracene	ND	2.2	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.22	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.22	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.22	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.22	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.22	ug/l	
218-01-9	Chrysene	ND	0.22	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	ug/l	
206-44-0	Fluoranthene	ND	2.2	ug/l	
86-73-7	Fluorene	ND	2.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	ug/l	
91-20-3	Naphthalene	ND	2.2	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.2	ug/l	
85-01-8	Phenanthrene	ND	2.2	ug/l	
129-00-0	Pyrene	ND	2.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	74%		45-130%
92-94-4	p-Terphenyl	89%		50-150%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE		
Lab Sample ID:	F6536-1	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
Method:	FLORIDA-PRO	Percent Solids:	n/a
Project:	NAS Key West		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP08299.D	1	05/17/00	ME	05/16/00	OP1559	GOP377
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	0.383	0.30	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	90%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST

Report of Analysis

Client Sample ID:	M. PIPELINE		
Lab Sample ID:	F6536-1	Date Sampled:	05/12/00
Matrix:	AQ - Ground Water	Date Received:	05/13/00
		Percent Solids:	n/a
Project:	NAS Key West		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method
Lead	<5.0	5.0	ug/l	1	05/16/00	05/19/00	SJL	EPA 200.7

RL = Reporting Limit

ACCUTEST

CHAIN OF CUSTODY

4405 VINELAND ROAD • SUITE C-15
ORLANDO, FL 32811
TEL: 407-425-6700 • FAX: 407-425-0707

ACCUTEST JOB #: H-65 36

ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: BBL
ADDRESS: 15741 Kinda Ct
CITY, STATE, ZIP: Montverde FL 34756
SEND REPORT TO: A. Shearer
PHONE #:

FACILITY INFORMATION

PROJECT NAME: NAS Boca Chica
LOCATION: M. Pipeline Key West, FL
PROJECT NO.: 8080.21
FAX #:

ANALYTICAL INFORMATION

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	602 (BTEX/MTBE)	8100	FL-PRO	EDB		LAB USE ONLY
-1	M. Pipeline	5/12/00	1145	RAP/AAP	GW	9	2	1		2	4	2	2	2	2	1	

DATA TURNAROUND INFORMATION

- [x] STANDARD
- [ ] 48 HOUR RUSH
- [ ] 24 HOUR EMERGENCY
- [ ] OTHER

APPROVED BY:

EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- [x] STANDARD
- [ ] COMMERCIAL "B"
- [ ] DISK DELIVERABLE
- [ ] STATE FORMS
- [ ] OTHER (SPECIFY)

COMMENTS/REMARKS

All samples must meet 62-777 standards

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1. Ryan P Baker	5/12/00 1400	Cindy Wilson	2.		2.
RELINQUISHED BY:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
3.		3. 5/13/00 1400	4.		4.
RELINQUISHED BY:	DATE TIME:	RECEIVED BY:	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE 8°C
5.		5.			

FLORIDA

M pipeline

Petroleum or Petroleum Products
Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: MW-1	SAMPLE ID: MW-1	DATE: 5/1/2000
SITE NAME: Dept. of the Navy	SITE LOCATION: Key West, FL		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.75	DEPTH TO WATER (ft): 2.44	WELL CAPACITY (gal/ft): .16

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =
= (11.75 - 2.44) x .16 = 1.5

PURGE METHOD: Peristaltic, teflon tubing pump	PURGING INITIATED AT: ~~1140~~ 1127	PURGING ENDED AT: ~~1150~~ 1127	
	PURGE RATE (gpm): .5	TOTAL VOLUME PURGED (gal): 4.5	

WELL VOLS. PURGED	CUMUL VOLUME PURGED (gal)	pH	TEMP. (°C)	mS/cm COND. ~~(µmhos)~~	COLOR	ODOR	APPEARANCE	DO (mg/l)	OTHER Turb
1		7.35	29.1	40.7	gray	None	cloudy	7.11	813
2		7.30	~~40.3~~ 29.4	40.3	"	"	sl. cloudy	7.10	999
3		7.29	29.2	40.8	"	"	"	6.97	999

SAMPLING DATA

SAMPLED BY / AFFILIATION: BBL	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): disp. bailer (Teflon)	SAMPLING INITIATED AT: 1145	SAMPLING ENDED AT: ~~1240~~ 1200
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
		3 x 40ml	HCl			602
		2 x 1L	none			610
		2 x 1L	H_2SO_4			
		2 x 40ml	none			
		5 x 30ml				

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)
WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

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

include w/
Lab Job No F6536