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# CONTAMINATION ASSESSMENT REPORT FOR SITE 1159 OUTLYING LANDING FIELD BRONSON NAS PENSACOLA FL

11/17/1997

NAVY PUBLIC WORKS CENTER

# CONTAMINATION ASSESSMENT REPORT
# FDEP REGISTERED NUMBER 179300938

## U.S. NAVY OUTLYING LANDING FIELD (OLF) BRONSON
## SITE 1159
## PENSACOLA, FLORIDA

**PREPARED BY:**

**NAVY PUBLIC WORKS CENTER**
**BUILDING 458**
**PENSACOLA, FLORIDA 32508-6500**

**AUTHOR: GREG CAMPBELL, P.E.**
**NOVEMBER 1997**

**PREPARED FOR:**

**SOUTHERN DIVISION NAVAL FACILITIES ENGINEERING COMMAND**
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**DEPARTMENT OF THE NAVY**
NAVY PUBLIC WORKS CENTER
310 JOHN TOWER ROAD
PENSACOLA, FLORIDA 32508-5303

IN REPLY REFER TO:

5090
Code 4231
Ser 1002
17 November 1997

Mr. John Mitchell
Remedial Project Manager
Florida Dept. Of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: CONTAMINATION ASSESSMENT REPORT (CAR) - SITE 1159, U.S. NAVY OUTLYING LANDING FIELD (OLF) BRONSON, PENSACOLA, FLORIDA FDEP FACILITY NUMBER 179300938

Dear Mr. Mitchell:

Enclosed are two copies of the reference report for your action. If you have any questions, please contact Mr. Greg Campbell of my staff at (904) 452-8587 or 452-4315.

Sincerely,

KURT R. GIES
LT, CEC, USN
By direction of
the Commanding Officer

Enclosure: (2 copies)
(1) Contamination Assessment Report (CAR)
Site 1159, U.S. Navy Outlying Field (OLF)
Bronson, Pensacola, Florida

Copy to:
SOUTHNAVFACENGCOM (Code 18410,
Byes Glover)
NAS Envir. Dept. (Dean Spencer,
Code 00500)

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**Pensacola, Florida**


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# 1.0 INTRODUCTION

## 1.1 PURPOSE

The Navy Public Works Center, Naval Air Station, Pensacola, Florida, was retained by Southern Division Navy Facilities Engineering Command (SOUTHNAVFACENGCOM) to conduct a contamination assessment and remediation plan (if warranted) at the U.S. Navy Outlying Landing Field (OLF) Bronson, Site 1159, Pensacola Naval Air Station, Pensacola, Florida.

The findings and conclusions of the field investigation for the contamination assessment for OLF Bronson Site 1159 are presented herein.

## 1.2 SITE LOCATION AND AREA OF INVESTIGATION

Site 1159 is located within the confines of OLF Bronson which consists of approximately 950-acres of mostly grass and forest. OLF Bronson is located in northwest Florida, on the east side of Perdido Bay, approximately 5 miles west of Pensacola, Florida and about one mile from the Alabama border. Located on OLF Bronson are four abandoned airstrips and the remains of old support buildings for the airfield. OLF Bronson is now known as Blue Angel Recreation Park and is used for recreational purposes and occasional helicopter training exercises. Figure 1-1 shows the facility in relation to surrounding area. Most runoff from the property is toward the southwest through a network of culverts that lead to Perdido Bay. Figures 1-2 thru 1-5 show topographic and local surface drainage features.

The area surrounding OLF Bronson is sparsely populated. Two small communities, Paradise Beach and Perdido Heights, are located about a mile to the north of the old airfield. A few houses are located around the perimeter of the old airfield, but most of the surrounding area is either wetland, forest, or the waters of Perdido Bay. The areas north, south, and east of OLF Bronson are characterized by scattered residential structures, mobile homes, farm buildings, stores, and churches. Perdido Bay is located west of OLF Bronson.

Specifically, Site 1159 is located at latitude 30°23'16"N, longitude 87°25'09"W. The fuel oil tank removed from the site was located on the east side of Building 1159, an old brick building with a chimney. To the north of the site are dense woods, to the south is a main dirt road running east to west, to the east are woods (tent camping area) and a road, and to the west is a concrete parking area for campers. Site location maps are included in Figures 1-6 and 1-7 to show locations of buildings, facility boundaries, and former tank.

## 1.3 SITE HISTORY AND OPERATIONS

A 500 gallon underground storage tank was removed adjacent to Building 1159 by PWC personnel on August 15, 1994. The underground tank, approximately 50 years old, was used to store diesel for an emergency generator. The closure assessment performed during the removal of the tank revealed petroleum contamination of the groundwater at levels greater than the allowable FDEP target levels.

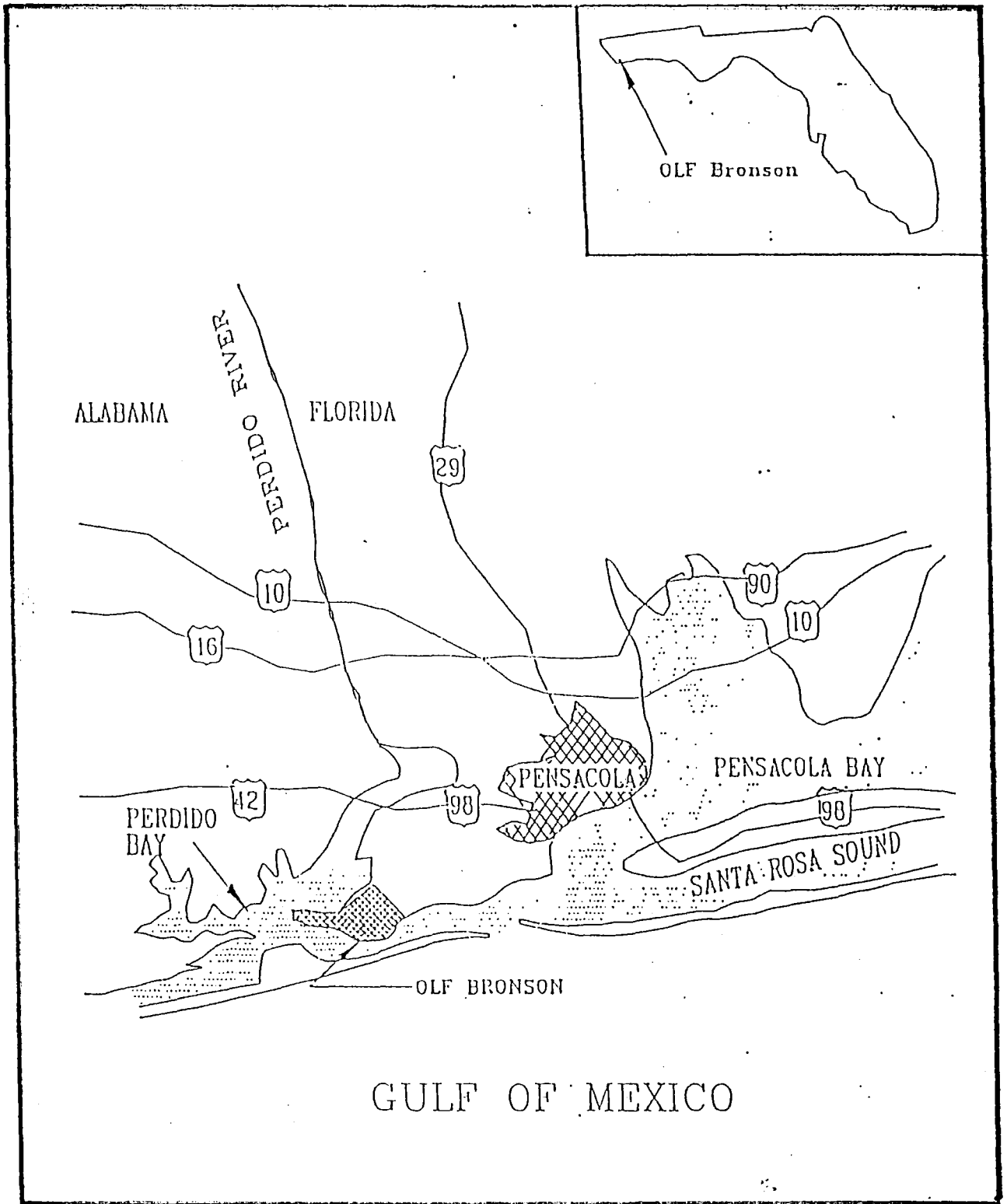



FIGURE 1-1.
OLF Bronson
VICINITY MAP

Key:

Highway

Water Way

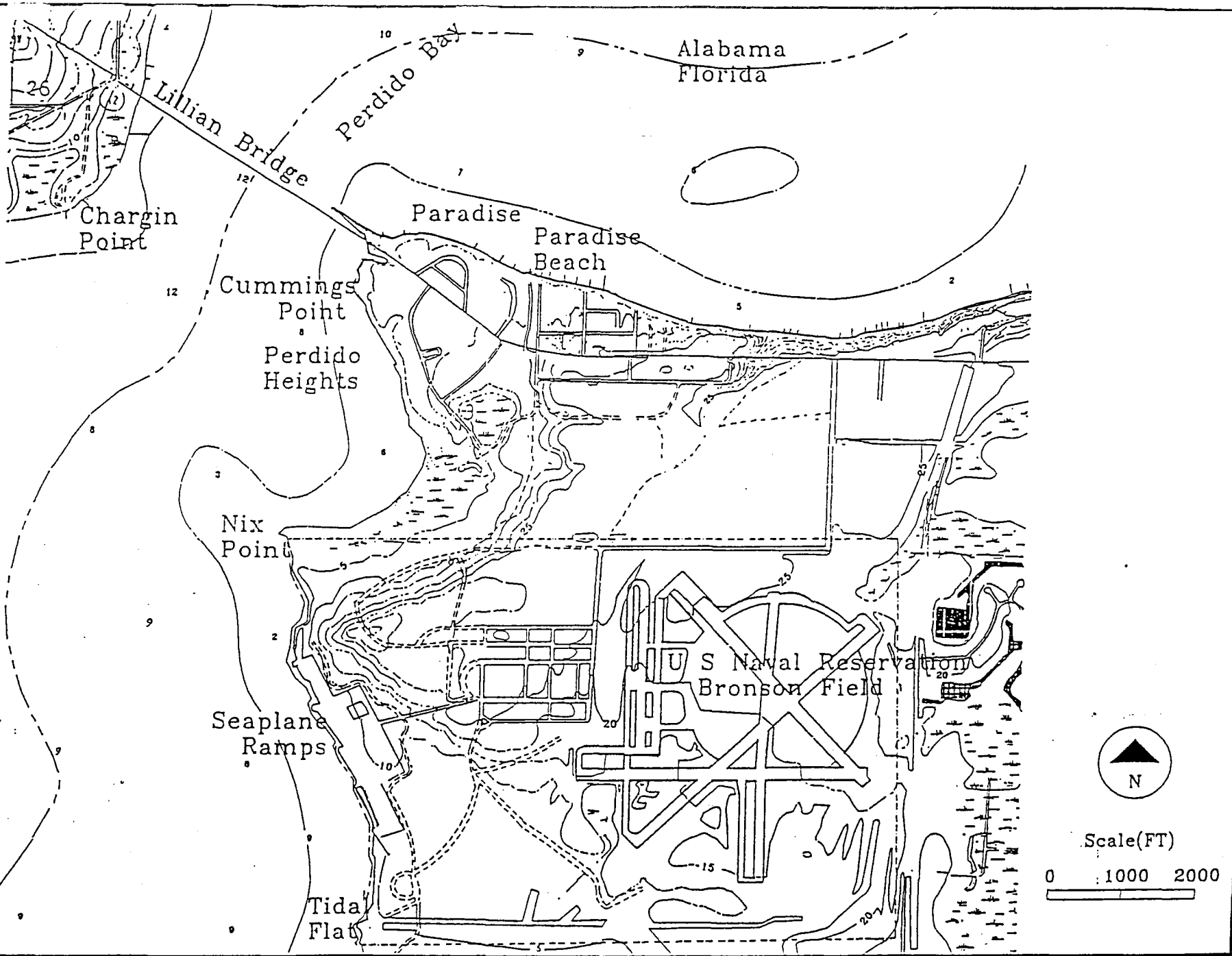



Figure 1-2
OLF Bronson
Topographic Map

Key:
Base Border ----------

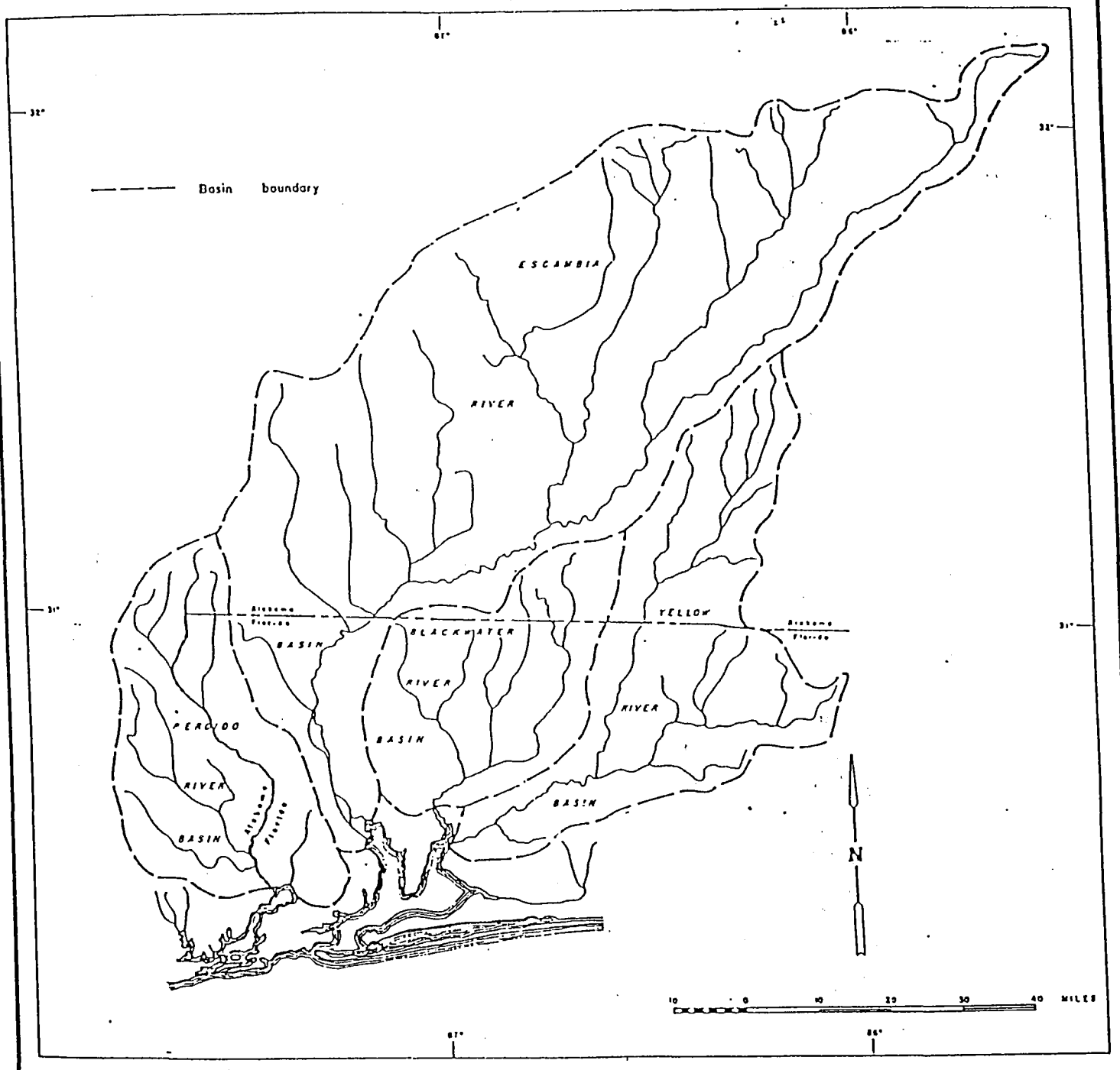



Figure 1-3
OLF BRONSON

Key: Basin Map of Perdido, Escambia, Blackwater, & Yellow Rivers (Modified After Musgrove ET. AL., 1965).

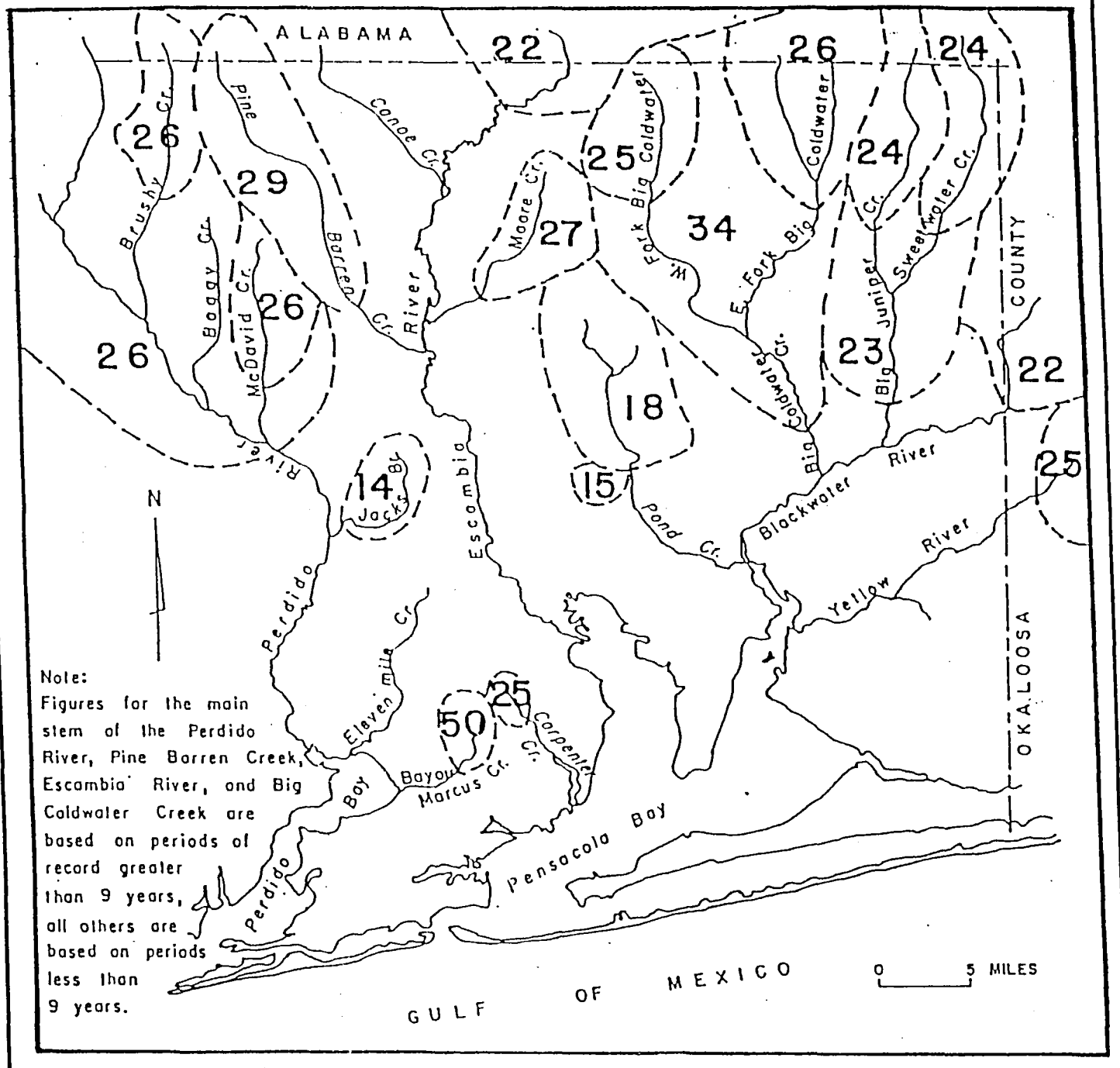



Figure 1-4
OLF BRONSON

Key: Approximate Average Annual Runoff (Inches) From Areas Within Escambia & Santa Rosa Counties (Modified After Musgrove ET. AL.,1965).

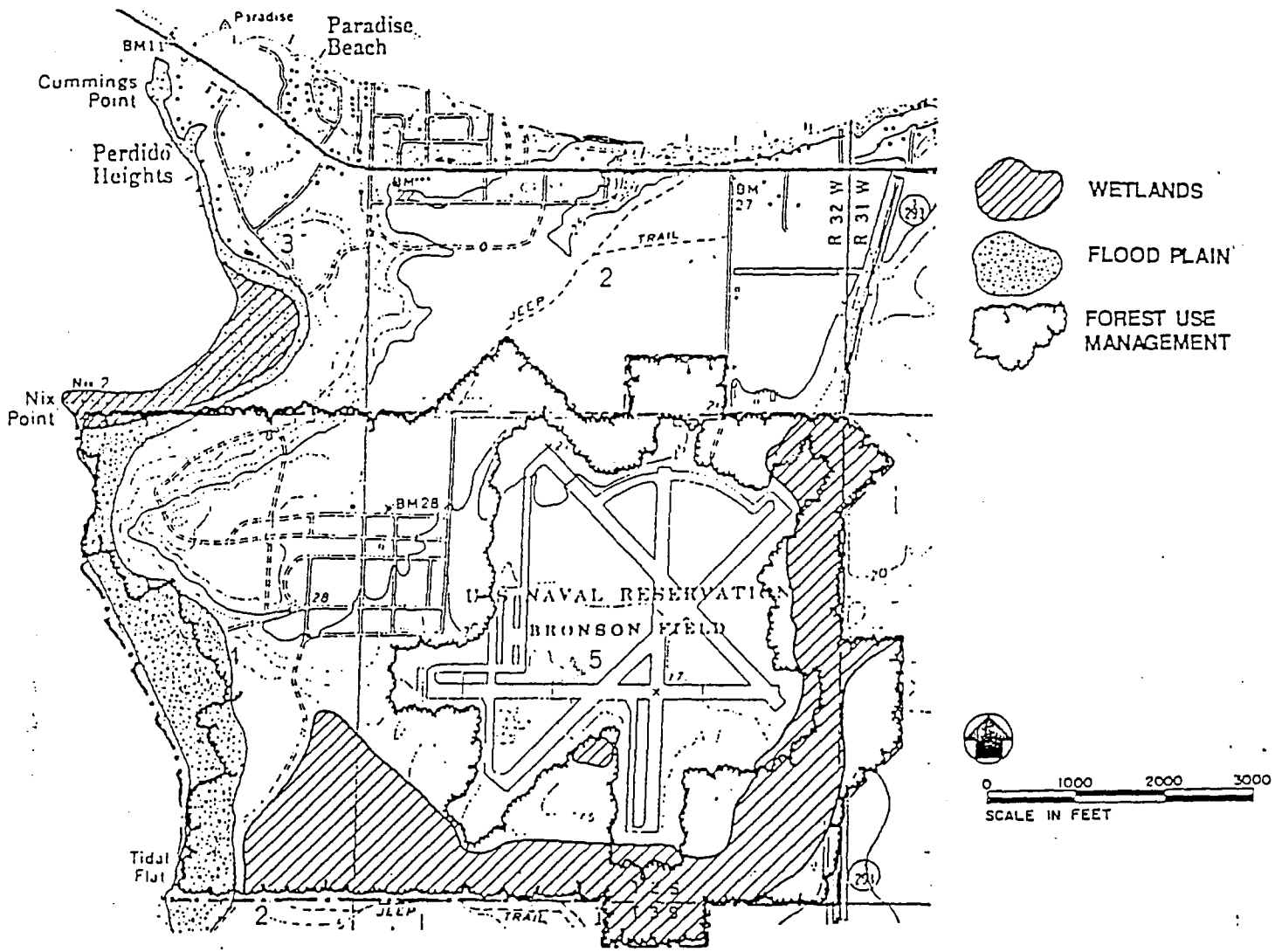



Figure 1-5
OLF Bronson
Flood Plain Area

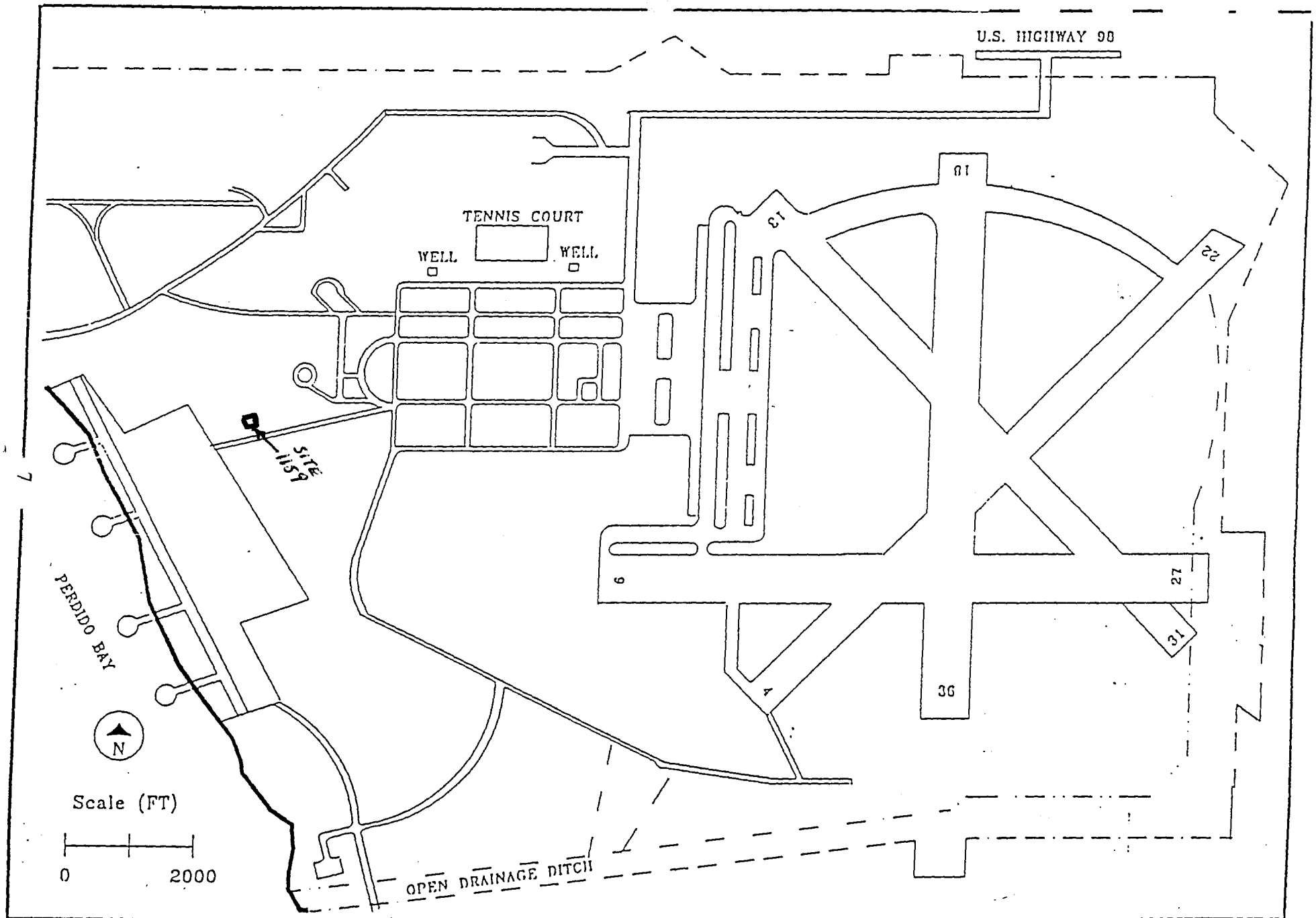



FIGURE 1-6
OLF BRONSON BASE MAP

KEY
— — OPEN DRAINAGE DITCH
—·— NAVAL PROPERTY LINE

TREES & BRUSH

TREES & BRUSH

TREES & BRUSH

TREES & BRUSH

EXISTING ROADWAY

PRIMITIVE TENT CAMPING AREA

FORMER 6-25,000 GALLON GASOLINE TANK LOCATIONS

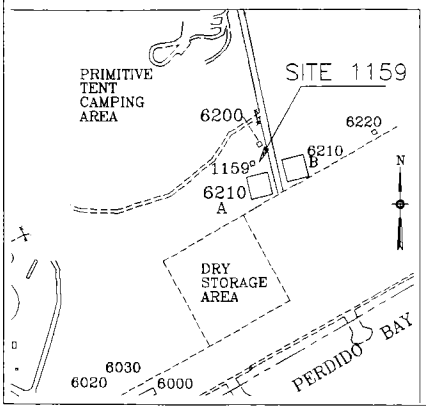
TREES & BRUSH

TREES & BRUSH

FORMER 5,000 GALLON DIESEL UST LOCATION

TREES & BRUSH

BLDG 1159




LEGEND

HOT CUTTINGS STORED ON PLASTIC SHEETING

FENCE

0' 10' 30' 50' 70'

N

NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA

| SCALE: | FIGURE 1--7 | DRAWN BY: DWG. NO: REVISED BY: |
|---|---|---|

SITE SPECIFIC MAP
SITE 1159, BRONSON FIELD

CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA

OLF Bronson was used as an Outlying Landing Field for NAS Pensacola from 1942-1950. When first opened in 1942, the 950-acre airfield was originally called Tarkiln Field, but in 1944 the name was changed to OLF Bronson. During that time the base used large amounts of aviation gasoline, oil products, and solvents. OLF Bronson was closed as an active airfield in late 1950. Helicopters from Combat Support Squadron 16 used the area for occasional training until the squadron was dismantled in 1995. Presently, all the runways are inactive. All buildings at OLF Bronson have been dismantled and parts of the base have been sold to private parties. Maps of OLF Bronson show building 1159 was designated as a Boiler House. The only current employees at Bronson are Morale Recreation and Welfare (MWR) personnel. Duties of MWR personnel at OLF Bronson include operating the campground, minor maintenance of the facility, and teaching sailing and windsurfing.

## 1.4 INITIAL REMEDIAL ACTION

No initial remedial actions were performed at the site.

## 1.5 RESULTS OF PREVIOUS INVESTIGATIONS

A closure assessment was performed during the removal of the underground fuel oil tank which consisted of collecting soil and groundwater samples; and analyzing the samples for volatile and semi-volatile organics, volatile aromatics (VOAs), and polynuclear aromatic hydrocarbons (PAHs). Groundwater sampling was conducted in accordance with FGS' Florida Department of Environmental Protection (FDEP) - approved Comprehensive Quality Assurance Plan (No. 890395G). Copies of all laboratory reports are included in Appendix D.

Soil samples were collected from the center, sides, and bottom of the excavation on August 15, 1994 and analyzed for priority pollutant volatiles by EPA Method 8260. Laboratory analyses of soil samples indicated contaminants were below detection limits.

A shallow groundwater monitoring well was installed at Site 1159 (MW-17) by FGS Inc. on May 25, 1996. A sample diagram of "Basic Monitor Well Design in a Water Table Aquifer" is found in Appendix A. A copy of the "Log of Monitoring Well" and "Well Sample Record" is located in Appendix C. The well consisted of a 4-inch diameter by 10.0 feet 0.010" slotted, Schedule 40, PVC screen threaded to solid PVC riser. The well was completed in an approximately 8-inch diameter borehole approximately 15 feet in depth. The well was developed by a combination of surge pumping (formation water only), overpumping, and pumping. A filter sand pack (16/40 silica sand) was extended approximately one foot above the top of the well screen. A 1-2 foot bentonite seal was placed above the sand pack, and the remaining annular space was filled with cement grout (with 3-5% Bentonite Mix). An aboveground steel protective cover and lock cap was installed to complete the monitoring well installation. The monitoring well location is shown in Figure 2-2.

A groundwater sample was collected from monitoring well MW-17 on May 30, 1995 and analyzed for VOAs and PAHs. A summary of the analytical results for the groundwater sample is shown in Table 1-1. The total VOAs detected by EPA Method 8260 in the groundwater

**TABLE 1-1**
**SUMMARY OF VOLATILE AROMATICS**
**ANALYTICAL RESULTS FOR GROUNDWATER SAMPLE**
**COLLECTED FROM CLOSURE ASSESSMENT MONITORING WELL MW-17**
**U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1159**

| VOLATILES | |
|---|---|
| **PARAMETER** | **B1159 MW-17** |
| Benzene | 1.3 |
| Ethylbenzene | 20 |
| Toluene | 1.1 |
| Xylenes (Total) | 104 |
| Methyl-tert-butyl ether (MTBE) | BDL |
| Total VOA | 126.4 |

NOTES: BDL = Below detection limits.
Groundwater sample was collected on May 30, 1995.
All results are reported in parts per billion (ppb) unless otherwise noted.

sample of 126.4 ppb were above the FDEP allowable regulatory levels of 50 ppb. Benzene, ethylbenzene, toluene, and xylenes (total) were detected at levels of 1.3 ppb, 20 ppb, 1.1 ppb, and 104 ppb, respectfully. The total naphthalene concentration was below detection limits.

## 1.6 REGIONAL GEOLOGY AND HYDROGEOLOGY

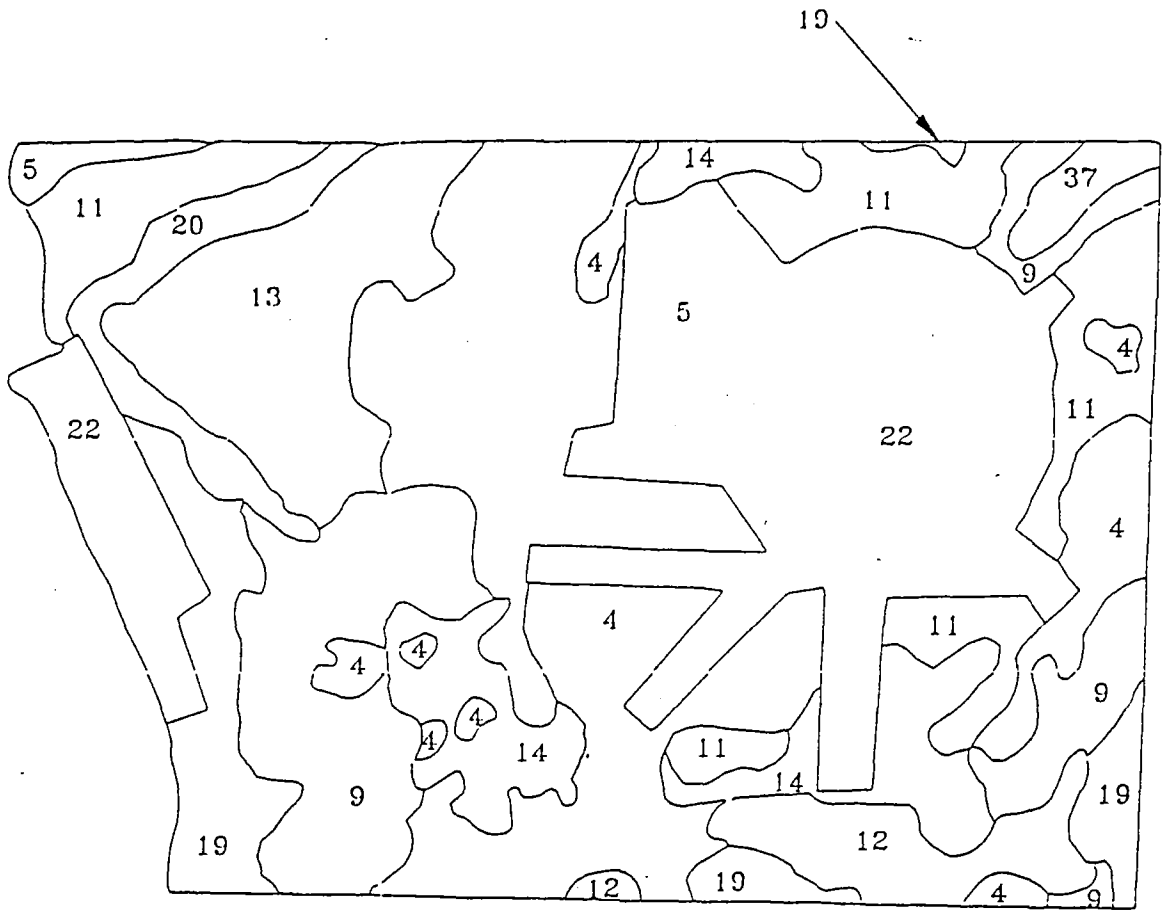
Figure 1-8 displays the soil configuration map as of 1991. Surface sediments in the Bronson Field area are classified with the Croatan, Foxworth, Hurricane, Lakeland, Leon, Pickney, Pottsburg, and Urban Land associations.

OLF Bronson resides along the western edge of the Florida Panhandle within the Coastal Plain Province. The Coastal Plain, a major physiographic division of the United States, extends eastward from Texas and northward as far as New York. It consists of cretaceous to recent age beds of sand, silt, limestone, and clay that dip gently seaward. Most of these sediments were deposited during higher stands of the sea as the Mississippi River system transported eroded debris southward. The Gulf Coast region of the United States is the landward side of the most active geosyncline in North America. The formations which make up the landward side of the geosyncline are all wedge-shaped, thickening rapidly from the outcrop gulfward to the south.

More precisely, OLF Bronson resides with the Coastal Lowland topographic subdivision of the Coastal Plain which consists of relatively undissected, nearly level plains lying less than 100 feet above sea level (Marsh, 1966). It is situated along the north flank of the Mississippi Embayment, which accounts for the characteristic southwestward dip of cretaceous and younger strata (Figure 1-9 thru Figure 1-12).

Figure 1-13 describes the geologic sequence by a representative log of an oil test well near Pensacola. For the region of study, a thick sequence of sand, gravel, and clay extends from the surface to as much as 1000 feet deep. Nearly all wells in this area tap permeable sediments within this sequence - collectively referred to as the Sand-and-Gravel Aquifer. In the southern part (where OLF Bronson resides), the two aquifers are separated by a thick clay unit of Miocene age, which serves to confine the water that is present in the upper limestone of the Floridan Aquifer (Figure 1-14). An extensive clay bed, the Bucatunna Clay Member of the Byram Formation, underlies the upper limestone of the Floridan Aquifer and forms an aquiclude throughout the area. The lower limestone of the Floridan Aquifer underlies the Bucatunna and rests upon relatively impermeable clay and shale. Within the area, no freshwater aquifers occur below the lower limestone of the Floridan Aquifer. More than 99 percent of groundwater utilized for drinking and industrial purposes in the region is obtained from the Sand-and-Gravel Aquifer.

Parts of the Sand-and-Gravel Aquifer have a rather high average porosity and permeability and are thus excellent reservoirs for groundwater. The aquifer primarily consists of relatively insoluble quartz grains, which accounts for the low mineral content and softness of this water. The groundwater conditions are complicated by great lithologic variability due to facies changes during deposition. Groundwater is under artesian pressure where lenses and layers of clay, sandy clay, or hardpan overlie a saturate permeable bed. Groundwater is under non-artesian conditions




4 Pickney Sand

5 Croatan & Pickney Soils, Depressional

9 Leon Sand

11 Hurrricane Sand

12 Croatab Muck Depressional

13 Lakeland Sand, Level

14 Pottsburg Sand

19 Foxworth Sand

20 Lakeland Sand Gentle Slope

22 Urban Land

37 Pickney Mucky Sand Depressional

N

Scale (FT)

0 2000

Figure 1-8
OLF Bronson
Soil Map
(Modified Ater U.S.D.A 1991)

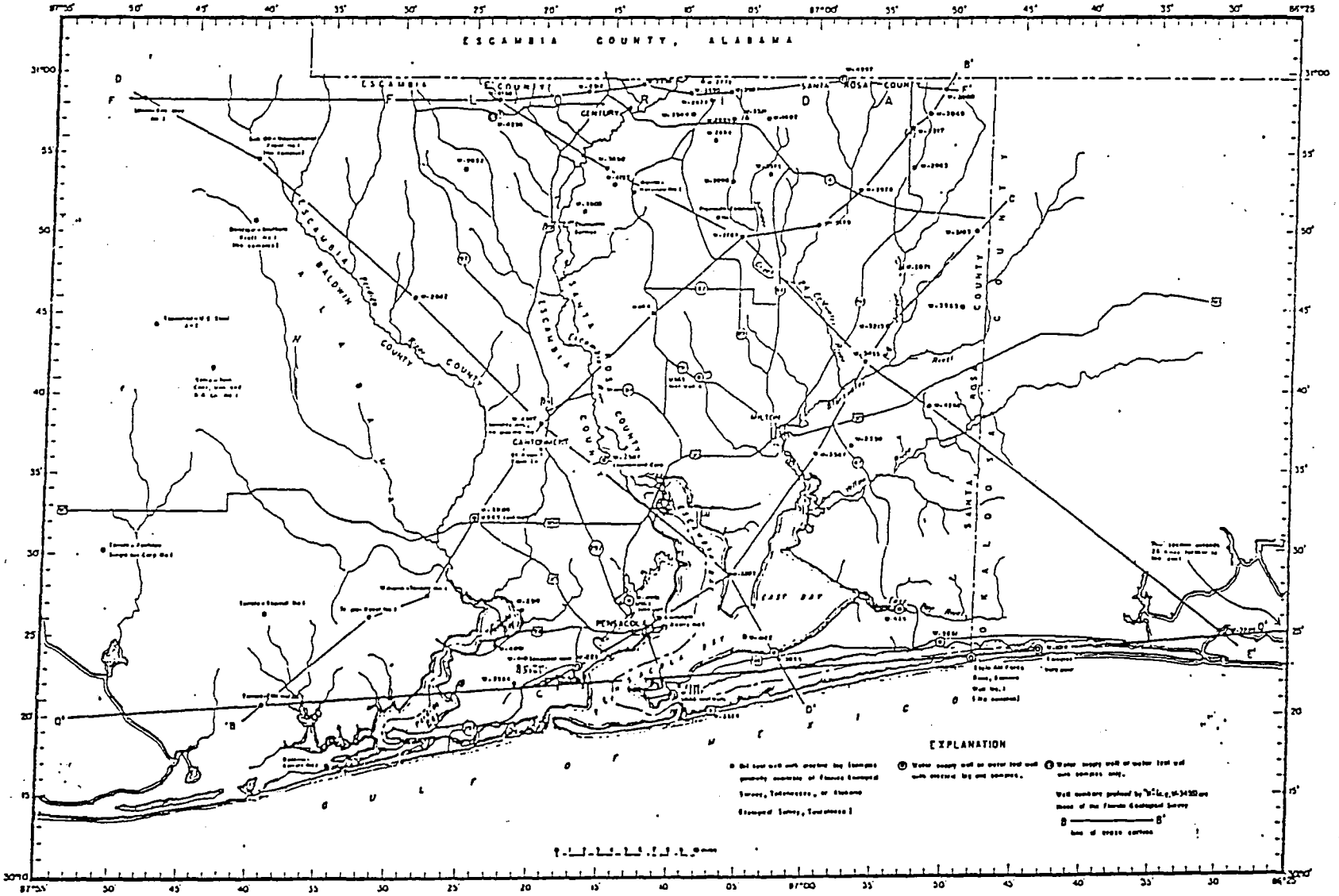



Figure 1-9
OLF Bronson

Key: Map of Westernmost Florida & Southwestern Alabama Showing Locations of Cross Sections & Wells Used in This Report (Modified After Marsh, 1966).

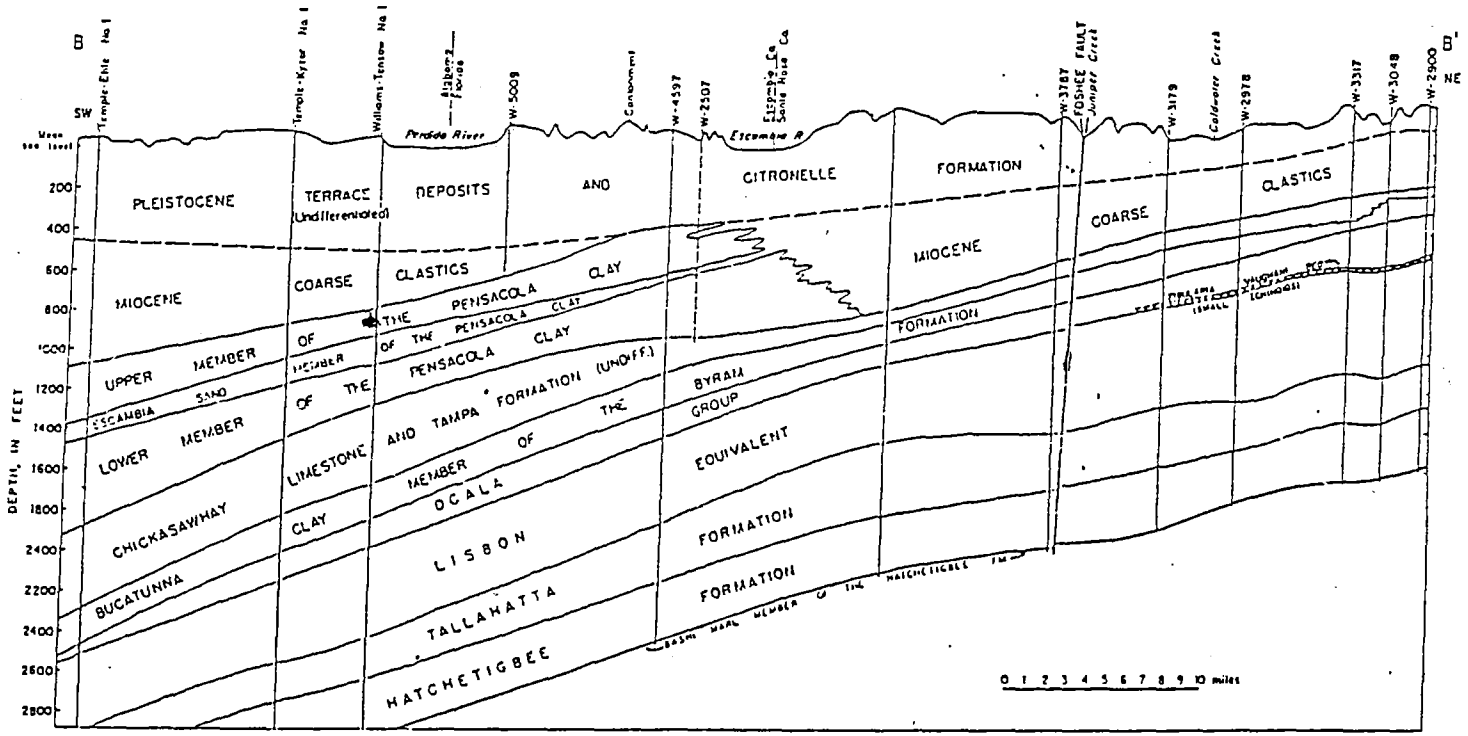



Figure 1-10
OLF Bronson

Key: Geologic Cross Section B–B' Across Escabia & Santa Rosa Couties (Modified After Marsh, 1966). Section Parallels the Regional Dip.

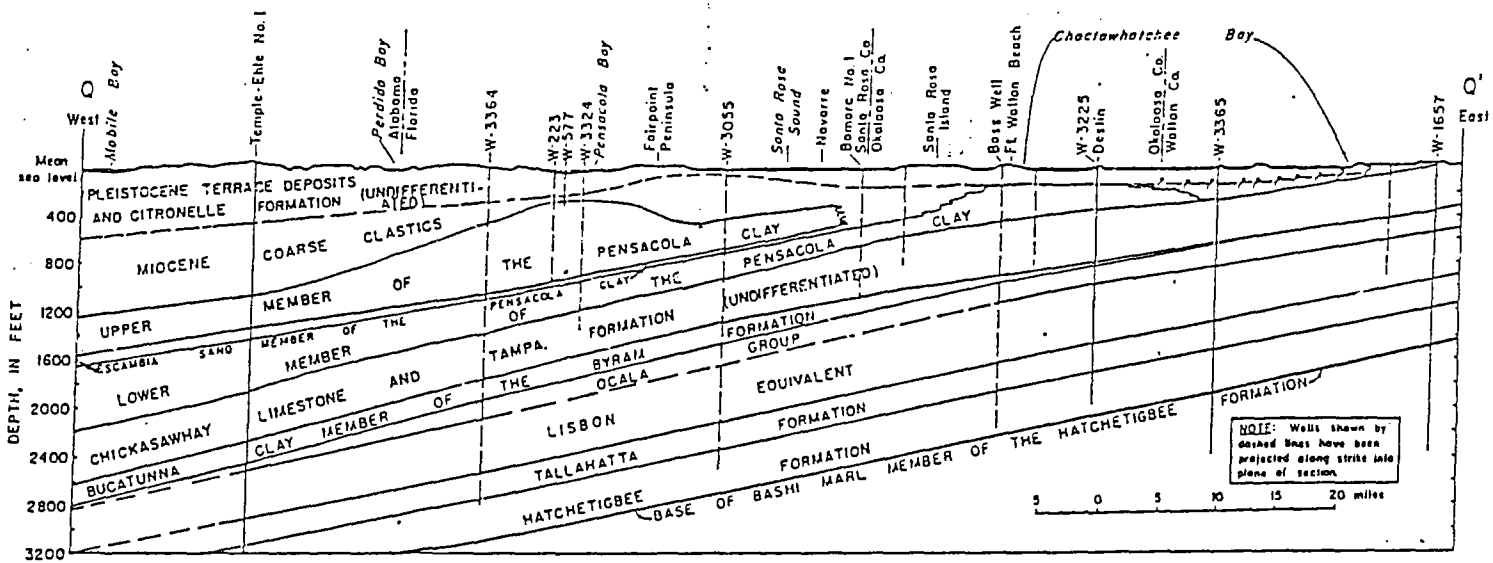



Figure 1-11
OLF Bronson

Key: Geologic Section Q–Q' From Mobile Bay to the Choctawhatchee River (115 Miles) Showing Formations along the Gulf Coast of Western Florida (Modified After Marsh, 1966).

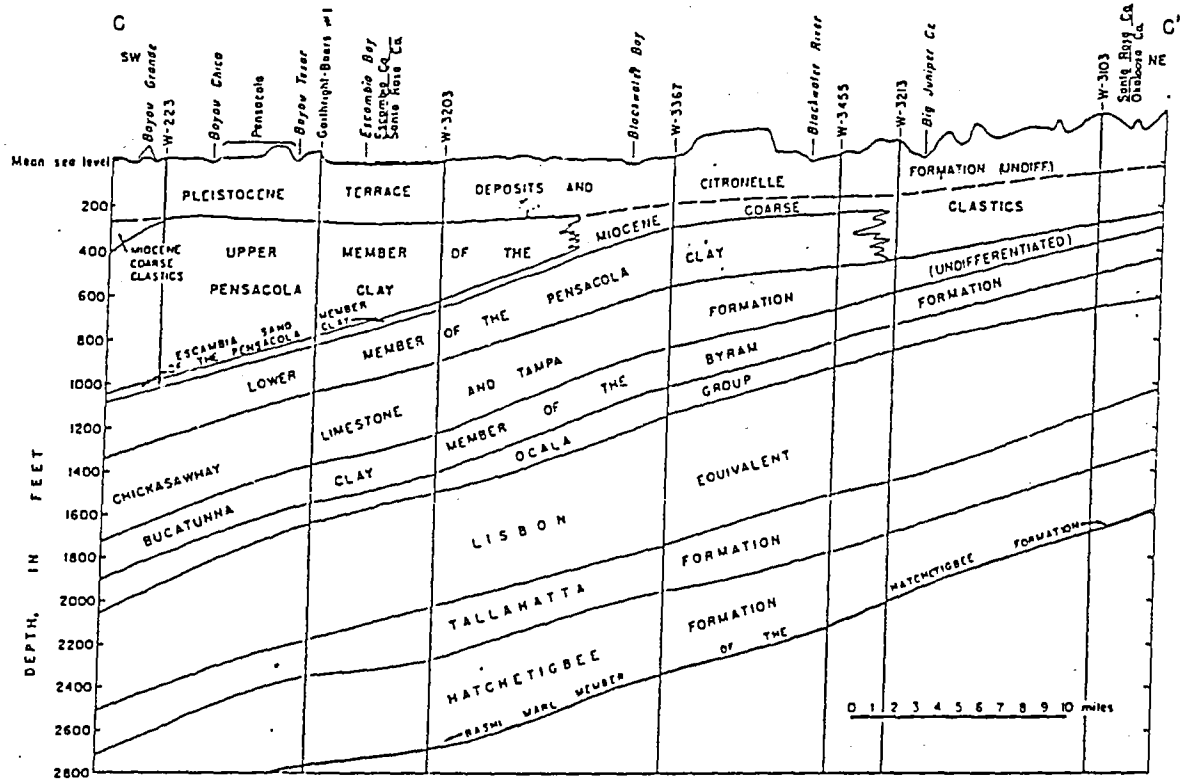



Figure 1-12
OLF Bronson

Key: Geologic Section C–C' Across Escambia & Santa Rosa Counties (ModifiedAfter Marsh, 1966). Section is Parallel to Regional Dip.

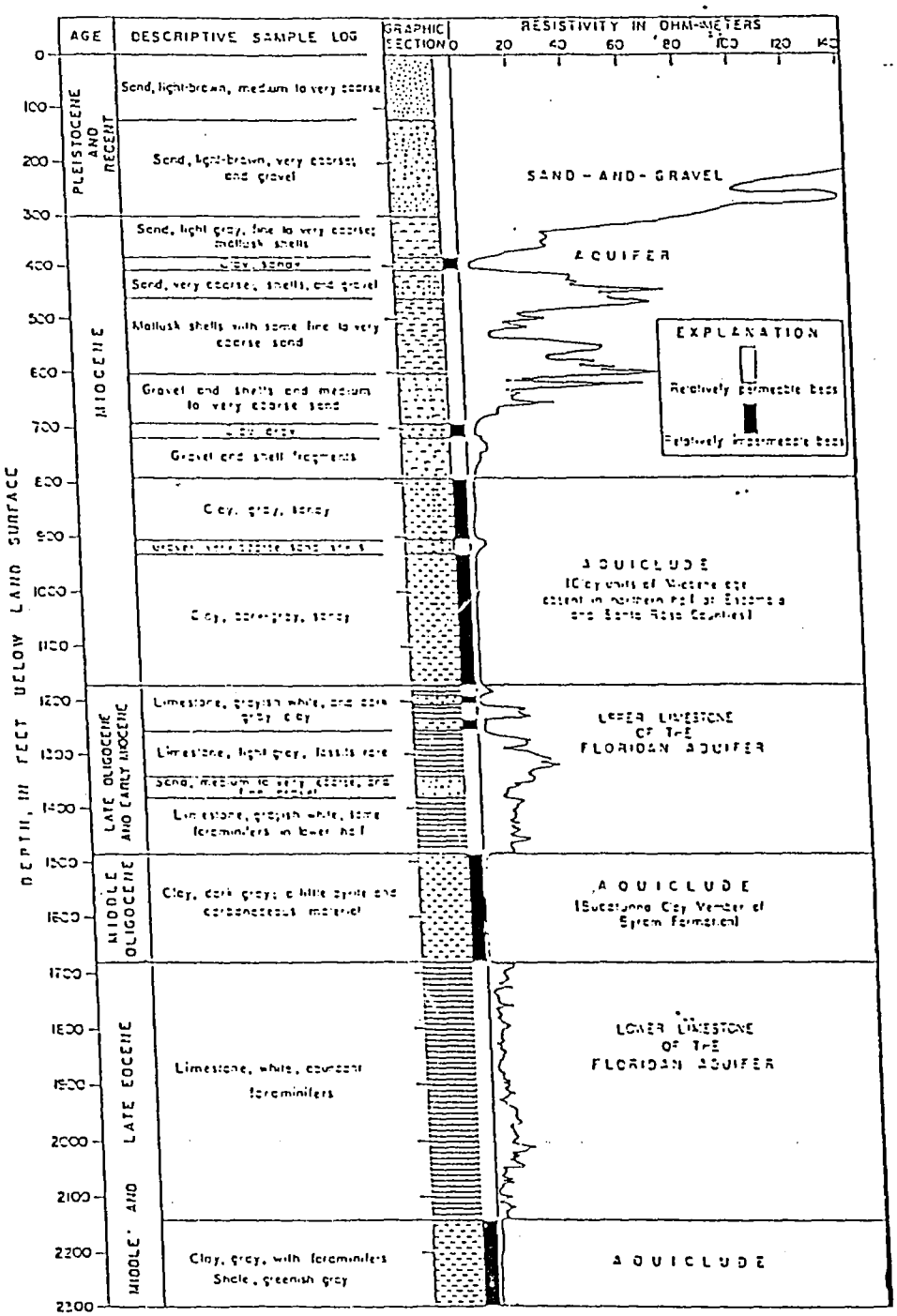



Figure 1-13
OLF Bronson

Key: Representative Geologic Sequence Based on Log of Oil Test Well Located Near Pensacola (After Marsh, 1966).

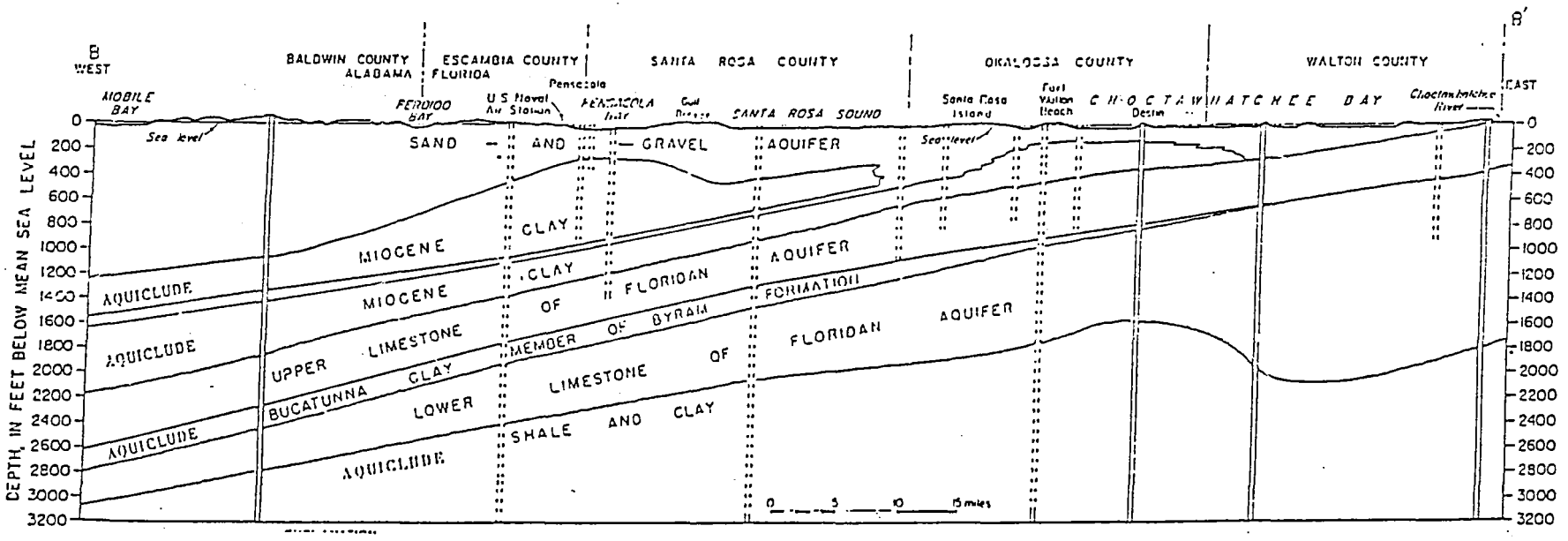



Figure 1-14
OLF Bronson

Key: Geologic Section Across Escambia & Santa Rosa Counties Showing Aquifers & Aquicludes Along Section B-B' in Figure 8 (Modified After musgrove ET. AL., 1965).

where such clays or hardpan are absent or where the permeability is not completely saturated. It is common for a well to tap both artesian and non-artesian sources. Groundwater in the Sand-and-Gravel Aquifer is derived almost entirely from rain falling in the area. Recharge is greatest where land is relatively flat. The aquifer is discharged by pumping, evapotranspiration, and seepage into streams, swamps, bays and the Gulf of Mexico.

The gradient along the potentiometric surface in the shallow beds of the Sand-and-Gravel Aquifer generally indicates movement of groundwater toward nearby streams. The seepage of this groundwater supplies more than half of the entire flow of the smaller streams in Escambia and neighboring Santa Rosa counties. Average velocity of groundwater was previously computed to be approximately 100 feet per year in the Pensacola area. The water table tends to be highest under the broad, relatively level lands that are at a higher elevation than the surrounding lands.

The artesian pressure head of water in the lower permeable beds of the Sand-and-Gravel Aquifer does not conform to the topography of the land as much as the water table. The artesian pressure head of water from the lower beds indicates a general movement of water to the south. The head of water in the northern part of Escambia and Santa Rosa counties is usually more than 100 feet above sea level and at some places exceeds 150 feet. In the central part of the counties, the artesian pressure head is about 30 to 80 feet above sea level except near the large rivers. Upward leakage of groundwater probably occurs, which lowers the pressure head of the groundwater. The artesian pressure head of water under the lands adjacent to the bays is usually less than 20 feet above sea level and is often less than 10 feet above sea level.

Pumping tests on nearby wells screened within the Sand-and-Gravel Aquifer indicate specific capacity values that range from 30 to 80 gallons per minute per foot of drawdown. Aquifer tests performed on wells penetrating the Sand-and-Gravel Aquifer owned by the City of Pensacola, the U. S. Navy (at NTTC Station), and Newport Industries indicate transmissivities ranging from 58,800 to 94,000 gallons per day per foot.

With few exceptions, the sum of the mineral constituents in the groundwater of the Sand-and-Gravel Aquifer is very low, ranging from 12 ppm to 36 ppm. Water in this aquifer is exceptionally soft, generally containing 4 ppm to 30 ppm of calcium and magnesium carbonates. The fluoride content of this water is usually less than 0.2 ppm. Iron content of water from this aquifer ranges from 0.06 ppm to 4.9 ppm, although it is generally less than 0.15 ppm. Copious amounts of carbon dioxide render much of the water acidic. In some areas water contains hydrogen sulfide in solution. Carbon dioxide measurements in waters beneath NAS Pensacola have been as high as 100 mg/l. However, elsewhere in the area, Carbon dioxide concentrations are generally less than 30 mg/l. In Bronson Field groundwater reserves, chloride is the major anion and is generally accompanied by a predominant sodium cation.

## 1.7 WELL SURVEY

Escambia County Utilities Authority (ECUA) operates one potable water well (#2) located at OLF Bronson. The well is permitted by the Northwest Florida Water Management District and

is used to supply potable water to the base and to ECUA customers in the Perdido Key community. Former potable water well #1 was taken out of service in June 1995. Potable water well #2 and former potable water well #1 are located within a half-mile radius of the site. Construction details of Well #1 and Well #2 are shown in Table 1-2.

## 2.0 SITE ASSESSMENT

### 2.1 SOIL BORING AND MONITORING WELL CONSTRUCTION DETAILS

PWC personnel initiated the investigation with the installation of 15 soil borings (BH-1 thru BH-15) to a depth of 6 feet below land surface (BLS) in an area surrounding the former tank location. These borings were installed by W.E.S., Inc. on March 26, 1996. Subsequently, monitoring wells MW-2 thru MW-30 were then installed around the former tank location. Petroleum contaminants were detected in the groundwater samples collected from the monitoring wells upgradient of the diesel source (i.e. monitoring wells MW-5, MW-6, MW-12, MW-14, MW-16) indicating another possible source of contamination. A review of an old drawing of N.A.S. Bronson Field (Dwg. #23032) dated June 24, 1994 indicates there were 6-25,000 gallon gasoline tanks northeast of site 1159 on top of a hill. These tanks, apparently removed in the 1980's by E.C. Jordan, were located upgradient of site 1159 and are the suspected source of petroleum contamination. NAS Pensacola and SOUTHDIV indicated that they could not find any closure assessments performed for the removal of these tanks. In addition, since PAHs were detected in only one of the monitoring wells (MW-40) it appears that the 6-25,000 gallon gasoline tanks may be the only source of contamination in the area of the former 1159 tank location (i.e. VOA compounds were detected in lieu of PAH compounds typically detected in diesel releases). Forty-two additional soil borings (SB-1 thru SB-42) were installed east-northeast of the former tank location by W.E.S., Inc. from September 11, 1996 thru September 25, 1996 to better delineate the soil contamination upgradient of the site. Additional shallow monitoring wells MW-31 thru MW-59 were installed to better define the plume upgradient of the former tank location.

Soil samples were collected from each borehole at depths starting at 1' BLS and collected every 3' thereafter and ending at 1' above groundwater level. All borings were installed using a hollow stem auger. The augers were decontaminated between borings. Soil samples were analyzed for volatile organic vapors using an organic vapor analyzer (OVA) with a flame ionization detector. Soil boring cuttings were placed back into the boreholes upon completion of installation. Soil samples were also collected from each of the boreholes during the installation of shallow monitoring wells MW-2 thru MW-59 and deep monitoring wells DMW-60 and DMW-61. Soil samples were collected at 1, 3, and 5 feet BLS at MW-2 thru MW-6; 1, 4, and 6 feet BLS at MW-7 thru MW-18; 1, 4, and 7 feet BLS at MW-19 thru MW-28; 1 and 3 feet BLS at MW-29 and MW-30; 1, 4, and 7 feet BLS at MW-31; 1, 4, 7, and 10 feet BLS at MW-32; 1, 4, 7, 10, 13, 16, 19, and 21 feet BLS at MW-33; 1, 4, 7, 10, 13, 16, 19, and 22 feet BLS at MW-34 thru MW-36; 1, 4, 7, 10, 13, 16, 19, 22, and 23 feet BLS at MW-37; 1, 4, 7, 10, 13, and 16 feet BLS at MW-38; 1, 4, 7, 10, and 11 feet at MW-39; 1, 4, 7, 10, and 12 feet at MW-40 and MW-41; 1, 4, 7, and 9 feet at MW-42; 1, 4, 7, and 8 feet at MW-43; 1, 4, 7, 10, 11, 13, 16, 19, and 22 feet at MW-44; 1, 4, 7, 10, 13, 16, and 19 feet at MW-45; 1, 4, 7, 10, and 12 feet BLS at MW-46; 1, 4,

## TABLE 1-2

## CONSTRUCTION DETAILS OF WATER-SUPPLY WELLS

| OLF BRONSON WELL NUMBER | #1 | #2 |
|---|---|---|
| Year Drilled | 1942 | 1943 |
| Depth Drilled | 245ft | 248ft |
| Length, outside casing | 126ft 9in | 120ft |
| Diameter, outside casing | 24in | 24in |
| Material, outside casing | Black Steel | Black Steel |
| Depth to static water level | 26ft | 23ft 4in |
| Normal suction lift (wkng. level) | 53ft | 43ft |
| Normal yield, GPM | 800 | 800 |
| Test yield, GPM | 1007 | 1012 |
| Type of grout | Type 1 Portland | Type 1 Portland |
| Drilling method | Reverse Flow | Reverse Flow |
| Type of strainer | Shutter Bronze | Shutter Bronze |
| Depth to top of strainer | 135ft | 144ft |
| Protection from surface water? | Yes | Yes |
| Is inundation of well possible? | No | No |
| Sale intrusion noted in past? | No | No |
| Has the well ever been contaminated? | No | No |
| Pump manufacturers' name | Layne Bowler | Layne Bowler |
| Model number | 11 8MH | 11 8MH |
| Capacity GPM | 750 | 800 |
| Check valve present in line? | Yes | Yes |
| Date of last servicing | 4/26/94 | 5/11/95 |
| Maintenance schedule (day/mo.) | Daily | Daily |

Notes: uk=unknown
s.s.=stainless

7, 10, 13, and 14 feet BLS at MW-47; 1, 4, 7, 10, 13, and 16 feet BLS at MW-48; 1, 4, 7, 10, 13, and 14 feet BLS at MW-49; 1, 4, 6 feet BLS at MW-50 thru MW-52; 1, 4, 7, 10, 13, and 16 feet BLS at MW-53 and MW-54; 1, 4, 7, and 9 feet BLS at MW-55; 1, 4, 7, 10, 13, 16, and 18 feet BLS on MW-56; 1, 4, 7, 10, and 13 feet BLS at MW-57; 1, 4, 7, and 10 feet BLS at MW-58; 1, 4, 7, and 9 feet BLS at MW-59; 1, 4, 7, 10, and 13 feet BLS at DMW-60; and 1, 4, and 6 feet BLS at DMW-61. The soil samples were analyzed for volatile organic vapors using an organic vapor analyzer (OVA) with a flame ionization detector. Location maps of the soil borings and monitoring wells are provided in Figures 2-1 and 2-2, respectfully. Monitoring well construction diagrams for monitoring wells MW-1 thru DMW-61 are shown in Appendix A. Lithological logs for monitoring wells MW-1 thru DMW-61 are shown in Appendix C. Monitoring well MW-1 (formerly designated MW-17) was installed during the Closure Assessment of the underground tanks. A well construction diagram for this well is found in Appendix A.

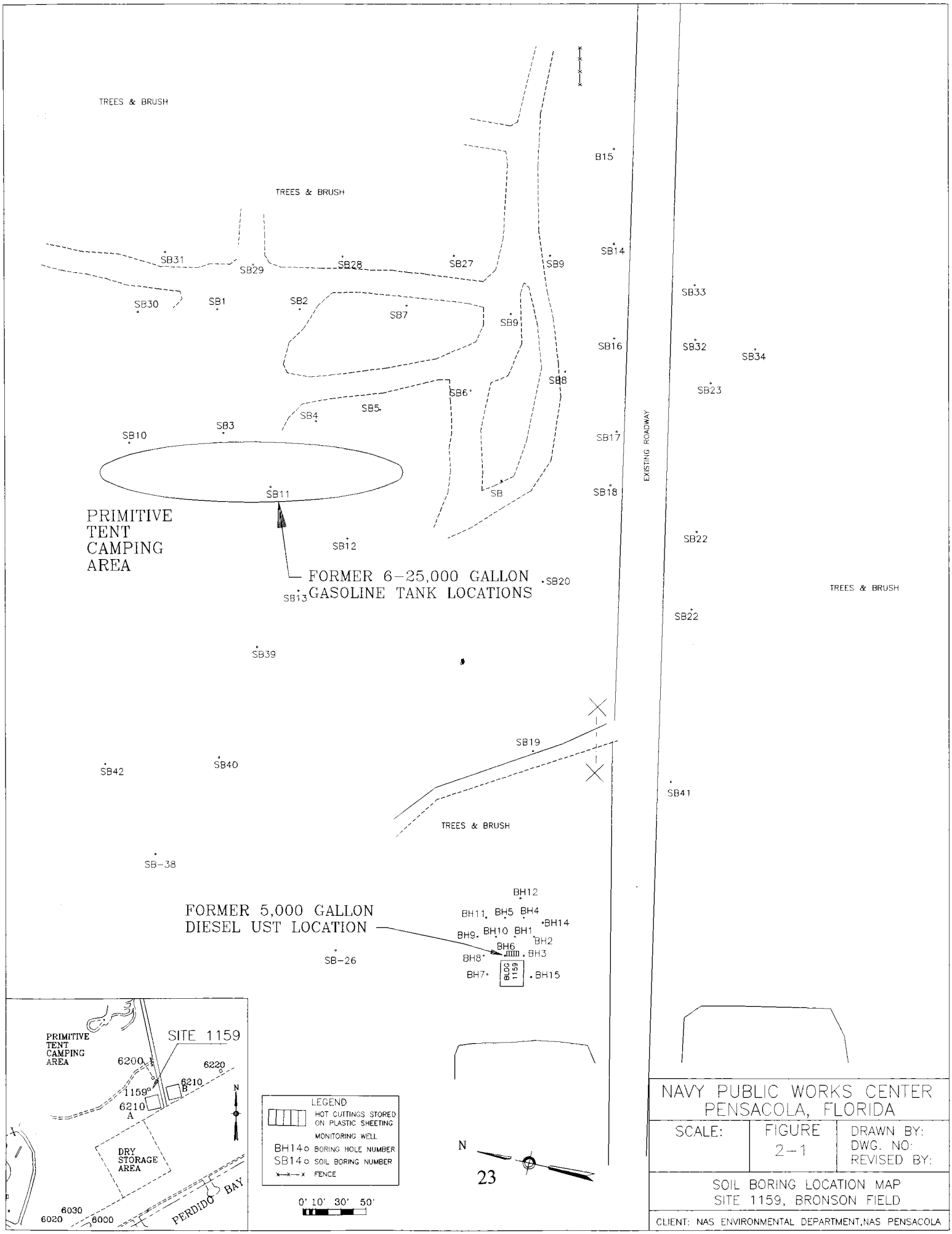
Shallow groundwater monitoring wells MW-2 thru MW-6 were installed by W.E.S., Inc. on April 3, 1996 to a depth of 13.5 feet below land surface (BLS). The monitoring wells were installed using a hollow stem auger with an inside diameter of 4-inches. The monitoring wells consist of 2-inch diameter by 10.0 feet of 0.010-inch slotted Schedule 40 PVC screen, threaded to 3.0 feet of solid schedule PVC riser casing. A filter sand pack for monitoring wells MW-2 thru MW-6 consisted of course silica sand with a mesh size of 20-30 and was placed in the annular space between the outside of the well screen and borehole from the bottom of the borehole to approximately one foot above the top of the well screen. A one foot bentonite seal was placed above the sand pack and the remaining annular space was filled with neat cement grout. A flush mounted manhole was installed around the top of the monitoring well with an 8-inch diameter steel manhole cover.

Shallow groundwater monitoring wells MW-7 thru MW-18 were installed by W.E.S., Inc. on May 22 and May 23, 1996 to a depth of 14.5 feet below land surface (BLS). Monitoring wells MW-7 thru MW-18 are constructed identical to MW-2 thru MW-6 (see details above) except the 2-inch diameter by 10.0 feet of 0.010-inch slotted Schedule 40 PVC screen is threaded to 4 feet of solid Schedule PVC riser casing.

Shallow groundwater monitoring wells MW-19 thru MW-30 were installed by W.E.S., Inc. on July 30, 31, and August 14, 1996, to a depth of 14.5 feet below land surface (BLS). Monitoring wells MW-19 thru MW-30 are constructed identical to MW-7 thru MW-18 (see details above).

Shallow groundwater monitoring wells MW-31 thru MW-36 were installed by W.E.S., Inc. on September 26, 1996 to a depth of 15.5 (MW-31), 18.5 (MW-32), 29.5 (MW-33) and 30 (MW-34 thru MW-36) feet below land surface (BLS). Monitoring wells MW-31 thru MW-36 are constructed identical to MW-2 thru MW-6 (see details above) except the 2-inch diameter by 10.0 feet of 0.010-inch slotted Schedule 40 PVC screen is threaded to 5 (MW-31), 8 (MW-32), 19 (MW-33), and 20 (MW-34 thru MW-36) feet of solid Schedule PVC riser casing.

Shallow groundwater monitoring wells MW-37 thru MW-48 were installed by W.E.S., Inc. on October 1, 2 and 3, 1996 to a depth of 31.5 (MW-37), 24.5 (MW-38 and MW-48), 19.5 (MW-39), 20.5 (MW-40, MW-41, MW-46), 17.5 (MW-42), 16.5 (MW-43), 30.5 (MW-44), 27.5


TREES & BRUSH
TREES & BRUSH
B15
SB14
SB31
SB29
SB28
SB27
SB9
SB30
SB1
SB2
SB7
SB9
SB33
SB16
SB32
SB34
SB8
SB23
SB6
SB5
SB4
SB3
SB10
SB17
EXISTING ROADWAY
SB11
SB
SB18
PRIMITIVE TENT CAMPING AREA
SB12
SB22
FORMER 6-25,000 GALLON GASOLINE TANK LOCATIONS
SB20
SB13
TREES & BRUSH
SB22
SB39
SB19
SB42
SB40
SB41
TREES & BRUSH
SB-38
BH12
FORMER 5,000 GALLON DIESEL UST LOCATION
BH11
BH5
BH4
BH14
BH9
BH10
BH1
BH2
BH6
BH8
BH3
SB-26
BH7
BLDG 1159
BH15
PRIMITIVE TENT CAMPING AREA
SITE 1159
6200
6220
6210 B
1159
6210 A
N
DRY STORAGE AREA
6030
6020
6000
PERDIDO BAY
LEGEND
HOT CUTTINGS STORED ON PLASTIC SHEETING
MONITORING WELL
BH14 BORING HOLE NUMBER
SB14 SOIL BORING NUMBER
FENCE
0' 10' 30' 50'
N
23
NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA
SCALE:
FIGURE 2-1
DRAWN BY:
DWG. NO:
REVISED BY:
SOIL BORING LOCATION MAP
SITE 1159, BRONSON FIELD
CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA

TREES & BRUSH

MW-49

TREES & BRUSH

MW-56

MW-36

MW-38

MW-37

MW-34

MW-35

MW-40

EXISTING ROADWAY

MW-57

MW-44

MW-45

MW-41

MW-39

MW-33

FORMER 6-25,000 GALLON GASOLINE TANK LOCATIONS

PRIMITIVE TENT CAMPING AREA

MW-58

MW-53

MW-46

MW-47

DMW-60

MW-42

TREES & BRUSH

MW-51

MW-48

MW-23

MW-43

MW-54

MW-28

MW-27

TREES & BRUSH

MW-22

MW-15

MW-14

MW-50

MW-32

FORMER 5,000 GALLON DIESEL UST LOCATION

MW-16

MW-13

MW-12

MW-5

MW-6

TREES & BRUSH

MW-26

MW-1

DMW-61

MW-11

MW-21

MW-59

MW-55

MW-31

MW-17

EXIST MW

MW-3

MW-10

TREES & BRUSH

MW-25

BLDG 1159

MW-2

MW-18

MW-4

MW-9

MW-8

MW-20

MW-24

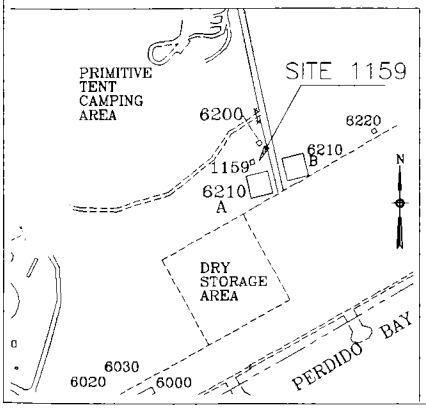
MW-7

MW-52

MW-19

MW-30

MW-29




LEGEND
HOT CUTTINGS STORED ON PLASTIC SHEETING
● MW-6 MONITORING WELL
x—x FENCE

N

0' 10' 30' 50' 70'

NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA

| SCALE: | FIGURE 2-2 | DRAWN BY: DWG. NO: REVISED BY: |
|---|---|---|

MONITORING WELL LOCATION MAP
SITE 1159, BRONSON FIELD

CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA

(MW-45), and 22.5 (MW-47) feet below land surface (BLS). Monitoring wells MW-37 thru MW-48 are constructed identical to MW-2 thru MW-6 (see details above) except the 2-inch diameter by 10.0 feet of 0.010-inch slotted Schedule 40 PVC screen is threaded to 21 (MW-37), 14 (MW-38 and MW-48), 9 (MW-39), 10 (MW-40, MW-41, MW-46), 7 (MW-42), 6 (MW-43), 20 (MW-44), 17 (MW-45), and 12 (MW-47) feet of solid Schedule PVC riser casing.

Shallow groundwater monitoring wells MW-49 thru MW-59 were installed by W.E.S., Inc. on December 10 and 11, 1996 to a depth of 25.5 (MW-49 and MW-56), 15.5 (MW-50, MW-51, and MW-52), 27.5 (MW-53), 24.5 (MW-54), 19.5 (MW-55), 22.5 (MW-57), 18.5 (MW-58), and 17.5 (MW-59) feet below land surface (BLS). Monitoring wells MW-49 thru MW-59 are constructed identical to MW-2 thru MW-6 (see details above) except the 2-inch diameter by 10.0 feet of 0.010-inch slotted Schedule 40 PVC screen is threaded to 15 (MW-49 and MW-56), 5 (MW-50, MW-51, and MW-52), 17 (MW-53), 14 (MW-54), 9 (MW-55), 12 (MW-57), 8 (MW-58), and 7 (MW-59) feet of solid Schedule PVC riser casing.

Vertical extent groundwater monitoring wells DMW-60 and DMW-61 were installed by W.E.S., Inc. on January 29, 1997 and February 18, 1997, respectfully. The wells were set at 40.5 feet BLS and 29.5 feet BLS, respectfully, with 5 feet of 2-inch diameter, 0.010-inch slotted schedule 40 PVC screen and 35 (DMW-60) and 24 (DMW-61) of Schedule 40 PVC riser casing. A filter sand pack was placed in the annular space between the outside of the well screen and edge of borehole from the bottom of the borehole to 1 foot above the well screen. A one foot fine sand seal was place approximately 1 foot above the sand filter pack with the remaining annular space filled with neat cement grout. A steel manhole with an 8" diameter manhole cover was placed in the borehole around the PVC riser and set with neat cement grout A locking cap placed at the top of the monitoring well completed the monitoring well construction.

The groundwater extracted during well development of MW-2 thru DMW-61 was placed into steel 55 gallon drums and properly labeled for disposal. Plastic was placed under and on top of drill cuttings. Monitoring well construction diagrams for MW-2 thru DMW-61 are shown in Appendix A. Lithological logs for monitoring wells MW-2 thru DMW-61 are shown in Appendix C.

## 2.2 GROUNDWATER FLOW DIRECTION

The top of casing (TOC) elevations for shallow monitoring wells MW-2 thru MW-59 were surveyed by W.E.S., Inc. on March 5, 1997. No survey bench marks were located near the site and therefore the top of casing elevations were based on monitoring well MW-1 having an assumed top of casing elevation of 30.0 feet above mean seal level (MSL). Groundwater elevations for the groundwater level measurements taken on June 12, 1997 are shown in Table 2-1. A groundwater flow direction map for the groundwater level measurements taken on June 12, 1997 is shown in Figure 2-3. The groundwater flow direction map indicates the groundwater flow at the site is generally toward the west.

**TABLE 2-1**
**TOP OF CASING AND GROUNDWATER ELEVATIONS**
**MONITORING WELLS MW-1 THRU MW-59**
**U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1159**

| WELL NUMBER | TOC FT. M.S.L. | DTW (FT) 6/12/97 | GROUNDWATER ELEVATION 6/12/97 |
|---|---|---|---|
| MW-1 | 30.00 | 6.65 | 23.35 |
| MW-2 | 27.36 | 7.08 | 20.28 |
| MW-3 | 27.66 | 7.36 | 20.30 |
| MW-4 | 26.97 | 6.65 | 20.32 |
| MW-5 | 27.57 | 7.19 | 20.38 |
| MW-6 | 27.68 | 7.31 | 20.37 |
| MW-7 | 27.13 | 6.87 | 20.26 |
| MW-8 | 27.54 | 7.31 | 20.23 |
| MW-9 | 27.89 | 7.66 | 20.23 |
| MW-10 | 27.99 | 7.71 | 20.28 |
| MW-11 | 28.19 | 7.86 | 20.33 |
| MW-12 | 28.24 | 7.86 | 20.38 |
| MW-13 | 28.39 | 7.98 | 20.41 |
| MW-14 | 28.47 | 8.05 | 20.42 |
| MW-15 | 28.18 | 7.75 | 20.43 |
| MW-16 | 27.75 | 7.36 | 20.39 |
| MW-17 | 27.47 | 7.12 | 20.35 |
| MW-18 | 27.70 | 7.39 | 20.31 |
| MW-19 | 28.60 | 8.42 | 20.18 |
| MW-20 | 28.56 | 8.41 | 20.15 |
| MW-21 | 28.27 | 7.97 | 20.30 |
| MW-22 | 28.86 | 8.36 | 20.50 |
| MW-23 | 28.72 | 8.19 | 20.53 |
| MW-24 | 26.73 | 6.51 | 20.22 |
| MW-25 | 27.70 | 7.39 | 20.31 |
| MW-26 | 28.30 | 7.91 | 20.39 |
| MW-27 | 29.06 | 8.58 | 20.48 |
| MW-28 | 29.21 | 8.76 | 20.45 |
| MW-29 | 25.49 | 5.37 | 20.12 |
| MW-30 | 25.14 | 5.02 | 20.12 |

NOTES: TOC = Top of Casing
DTW = Depth to Water

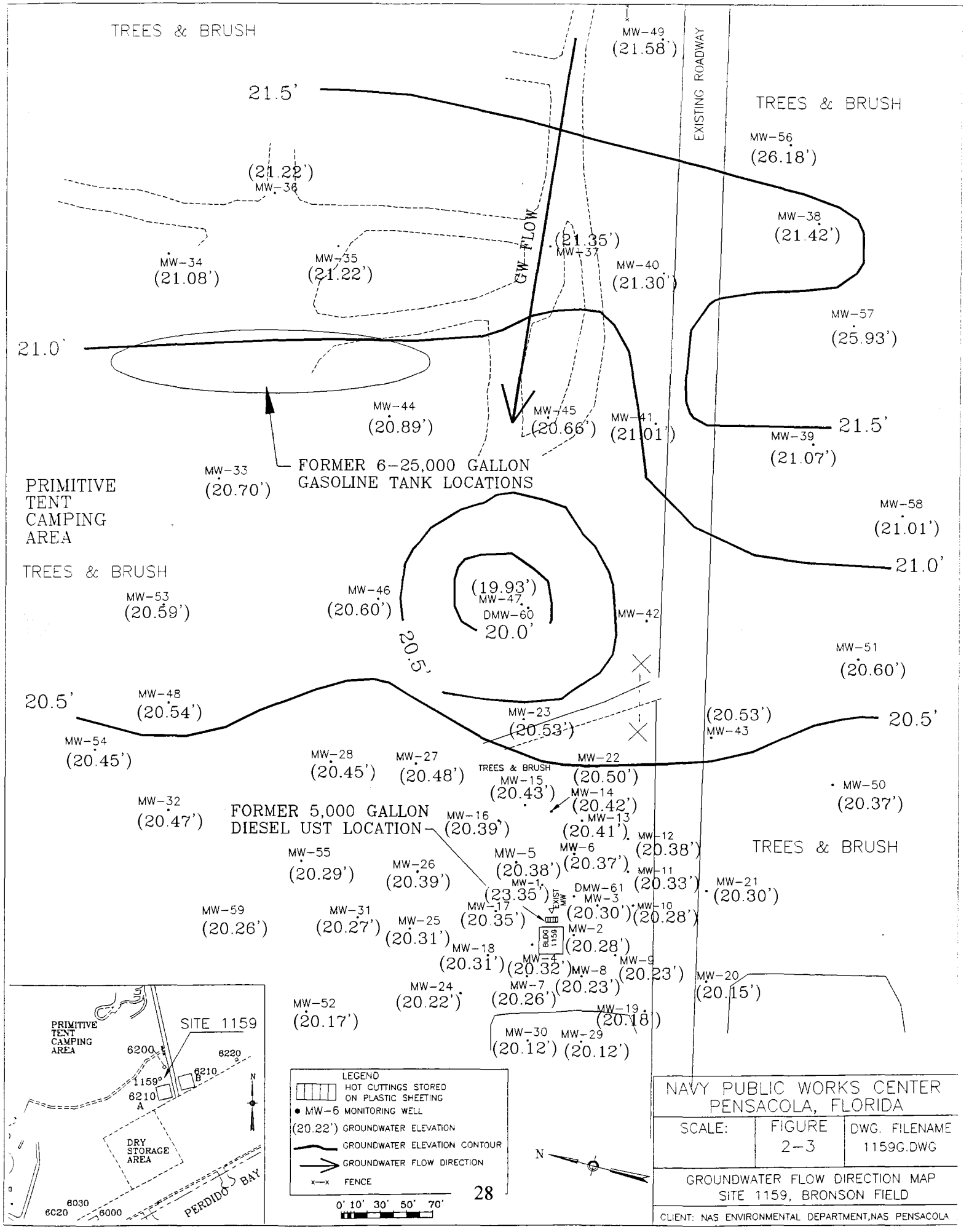
Benchmark assumes elevation of 30.00 ft., Top of Casing Existing MW-1, Bronson Field, Florida. MW-1 installed by others.

**TABLE 2-1 (CONT.)**

| WELL NUMBER | TOC FT. M.S.L. | DTW (FT) 6/12/97 | GROUNDWATER ELEVATION 6/12/97 |
|---|---|---|---|
| MW-31 | 27.20 | 6.93 | 20.27 |
| MW-32 | 32.98 | 12.51 | 20.47 |
| MW-33 | 41.49 | 20.79 | 20.70 |
| MW-34 | 44.93 | 23.85 | 21.08 |
| MW-35 | 44.31 | 23.09 | 21.22 |
| MW-36 | 44.83 | 23.61 | 21.22 |
| MW-37 | 44.32 | 22.97 | 21.35 |
| MW-38 | 39.63 | 18.21 | 21.42 |
| MW-39 | 32.86 | 11.79 | 21.07 |
| MW-40 | 35.61 | 14.31 | 21.30 |
| MW-41 | 33.36 | 12.35 | 21.01 |
| MW-42 | 30.88 | 10.15 | 20.73 |
| MW-43 | 28.88 | 8.35 | 20.53 |
| MW-44 | 42.70 | 21.81 | 20.89 |
| MW-45 | 39.97 | 19.31 | 20.66 |
| MW-46 | 34.41 | 13.81 | 20.60 |
| MW-47 | 34.74 | 14.81 | 19.93 |
| MW-48 | 37.05 | 16.51 | 20.54 |
| MW-49 | 37.99 | 16.41 | 21.58 |
| MW-50 | 27.10 | 6.73 | 20.37 |
| MW-51 | 27.67 | 7.07 | 20.60 |
| MW-52 | 26.91 | 6.74 | 20.17 |
| MW-53 | 41.00 | 20.41 | 20.59 |
| MW-54 | 35.76 | 15.31 | 20.45 |
| MW-55 | 29.94 | 9.65 | 20.29 |
| MW-56 | 43.24 | 17.06 | 26.18 |
| MW-57 | 39.90 | 13.97 | 25.93 |
| MW-58 | 29.10 | 8.09 | 21.01 |
| MW-59 | 30.64 | 10.38 | 20.26 |

NOTES: TOC = Top of Casing
DTW = Depth to Water

Benchmark assumes elevation of 30.00 ft., Top of Casing Existing MW-1, Bronson Field, Florida. MW-1 installed by others.


TREES & BRUSH
MW-49 (21.58')
EXISTING ROADWAY
TREES & BRUSH
21.5'
MW-56 (26.18')
(21.22') MW-36
MW-38 (21.42')
GW FLOW
(21.35') MW-37
MW-34 (21.08')
MW-35 (21.22')
MW-40 (21.30')
MW-57 (25.93')
21.0'
MW-44 (20.89')
MW-45 (20.66')
MW-41 (21.01')
21.5'
MW-39 (21.07')
FORMER 6-25,000 GALLON GASOLINE TANK LOCATIONS
MW-33 (20.70')
PRIMITIVE TENT CAMPING AREA
MW-58 (21.01')
21.0'
TREES & BRUSH
(19.93') MW-47
DMW-60 20.0'
MW-46 (20.60')
MW-53 (20.59')
MW-42
20.5'
MW-51 (20.60')
20.5'
MW-48 (20.54')
MW-23 (20.53')
(20.53') MW-43
20.5'
MW-54 (20.45')
MW-28 (20.45')
MW-27 (20.48')
TREES & BRUSH
MW-22 (20.50')
MW-15 (20.43')
MW-14 (20.42')
MW-50 (20.37')
MW-32 (20.47')
FORMER 5,000 GALLON DIESEL UST LOCATION
MW-16 (20.39')
MW-13 (20.41')
MW-12 (20.38')
TREES & BRUSH
MW-55 (20.29')
MW-26 (20.39')
MW-5 (20.38')
MW-6 (20.37')
MW-11 (20.33')
MW-21 (20.30')
MW-1 (23.35')
DMW-61
EXIST MW
MW-3 (20.30')
MW-10 (20.28')
MW-59 (20.26')
MW-31 (20.27')
MW-25 (20.31')
MW-17 (20.35')
BLDG 1159
MW-2 (20.28')
MW-18 (20.31')
MW-4 (20.32')
MW-9 (20.23')
MW-8 (20.23')
MW-20 (20.15')
MW-24 (20.22')
MW-7 (20.26')
MW-52 (20.17')
MW-19 (20.18')
MW-30 (20.12')
MW-29 (20.12')
PRIMITIVE TENT CAMPING AREA
SITE 1159
6200
6220
6210 B
1159
6210 A
N
DRY STORAGE AREA
6030
6020
6000
PERDIDO BAY
LEGEND
HOT CUTTINGS STORED ON PLASTIC SHEETING
MW-6 MONITORING WELL
(20.22') GROUNDWATER ELEVATION
GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION
FENCE
0' 10' 30' 50' 70'
N
NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA
SCALE:
FIGURE 2-3
DWG. FILENAME 1159G.DWG
GROUNDWATER FLOW DIRECTION MAP
SITE 1159, BRONSON FIELD
CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA

## 2.3 GROUNDWATER FLOW RATE

There are nine sites at Bronson Field at which contamination assessment reports are being conducted. Because the hydrogeology at the site was generally found consistent at each of the nine sites at Bronson Field, slug tests were performed at only three of the sites (Sites 1140-NE, 1122 and 1116). A rising head slug test was performed at each of the three sites by W.E.S., Inc. to assess the hydraulic conductivity of the surficial zone of the sand-and-gravel aquifer. Procedures for conducting the slug tests, slug test data graphs and calculations are attached in Appendix B. The slug test results indicate the estimated horizontal hydraulic conductivity (k) at sites 1140-NE, 1122 and 1116 to be 0.9719 ft/day, 0.1171 ft/day and 0.6899 ft/day, respectively. Therefore, the average estimated horizontal hydraulic conductivity at the site is 0.6130 ft/day. The calculated linear groundwater flow velocity at sites 1140-NE, 1122 and 116 was estimated to be 0.0152 ft/day (5.5337 ft/yr), 0.0043 ft/day (1.5514 ft/yr) and 0.0069 ft/day (2.5181 ft/yr), respectively. Therefore, the average estimated linear groundwater velocity was determined to be 0.0088 ft/day (3.201 ft/yr).

## 2.4 SITE SPECIFIC HYDROGEOLOGY

The principal aquifer of concern at the site is the surfical zone of the sand-and-gravel aquifer. The surfical zone was penetrated to a depth of 40 feet below land surface (BLS) during this investigation. The groundwater table was encountered at approximately 6 feet to 24 feet BLS.

The site specific geology was determined by examination of soil samples collected during the installation of monitoring wells. The shallow subsurface lithology beneath the site is generally characterized by a red/brown fine sand at a depth of 0-13 to 17 ft. and by a red/ brown fine silty sand with traces of clay at a depth of 13 to 17-30 ft.; and white coarse to medium grained sand at a depth of 30-40 ft. Stratigraphic units are shown on lithologic logs compiled during the drilling of the groundwater monitoring wells. Lithologic logs are found in Appendix C.

## 2.5 SOIL ASSESSMENT

The extent of soil contamination at the site was determined by OVA screening. Fifteen borings (BH-1 thru BH-15) were installed at the site on March 26, 1996 by W.E.S. Inc. to a depth of approximately 6 feet BLS. Forty-two additional borings (SB-1 thru SB-42) were installed at the site from September 11, 1996 thru September 25, 1996 by W.E.S., Inc. to a depth of from 9 to 25 feet BLS to delineate horizontal and vertical extent of soil contamination at the site. The soil borings were installed using a hollow stem auger. Sixty borings were installed during the installation of monitoring wells MW-2 thru DMW-61. Soil samples were collected from soil borings BH-1 thru BH-15, SB-1 thru SB-42 and monitoring wells MW-2 thru DMW-62 at three foot intervals beginning at 1' BLS and ending at 1' above the water table. Most samples were taken at 1, 4, 7, and 10 feet BLS. The locations of the soil borings and monitoring wells are shown in Figures 2-1 and 2-2, respectively. The groundwater level at the site varied from a high of 24 feet to a low of 6 feet BLS.

The soil boring designations and their respective OVA screening results are shown in

Table 2-2 and a Soil Contamination Distribution Map is included as Figure 2-4. The groundwater table at the site was generally encountered at from 6 to 24 feet BLS. Soil samples from SB-3 (>1000 ppm) @ 25 ft. BLS, SB-4 (800 ppm) @ 25 ft. BLS, SB-5 (>1000 ppm) @ 25 ft. BLS, SB-6 (75 ppm) @ 25 ft. BLS, SB-8 (830 ppm) @ 25 ft. BLS, SB-12 (200 ppm & 720 ppm) @ 19 and 22 ft. BLS, respectfully, SB-13 (80 ppm & >1000 ppm) @ 16 and 19 ft. BLS, respectfully, SB-14 (160 ppm) @ 13 ft. BLS, SB-16 (>1000 ppm) @ 16 ft. BLS, SB-17 (>1000 ppm) @ 16 ft. BLS, SB-18 (>1000 ppm) @ 13 ft. BLS, SB-19 (>1000 ppm) @ 13 ft. BLS, SB-20 (50 ppm) @13 ft. BLS, SB-21 (60 ppm) @ 13 ft. BLS, SB-23 (>1000 ppm) @ 20 ft. BLS, SB-32 (>1000) @ 25 ft. BLS, SB-33 (>1000 ppm) @ 19 ft. BLS, SB-34 (>1000 ppm) @ 19 ft. BLS, SB-39 (>1000 ppm) @ 12 ft. BLS, and DMW-60 (>1000 ppm) @ 13 ft. BLS met or exceeded the 50 ppm level for soil considered to be excessively contaminated from diesel contamination. Those soil samples were collected approximately 1 ft. above the water table. The OVA results indicate that the diesel contamination is located directly above the water table in the capillary fringe. All other soil samples collected were found to be less than the 50 ppm level for soil considered to be excessively contaminated from diesel contamination.

## 2.6 SURFACE WATER ASSESSMENT

No surface water was observed at or immediately adjacent to the site. The nearest surface water, Perdido Bay, is located approximately 900 feet west southwest of the site and therefore no surface water assessment was performed for this report.

## 2.7 GROUNDWATER QUALITY ASSESSMENT

Groundwater samples were extracted from shallow groundwater monitoring wells MW-1 thru MW-59 and deep vertical extent groundwater monitoring wells DMW-60 and DMW-61 by W.E.S., Inc. using the methods and procedures outlined in their Comprehensive Quality Assurance Plan No. 900465G. The groundwater samples were analyzed by NPWC laboratory using the method and procedures outlined in PWC's Comprehensive Quality Assurance Plan No. 920121G. American Environmental Network (AEN) performed TPH analyses on some of the groundwater samples in accordance with their Comprehensive Quality Assurance Plan No 860137.

Groundwater samples were collected from shallow groundwater monitoring wells MW-2 thru MW-6 on April 24, 1996, from MW-1 on May 22, 1996, from MW-7 thru MW-18 on June 4, 1996, from MW-19 thru MW-28 on August 14, 1996, from MW-29 and MW-30 on August 22, 1996, from MW-31 thru MW-38 on October 10, 1996, from MW-39 thru MW-48 on October 22, 1996, from MW-49 thru MW-59 on December 13, 1996, from deep vertical extent monitoring well DMW-60 on January 31, 1997 and March 10, 1997, and DMW-61 on February 26, 1997. Groundwater samples collected from the monitoring wells were analyzed for volatile organic aromatics (VOAs), polynuclear aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPHs), and ethylene dibromide (EDBs) utilizing EPA Methods 8260, 8270A, FLPRO 8015, and 504, respectfully.

Groundwater samples were collected from each monitoring well using the quiescent sampling

**TABLE 2-2**
**VOLATILE ORGANIC COMPOUNDS (VOCs)**
**CONCENTRATIONS IN SOIL**
**SOIL SAMPLES FROM BH-1 THRU BH-15**
**SB-1 THRU SB-42 AND MW-2 THRU DMW-61**
**U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1159**

| Boring Designation | Depth (Feet BLS) | VOCs Concentration (ppm)[1] |
|---|---|---|
| BH-1 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| | 6' | 0 |
| BH-2 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| | 6' | 0 |
| BH-3 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| | 6' | 0 |
| BH-4 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| | 6' | 0 |
| BH-5 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| | 6' | 0 |
| BH-6 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| | 6' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface
ppm = parts per million
NS = not sampled
Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| BH-7 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| | 6' | 0 |
| BH-8 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| | 6' | 0 |
| BH-9 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| | 6' | 0 |
| BH-10 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| | 6' | 0 |
| BH-11 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| | 6' | 0 |
| BH-12 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| | 6' | 0 |
| BH-13 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| | 6' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface ppm = parts per million

NS = not sampled

Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| BH-14 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| | 6' | 0 |
| BH-15 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| | 6' | 0 |
| SB-1 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| | 25' | 22 |
| SB-2 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 25' | 40 |
| SB-3 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface ppm = parts per million NS = not sampled

Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| SB-3 | 16' | 0 |
| | 19' | 0 |
| | 25' | >1000 |
| SB-4 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| | 25' | 800 |
| SB-5 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| | 25' | >1000 |
| SB-6 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| | 25' | 75 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface
ppm = parts per million
NS = not sampled
Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| SB-7 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| | 25' | 0 |
| SB-8 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| | 25' | 830 |
| SB-9 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| | 25' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface
ppm = parts per million
NS = not sampled
Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| SB-10 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| | 25' | 0 |
| SB-11 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| | 25' | 40 |
| SB-12 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 200 |
| | 22' | 720 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface
ppm = parts per million
NS = not sampled
Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| SB-13 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 80 |
| | 19' | >1000 |
| SB-14 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 160 |
| SB-15 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| SB-16 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | >1000 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface
ppm = parts per million
NS = not sampled
Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| SB-17 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | >1000 |
| SB-18 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | >1000 |
| SB-19 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | >1000 |
| SB-20 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 50 |
| SB-21 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 60 |
| SB-22 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface
ppm = parts per million
NS = not sampled
Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| SB-22 | 13' | 40 |
| SB-23 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 20' | >1000 |
| SB-24 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 9' | 0 |
| SB-25 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 9' | 0 |
| SB-26 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 9' | 8 |
| SB-27 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| | 25' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface
ppm = parts per million
NS = not sampled
Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| SB-28 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| | 25' | 0 |
| SB-29 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| | 25' | 0 |
| SB-30 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| | 25' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface
ppm = parts per million
NS = not sampled
Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| SB-31 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| | 25' | 0 |
| SB-32 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 30 |
| | 25' | >1000 |
| SB-33 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 7 |
| | 19' | >1000 |
| SB-34 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface

ppm = parts per million NS = not sampled

Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| SB-34 | 16' | 0 |
| | 19' | >1000 |
| SB-35 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| SB-36 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 20 |
| SB-37 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 8 |
| SB-38 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 9' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface
ppm = parts per million
NS = not sampled
Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| SB-39 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 12' | >1000 |
| SB-40 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 10 |
| SB-41 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| SB-42 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface
ppm = parts per million
NS = not sampled
Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| MW-2 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| MW-3 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| MW-4 | 1' | 0 |
| | 3' | 0 |
| | 5' | 4 |
| MW-5 | 1' | 0 |
| | 3' | 0 |
| | 5' | 0 |
| MW-6 | 1' | 0 |
| | 3' | 0 |
| | 5' | 1.5 |
| MW-7 | 1' | 0 |
| | 4' | 0 |
| | 6' | 0 |
| MW-8 | 1' | 0 |
| | 4' | 0 |
| | 6' | 0 |
| MW-9 | 1' | 0 |
| | 4' | 0 |
| | 6' | 0 |
| MW-10 | 1' | 0 |
| | 4' | 0 |
| | 6' | 0 |
| MW-11 | 1' | 0 |
| | 4' | 0 |
| | 6' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface
ppm = parts per million
NS = not sampled
Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| MW-12 | 1' | 0 |
| | 4' | 0 |
| | 6' | 0 |
| MW-13 | 1' | 0 |
| | 4' | 0 |
| | 6' | 0 |
| MW-14 | 1' | 0 |
| | 4' | 0 |
| | 6' | 0 |
| MW-15 | 1' | 0 |
| | 4' | 0 |
| | 6' | 0 |
| MW-16 | 1' | 0 |
| | 4' | 0 |
| | 6' | 0 |
| MW-17 | 1' | 0 |
| | 4' | 0 |
| | 6' | 0 |
| MW-18 | 1' | 0 |
| | 4' | 0 |
| | 6' | 0 |
| MW-19 | 1' | 0 |
| | 4' | 2 |
| | 7' | 5 |
| MW-20 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| MW-21 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface
ppm = parts per million
NS = not sampled
Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| MW-22 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| MW-23 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| MW-24 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| MW-25 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| MW-26 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| MW-27 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| MW-28 | 1' | 1 |
| | 4' | 5 |
| | 7' | 0 |
| MW-29 | 1' | 0 |
| | 3' | 0 |
| MW-30 | 1' | 0 |
| | 3' | 0 |
| MW-31 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| MW-32 | 1' | 0 |
| | 4' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface ppm = parts per million
NS = not sampled
Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| MW-32 | 7' | 0 |
| | 10' | 0 |
| MW-33 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 21' | 0 |
| MW-34 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| MW-35 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| MW-36 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface
ppm = parts per million
Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| MW-36 | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| MW-37 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| | 23' | 0 |
| MW-38 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| MW-39 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 11' | 0 |
| MW-40 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 12' | 0 |
| MW-41 | 1' | 0 |
| | 4' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface

ppm = parts per million

Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| MW-41 | 7' | 0 |
| | 10' | 0 |
| | 12' | 0 |
| MW-42 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 9' | 0 |
| MW-43 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 8' | 0 |
| MW-44 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 11' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |
| | 22' | 0 |
| MW-45 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 19' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface

ppm = parts per million

Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| MW-46 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 12' | 0 |
| MW-47 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 14' | 0 |
| MW-48 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| MW-49 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 14' | 0 |
| MW-50 | 1' | 0 |
| | 4' | 0 |
| | 6' | 0 |
| MW-51 | 1' | 0 |
| | 4' | 0 |
| | 6' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface

ppm = parts per million

Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| MW-52 | 1' | 0 |
| | 4' | 0 |
| | 6 | 0 |
| MW-53 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| MW-54 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| MW-55 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 9' | 0 |
| MW-56 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |
| | 16' | 0 |
| | 18' | 0 |
| MW-57 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| | 13' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface

ppm = parts per million

Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

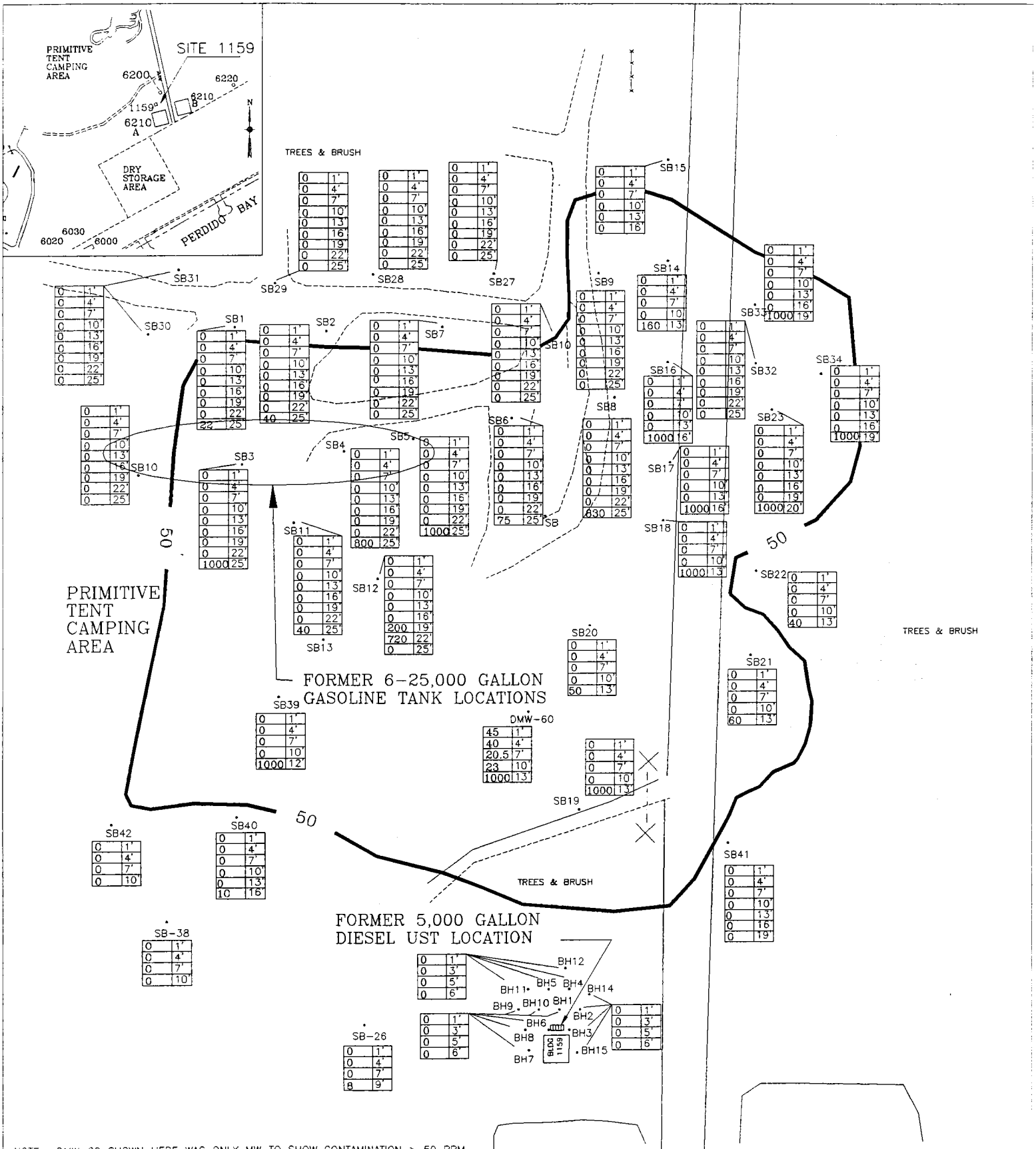
| Table 2-2 (Cont.) | | |
|---|---|---|
| **Boring Designation** | **Depth (Feet BLS)** | **VOCs Concentration (ppm)[1]** |
| MW-58 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 10' | 0 |
| MW-59 | 1' | 0 |
| | 4' | 0 |
| | 7' | 0 |
| | 9' | 0 |
| DMW-60 | 1' | 45 |
| | 4' | 40 |
| | 7' | 20.5 |
| | 10' | 23 |
| | 13' | >1000 |
| DMW-61 | 1' | 0 |
| | 4' | 0 |
| | 6' | 0 |

[1] VOCs concentrations assessed by organic vapor analyzer headspace techniques. Results are total VOCs less methane.

Notes: BLS = below land surface

ppm = parts per million

Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL




NOTE: DMW-60 SHOWN HERE WAS ONLY MW TO SHOW CONTAMINATION > 50 PPM
ALL MW LOCATIONS AND CONCENTRATIONS SHOWN ON SHEET 2 OF 2

LEGEND

HOT CUTTINGS STORED ON PLASTIC SHEETING

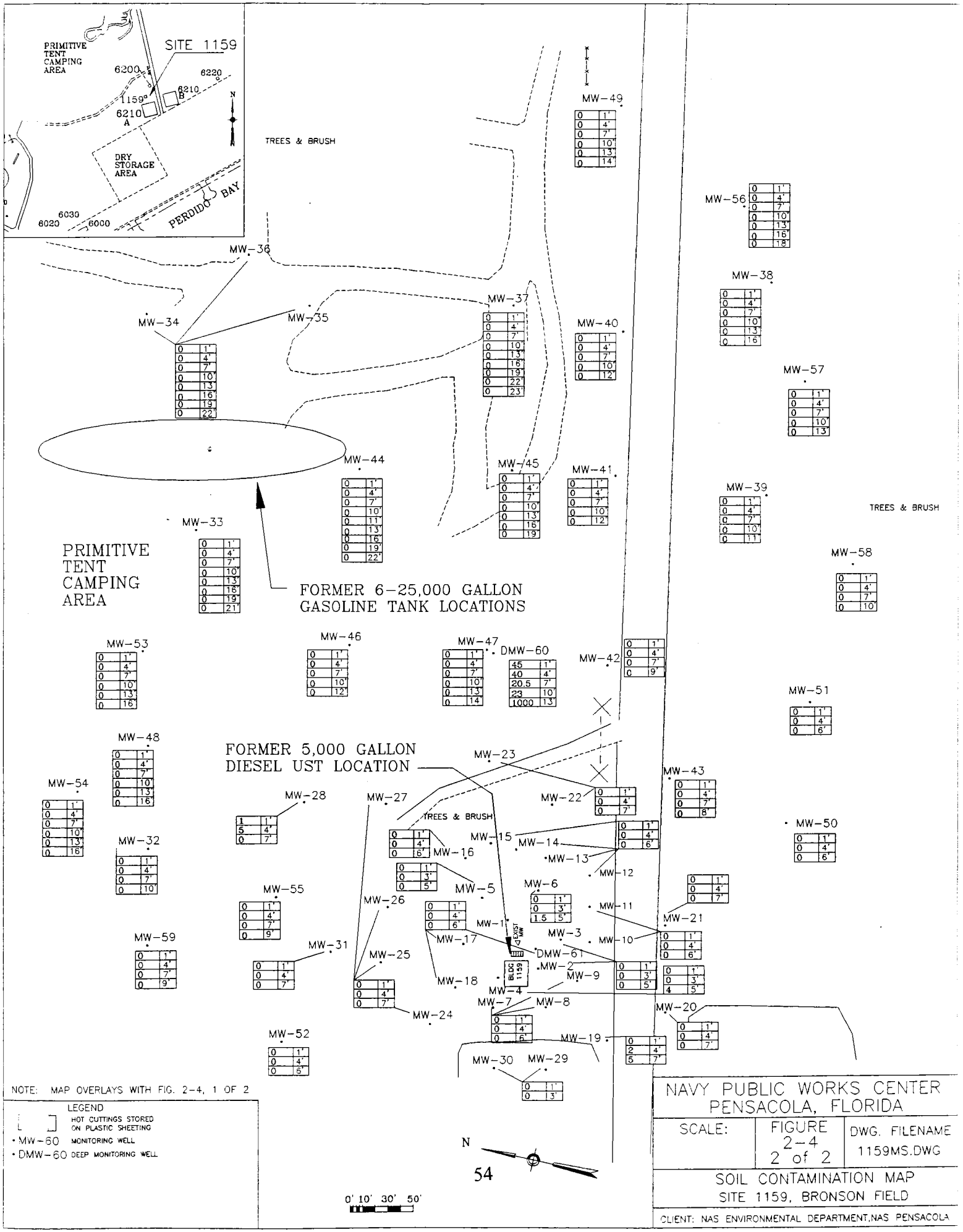
DMW-60 DEEP MONITORING WELL
BH14 BORING HOLE NUMBER
SB14 SOIL BORING NUMBER
FENCE
50 ISOCONCENTRATION LINE 50 PPM
50 50 PPM

NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA

| SCALE: | FIGURE 2-4 1 of 2 | DWG. FILENAME 1159S.DWG |
|---|---|---|

SOIL CONTAMINATION MAP
SITE 1159, BRONSON FIELD

CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA




NOTE: MAP OVERLAYS WITH FIG. 2-4, 1 OF 2

LEGEND

HOT CUTTINGS STORED ON PLASTIC SHEETING

• MW-60 MONITORING WELL

• DMW-60 DEEP MONITORING WELL

NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA

| SCALE: | FIGURE 2-4 2 of 2 | DWG. FILENAME 1159MS.DWG |
|---|---|---|

SOIL CONTAMINATION MAP
SITE 1159, BRONSON FIELD

CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA

technique by Navy Public Work Center (PWC) Pensacola laboratory personnel on June 12, 1997. The groundwater sampling was conducted in accordance with the methods and procedures outlined in PWC's Comprehensive Quality Assurance Plan (CompQAP No. 920121G). The groundwater samples were analyzed for total lead using EPA Method 7421.

Groundwater analytical results are included in Appendix D. Summary tables of the VOAs and PAHs analytical results are shown Tables 2-3 and 2-4, respectfully, and summary tables of the TPHs, lead, and EDBs analytical results are shown in Table 2-5. A Benzene Contamination Distribution Map is included as Figure 2-5, a BTEX Contamination Distribution Map is included as Figure 2-6, a TPH Contamination Distribution Map is included as Figure 2-7, an EDB Contamination Distribution Map is included as Figure 2-8, and a Lead Contamination Distribution Map is included as Figure 2-9.

The analysis of groundwater samples collected from monitoring wells MW-1 thru DMW-61 indicated total BTEX levels in monitoring wells MW-1 thru MW-6, MW-8 and MW-9, MW-11 and MW-12, MW-14 thru 32, MW-39, MW-41 thru MW-43, MW-45 thru MW-48, and MW-55 at 319 ppb, 49 ppb, 464 ppb, 181 ppb, 94 ppb, 78 ppb, 131 ppb, 255 ppb, 20 ppb, 130 ppb, 291 ppb, 137 ppb, 228 ppb, 479 ppb, 114 ppb, 8 ppb, 5 ppb, 86 ppb, 85 ppb, 6280 ppb, 226 ppb, 531 ppb, 763 ppb, 1590 ppb, 4438 ppb, 25.1 ppb, 9.1 ppb, 499 ppb, 2740 ppb, 1 ppb, 66 ppb, 302 ppb, 186 ppb, 4560 ppb, 4820 ppb, 6780 ppb, 98 ppb, and 1405 ppb, respectively. Total BTEX levels in monitoring wells MW-1 (319 ppb), MW-3 (464 ppb), MW-4 (181 ppb), MW-5 (94 ppb), MW-6 (78 ppb), MW-8 (131 ppb), MW-9 (255 ppb), MW-12 (130 ppb), MW-14 (291 ppb), MW-15 (137 ppb), MW-16 (228 ppb), MW-17 (479 ppb), MW-18 (114 ppb), MW-21 (86 ppb), MW-22 (85 ppb), MW-24 (226 ppb), MW-25 (531 ppb), MW-26 (763 ppb), MW-27 (1590 ppb), MW-28 (4438 ppb), MW-31 (499 ppb), MW-32 (2740 ppb), MW-41 (66 ppb), MW-42 (302 ppb), MW-43 (186 ppb), MW-45 (4560 ppb), MW-46 (4820 ppb), MW-47 (ppb), MW-48 (98 ppb), and MW-55 (1405 ppb) were above the FDEP allowable regulatory limit of 50 ppb. Benzene was detected in the groundwater samples collected from monitoring wells MW-3, MW-22, MW-23, MW-24, MW-27, MW-28, and MW-47 at concentrations of 2 ppb, 5 ppb, 880 ppb, 4 ppb, 100 ppb, 38 ppb, and 320 ppb which are above the FDEP target level of 1 ppb for benzene. Bromodi-chloromethane was detected in the groundwater samples collected from monitoring wells MW-14, MW-15, MW-25, MW-26, and MW-27 at concentrations of 8 ppb and 5 ppb, 10 ppb, 11 ppb, and 2 ppb, respectfully. Chloroform was detected in the groundwater samples collected from monitoring wells MW-33, MW-34, MW-36, MW-37, MW-38, MW-53, MW-54, and deep vertical extent monitoring well DMW-61 at concentrations of 2 ppb, 4 ppb, 3 ppb, 4 ppb, 1 ppb, 1 ppb, 1 ppb, and 1 ppb. No VOAs were detected in the groundwater samples collected from monitoring wells MW-7, MW-10, MW-13, MW-33 thru MW-38, MW-40, MW-44, MW-49 thru MW-54, MW-56 thru MW-59, or deep vertical extent monitoring well DMW-60 (3/10/97) and DMW-61.

No PAHs were detected in the groundwater samples collected from monitoring wells MW-1 thru 39 or MW-41 thru DMW-61. Fluoranthene, phenanthrene, and pyrene were detected in shallow monitoring well MW-40 at concentrations of 7 ppb, 8 ppb, and 5 ppb, respectfully.

EDB was detected in shallow monitoring wells MW-23 and MW-38 at concentration levels of

**TABLE 2-3**
**SUMMARY OF VOLATILE ORGANICS**
**ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**
**COLLECTED FROM MONITORING WELLS MW-1 THRU DMW-61**
**U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1159**

| | MONITORING WELL NUMBER | | | | | |
|---|---|---|---|---|---|---|
| | 5/22/96 | 4/24/96 | 4/24/96 | 4/24/96 | 4/24/96 | 4/24/96 |
| PARAMETER | MW-1 | MW-2 | MW-3 | MW-4 | MW-5 | MW-6 |
| Benzene | BDL | BDL | 2 | BDL | BDL | BDL |
| Bromodi-chloromethane | BDL | BDL | BDL | BDL | BDL | BDL |
| Chloroform | BDL | BDL | BDL | BDL | BDL | BDL |
| Ethylbenzene | 57 | 11 | 110 | 27 | 11 | 15 |
| Toluene | 2 | BDL | 2 | 4 | 4 | BDL |
| Xylenes (Total) | 260 | 38 | 350 | 150 | 79 | 63 |
| Total VOA (BTEX) | 319 | 49 | 464 | 181 | 94 | 78 |

NOTES: Groundwater samples from MW-1 thru MW-6 were collected on dates noted above.
All results reported in parts per billion (ppb) unless otherwise noted.
BDL = Below detection limits
Total BTEX = Summation of benzene, ethylbenzene, toluene, and xylenes (total)

## TABLE 2-3 (Cont.)

| PARAMETER | MONITORING WELL NUMBER | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-7 | MW-8 | MW-9 | MW-10 | MW-11 | MW-12 | MW-13 | MW-14 | MW-15 | MW-16 | MW-17 | MW-18 |
| Benzene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Bromodi-chloromethane | BDL | BDL | BDL | BDL | BDL | BDL | BDL | 8 | 5 | BDL | BDL | BDL |
| Chloroform | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Ethylbenzene | BDL | 21 | 15 | BDL | BDL | 30 | BDL | 33 | 8 | 8 | 50 | 15 |
| Toluene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | 8 | 9 | BDL | 19 | 6 |
| Xylenes (Total) | BDL | 110 | 240 | BDL | 20 | 100 | BDL | 250 | 120 | 220 | 410 | 93 |
| Total VOA (BTEX) | BDL | 131 | 255 | BDL | 20 | 130 | BDL | 291 | 137 | 228 | 479 | 114 |

NOTES: All results reported in parts per billion (ppb) unless otherwise noted.
Groundwater monitoring analyses for June 4, 1996 sampling event.
BDL = Below detection limits
Total BTEX = Summation of benzene, ethylbenzene, toluene, and xylenes (total)

## TABLE 2-3 (Cont.)

| PARAMETER | MONITORING WELL NUMBER | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-19 | MW-20 | MW-21 | MW-22 | MW-23 | MW-24 | MW-25 | MW-26 | MW-27 | MW-28 | MW-29 | MW-30 |
| Benzene | BDL | BDL | BDL | 5 | 880 | 4 | BDL | BDL | 100 | 38 | BDL | BDL |
| Bromodi-chloromethane | BDL | BDL | BDL | BDL | BDL | BDL | 10 | 11 | 2 | BDL | BDL | BDL |
| Chloroform | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Ethylbenzene | BDL | BDL | 17 | 12 | 300 | 36 | 100 | 100 | 70 | 300 | 3.8 | 1.6 |
| Toluene | BDL | BDL | BDL | 23 | 2900 | 66 | 11 | 23 | 590 | 2400 | 1.3 | 1.5 |
| Xylenes (Total) | 8 | 5 | 69 | 45 | 2200 | 120 | 420 | 640 | 830 | 1700 | 20 | 6 |
| Total VOA (BTEX) | 8 | 5 | 86 | 85 | 6280 | 226 | 531 | 763 | 1590 | 4438 | 25.1 | 9.1 |

NOTES: All results reported in parts per billion (ppb) unless otherwise noted.
Groundwater samples for MW-19 thru MW-28 collected August 14, 1996.
Groundwater samples for MW-29 and MW-30 collected August 22, 1996.
BDL = Below detection limits
Total BTEX = Summation of benzene, ethylbenzene, toluene, and xylenes (total)

## TABLE 2-3 (Cont.)

| PARAMETER | MONITORING WELL NUMBER | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | MW-31 | MW-32 | MW-33 | MW-34 | MW-35 | MW-36 | MW-37 | MW-38 |
| Benzene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Bromodi-chloromethane | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Chloroform | BDL | BDL | 2 | 4 | BDL | 3 | 4 | 1 |
| Ethylbenzene | 130 | 470 | BDL | BDL | BDL | BDL | BDL | BDL |
| Toluene | 6 | 670 | BDL | BDL | BDL | BDL | BDL | BDL |
| Xylenes (Total) | 363 | 1600 | BDL | BDL | BDL | BDL | BDL | BDL |
| Total VOA (BTEX) | 499 | 2740 | BDL | BDL | BDL | BDL | BDL | BDL |

NOTES: All results reported in parts per billion (ppb) unless otherwise noted.
Groundwater samples for MW-31 thru MW-38 collected October 10, 1996.
BDL = Below detection limits
Total BTEX = Summation of benzene, ethylbenzene, toluene, and xylenes (total)

## TABLE 2-3 (Cont.)

| PARAMETER | MONITORING WELL NUMBER | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MW-39 | MW-40 | MW-41 | MW-42 | MW-43 | MW-44 | MW-45 | MW-46 | MW-47 | MW-48 |
| Benzene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | 320 | BDL |
| Bromodi-chloromethane | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Chloroform | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Ethylbenzene | BDL | BDL | 16 | 80 | 46 | BDL | 560 | 720 | 880 | 32 |
| Toluene | BDL | BDL | BDL | 2 | BDL | BDL | 1500 | 1000 | 1200 | BDL |
| Xylenes (Total) | 1 | BDL | 50 | 220 | 140 | BDL | 2500 | 3100 | 4700 | 66 |
| Total VOA (BTEX) | 1 | BDL | 66 | 302 | 186 | BDL | 4560 | 4820 | 6780 | 98 |

NOTES: All results reported in parts per billion (ppb) unless otherwise noted.
Groundwater samples for MW-39 thru MW-48 collected October 22, 1996.
BDL = Below detection limits
Total BTEX = Summation of benzene, ethylbenzene, toluene, and xylenes (total)

# TABLE 2-3 (Cont.)

| PARAMETER | MONITORING WELL NUMBER | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-49 12/13/96 | MW-50 12/13/96 | MW-51 12/13/96 | MW-52 12/13/96 | MW-53 12/13/96 | MW-54 12/13/96 | MW-55 12/13/96 | MW-56 12/13/96 | MW-57 12/13/96 | MW-58 12/13/96 | MW-59 12/13/96 | DMW-60 1/31/97 | DMW-60 3/10/97 | DMW-61 2/26/97 |
| Benzene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | 24 | BDL | BDL |
| Bromodi-chloromethane | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Chloroform | BDL | BDL | BDL | BDL | 1 | 1 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | 1 |
| Ethylbenzene | BDL | BDL | BDL | BDL | BDL | BDL | 310 | BDL | BDL | BDL | BDL | 12 | BDL | BDL |
| Toluene | BDL | BDL | BDL | BDL | BDL | BDL | 55 | BDL | BDL | BDL | BDL | 130 | BDL | BDL |
| Xylenes (Total) | BDL | BDL | BDL | BDL | BDL | BDL | 1040 | BDL | BDL | BDL | BDL | 64 | BDL | BDL |
| Total VOA (BTEX) | BDL | BDL | BDL | BDL | BDL | BDL | 1405 | BDL | BDL | BDL | BDL | 230 | BDL | BDL |

NOTES: All results reported in parts per billion (ppb) unless otherwise noted.
Groundwater samples from MW-49 thru MW-59 collected December 13, 1996.
Groundwater samples from DMW-60 and DMW-61 were collected on dates indicated above.
BDL = Below detection limits
Total BTEX = Summation of benzene, ethylbenzene, toluene, and xylenes (total)

# TABLE 2-4
## SUMMARY OF PAHs
## ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES
## COLLECTED FROM MONITORING WELLS MW-1 THRU DMW-61
## U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1159

| PARAMETER | MONITORING WELL NUMBER | | | | | |
|---|---|---|---|---|---|---|
| | MW-1 5/22/96 | MW-2 4/24/96 | MW-3 4/24/96 | MW-4 4/24/96 | MW-5 4/24/96 | MW-6 4/24/96 |
| Fluoranthene | BDL | BDL | BDL | BDL | BDL | BDL |
| Phenanthrene | BDL | BDL | BDL | BDL | BDL | BDL |
| Pyrene | BDL | BDL | BDL | BDL | BDL | BDL |
| 1-Methylnaphthalene | BDL | BDL | BDL | BDL | BDL | BDL |
| 2-Methylnaphthalene | BDL | BDL | BDL | BDL | BDL | BDL |
| Naphthalene | BDL | BDL | BDL | BDL | BDL | BDL |
| TOTAL NAPHTHALENES | BDL | BDL | BDL | BDL | BDL | BDL |

| PARAMETER | MONITORING WELL NUMBER | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-7 | MW-8 | MW-9 | MW-10 | MW-11 | MW-12 | MW-13 | MW-14 | MW-15 | MW-16 | MW-17 | MW-18 |
| Fluoranthene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Phenanthrene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Pyrene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 1-Methylnaphthalene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 2-Methylnaphthalene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Naphthalene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| TOTAL NAPHTHALENES | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

NOTES: BDL = Below detection limits.
Groundwater monitoring analyses for MW-1 thru MW-6 collected on date specified above.
Groundwater monitoring analyses for MW-7 thru MW-18 collected on June 4, 1996 sampling event.
All results reported in parts per billion (ppb) unless otherwise noted.

## TABLE 2-4 (Cont.)

| PARAMETER | MONITORING WELL NUMBER | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-19 | MW-20 | MW-21 | MW-22 | MW-23 | MW-24 | MW-25 | MW-26 | MW-27 | MW-28 | MW-29 | MW-30 |
| Fluoranthene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Phenanthrene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Pyrene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 1-Methylnaphthalene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 2-Methylnaphthalene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Naphthalene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| TOTAL NAPHTHALENES | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

| PARAMETER | MONITORING WELL NUMBER | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | MW-31 | MW-32 | MW-33 | MW-34 | MW-35 | MW-36 | MW-37 | MW-38 |
| Fluoranthene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Phenanthrene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Pyrene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 1-Methylnaphthalene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 2-Methylnaphthalene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Naphthalene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| TOTAL NAPHTHALENES | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

NOTES: BDL = Below detection limits.
Groundwater samples for MW-19 thru MW-28 collected August 14, 1996.
Groundwater samples for MW-29 and MW-30 collected August 22, 1996.
Groundwater samples for MW-31 thru MW-38 collected October 10, 1996
All results reported in parts per billion (ppb) unless otherwise noted.

## TABLE 2-4 (Cont.)

| PARAMETER | MONITORING WELL NUMBER | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MW-39 | MW-40 | MW-41 | MW-42 | MW-43 | MW-44 | MW-45 | MW-46 | MW-47 | MW-48 |
| Fluoranthene | BDL | 7 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Phenanthrene | BDL | 8 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Pyrene | BDL | 5 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 1-Methylnaphthalene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 2-Methylnaphthalene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Naphthalene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| TOTAL NAPHTHALENES | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |



| PARAMETER | MONITORING WELL NUMBER | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-49 12/13/96 | MW-50 12/13/96 | MW-51 12/13/96 | MW-52 12/13/96 | MW-53 12/13/96 | MW-54 12/13/96 | MW-55 12/13/96 | MW-56 12/13/96 | MW-57 12/13/96 | MW-58 12/13/96 | MW-59 12/13/96 | DMW-60 1/31/97 | DMW-60 3/10/97 | DMW-61 2/26/97 |
| Fluoranthene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Phenanthrene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Pyrene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 1-Methylnaphthalene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 2-Methylnaphthalene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Naphthalene | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| TOTAL NAPHTHALENES | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

NOTES: BDL = Below detection limits.
Groundwater samples from MW-39 thru MW-48 collected October 22, 1996.
Groundwater samples from MW-49 thru MW-59 collected December 13, 1996.
Groundwater samples from DMW-60 and DMW-61 were collected on dates indicated above.
All results reported in parts per billion (ppb) unless otherwise noted.

# TABLE 2-5
# SUMMARY TPH, LEAD, AND EDB
# ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES
# COLLECTED FROM MONITORING WELLS MW-1 THRU DMW-61
# U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1159

| PARAMETER | MONITORING WELL NUMBER | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MW-1 | MW-2 | MW-3 | MW-4 | MW-5 | MW-6 | MW-7 | MW-8 | MW-9 | MW-10 |
| TPH | 680 | 1400 | 2300 | 1300 | 1700 | 1800 | 220 | BDL | 190 | 220 |
| Lead | 33 | 75 | 130 | 55 | 64 | 79 | 16 | 20 | 34 | 33 |
| EDB | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

TPH: MW-1. Groundwater samples collected 5/22/96. TPH: MW-2 thru MW-6. Groundwater samples collected 4/24/96.
TPH: MW-7 thru MW-10. Groundwater sampes collected 6/4/96
LEAD: MW-1 thru MW-6. Groundwater samples collected 6/13/97. LEAD: MW-7 thru MW-10. Groundwater samples collected 6/16-17/97.
EDB: MW-1 thru MW-6. Groundwater samples collected 4/24/96. EDB: MW-7 thru MW-10. Groundwater samples collected 6/4/96.

| PARAMETER | MONITORING WELL NUMBER | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MW-11 | MW-12 | MW-13 | MW-14 | MW-15 | MW-16 | MW-17 | MW-18 | MW-19 | MW-20 |
| TPH | 210 | 140 | 120 | 400 | 730 | 470 | 260 | 280 | 360 | 340 |
| Lead | 26 | 35 | 15 | 63 | 62 | 365 | 42 | 45 | BDL | BDL |
| EDB | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

TPH: MW-11 thru MW-18. Groundwater samples collected 6/4/96. TPH: MW-19 thru MW-20. Groundwater sampes collected 8/14/96.
LEAD: MW-11 thru MW-18. Groundwater samples collected 6/16-17/97. LEAD: MW-19 thru MW-20. Groundwater samples collected 6/19/97.
EDB: MW-11 thru MW-18. Groundwater samples collected 6/4/96. EDB: MW-19 thru MW-20. Groundwater samples collected 8/14/96.

NOTES: All results reported in parts per billion (ppb) unless otherwise noted.
BDL = Below detection limits
EDB = 1,2 Dibromoethane

## TABLE 2-5 (Cont.)

| PARAMETER | MONITORING WELL NUMBER | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MW-21 | MW-22 | MW-23 | MW-24 | MW-25 | MW-26 | MW-27 | MW-28 | MW-29 | MW-30 |
| TPH | BDL | 550 | 6700 | 760 | 1800 | 1900 | 4800 | 6000 | BDL | 230 |
| Lead | BDL | 19 | 136 | 24 | 40 | 103 | 79 | 345 | BDL | BDL |
| EDB | BDL | BDL | 0.19 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

TPH: MW-21 thru MW-28. Groundwater samples collected 8/14/96. TPH: MW-29 thru MW-30. Groundwater sampes collected 8/23/96.
LEAD: MW-21 thru MW-24. Groundwater samples collected 6/19/97. LEAD: MW-25 thru MW-30. Groundwater samples collected 6/20,23/97.
EDB: MW-21 thru MW-28. Groundwater samples collected 8/14/96. EDB: MW-29 thru MW-30. Groundwater samples collected 8/23/96.

| PARAMETER | MONITORING WELL NUMBER | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MW-31 | MW-32 | MW-33 | MW-34 | MW-35 | MW-36 | MW-37 | MW-38 | MW-39 | MW-40 |
| TPH | 2000 | 4700 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | 2000 |
| Lead | 6 | 61 | BDL | BDL | BDL | BDL | BDL | BDL | BDL | 15 |
| EDB | BDL | BDL | BDL | BDL | BDL | BDL | BDL | 0.16 | BDL | BDL |

TPH: MW-31 thru MW-38. Groundwater samples collected 10/10/96. TPH: MW-39 thru MW-40. Groundwater sampes collected 10/22/96.
LEAD: MW-31. Groundwater samples collected 6/20,23/97. LEAD: MW-32. Groundwater samples collected 6/23/97.
LEAD: MW-33 thru MW-34. Groundwater samples collected 6/24,25/97. LEAD: MW-35 thru MW-37 & MW-40. Groundwater samples collected 6/25/97.
LEAD: MW-38 thru MW-39. Groundwater samples collected 6/27/97.
EDB: MW-31 thru MW-38. Groundwater samples collected 10/10/96. EDB: MW-39 thru MW-40. Groundwater samples collected 10/22/96.

NOTES: All results reported in parts per billion (ppb) unless otherwise noted.
BDL = Below detection limits
EDB = 1,2 Dibromoethane

## TABLE 2-5 (Cont.)

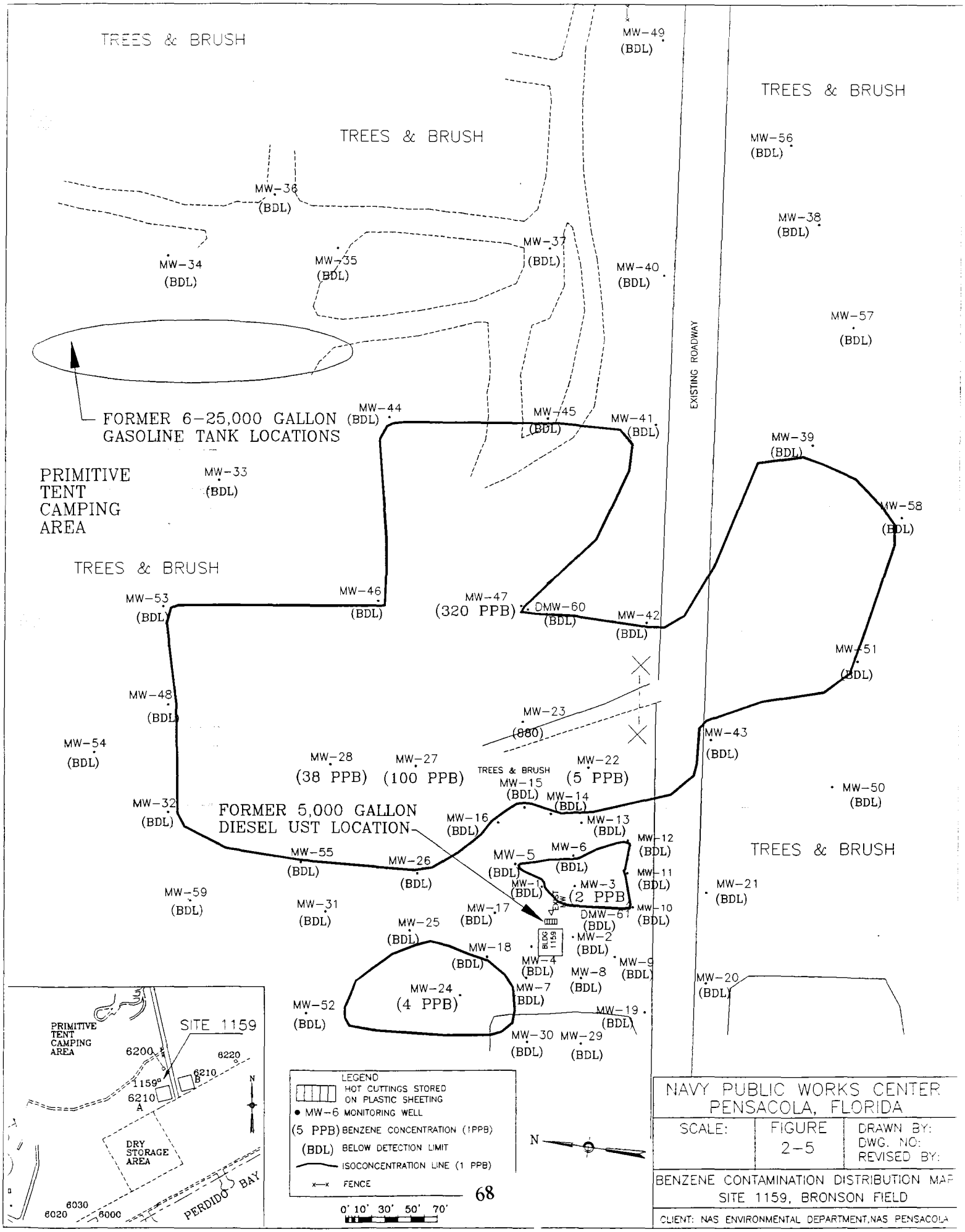
| PARAMETER | MONITORING WELL NUMBER | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MW-41 | MW-42 | MW-43 | MW-44 | MW-45 | MW-46 | MW-47 | MW-48 | MW-49 | MW-50 |
| TPH | 440 | 570 | 380 | 1100 | 11 | 65000 | 61000 | 1000 | BDL | BDL |
| Lead | 18 | 12 | 11 | 3 | 39 | 106 | 56 | 7 | BDL | BDL |
| EDB | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

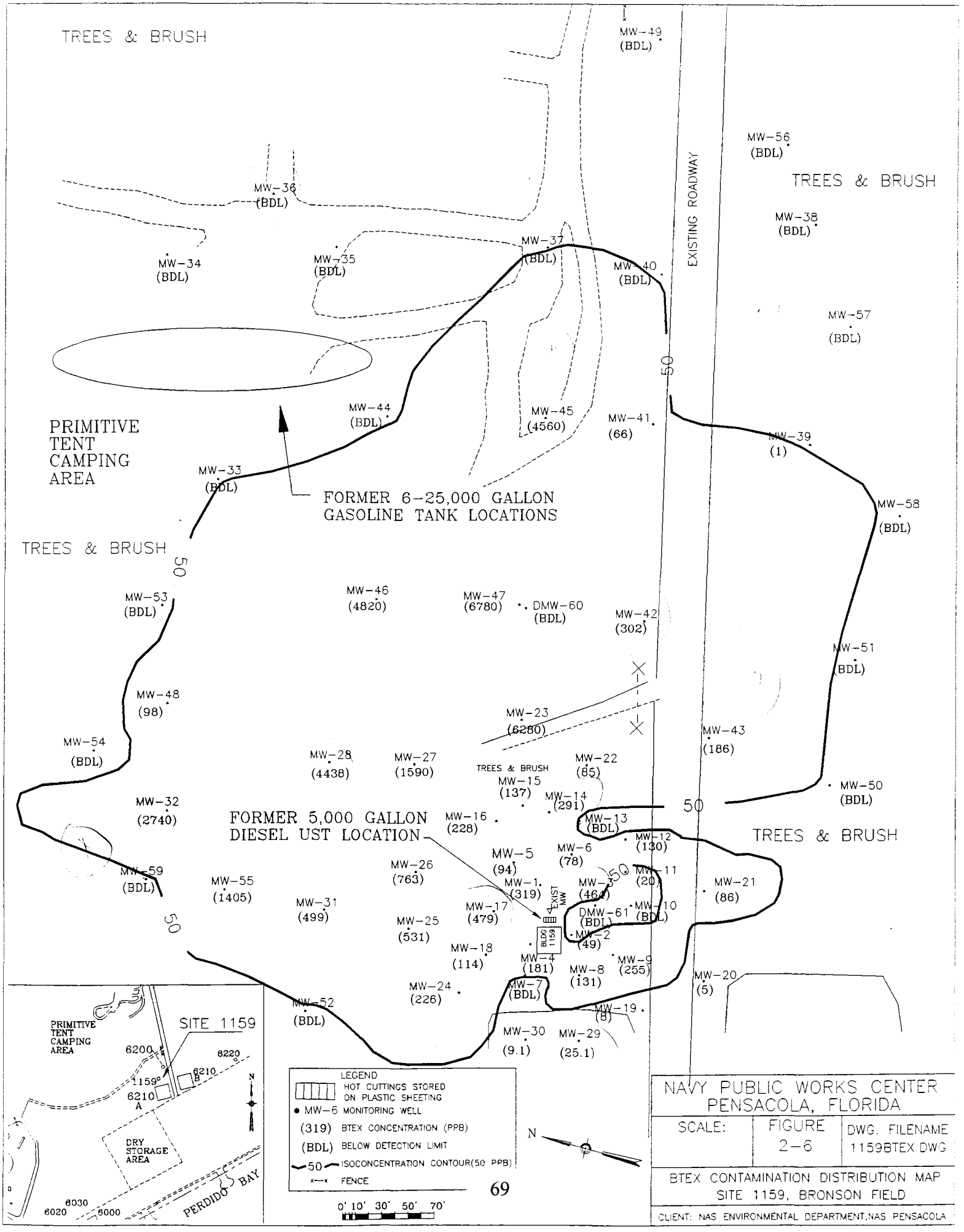
TPH: MW-41 thru MW-48. Groundwater samples collected 10/22/96. TPH: MW-49 thru MW-50. Groundwater samples collected 12/13/96.
LEAD: MW-41 thru MW-43. Groundwater samples collected 6/26/97. LEAD: MW-44 thru MW-48. Groundwater samples collected 6/24,25/97.
LEAD: MW-49 thru MW-50. Groundwater samples collected 6/26/97.
EDB: MW-41 thru MW-48. Groundwater samples collected 10/22/96. EDB: MW-49 thru MW-50. Groundwater samples collected 12/13/96.

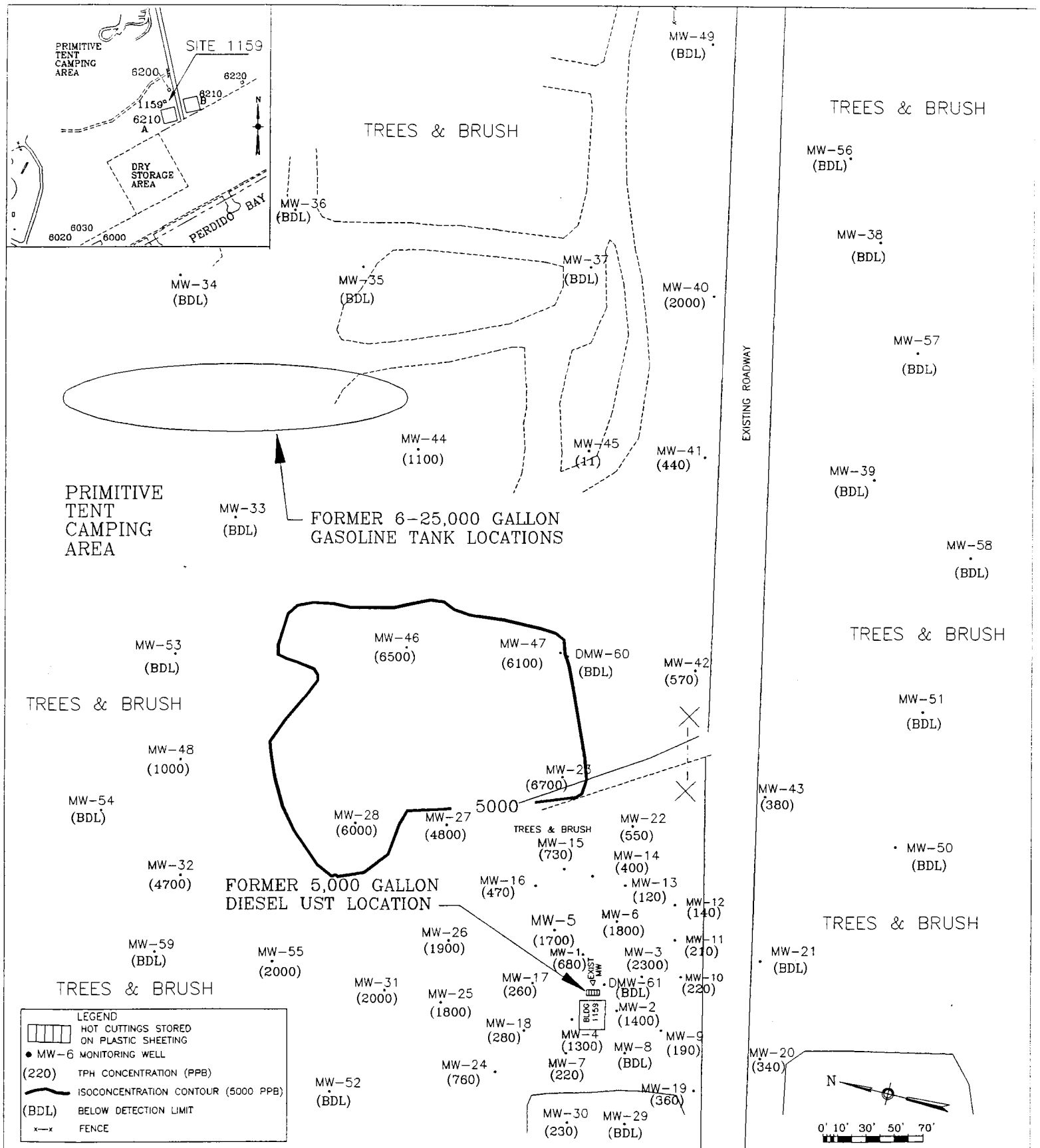
| PARAMETER | MONITORING WELL NUMBER | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-51 | MW-52 | MW-53 | MW-54 | MW-55 | MW-56 | MW-57 | MW-58 | MW-59 | DMW-60 | DMW-61 |
| TPH | BDL | BDL | BDL | BDL | 2000 | BDL | BDL | BDL | BDL | BDL | BDL |
| Lead | BDL | 4 | BDL | BDL | 19 | BDL | BDL | BDL | BDL | BDL | BDL |
| EDB | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |

TPH: MW-51 thru MW-59. Groundwater samples collected 12/13/96. TPH: DMW-60. Groundwater sampes collected 3/10/97.
TPH: DMW-61. Groundwater samples collected 2/26/97.
LEAD: MW-51. Groundwater samples collected 6/26/97. LEAD: MW-52. Groundwater samples collected 6/20,23/97.
LEAD: MW-53. Groundwater samples collected 6/24,25/97. LEAD: MW-54 thru MW-55. Groundwater samples collected 6/23/97.
LEAD: MW-56 thru MW-58. Groundwater samples collected 6/27/97. LEAD: MW-59. Groundwater samples collected 6/23/97.
LEAD: DMW-60 thru DMW-61. Groundwater samples collected 6/30/97 & 7/1/97.
EDB: MW-51 thru MW-59. Groundwater samples collected 12/13/96. EDB: DMW-60. Groundwater samples collected 3/10/97.
EDB: DMW-61. Groundwater samples collected 2/26/97.

NOTES: All results reported in parts per billion (ppb) unless otherwise noted.
BDL = Below detection limits EDB = 1,2 Dibromoethane


TREES & BRUSH
TREES & BRUSH
TREES & BRUSH
TREES & BRUSH
TREES & BRUSH
TREES & BRUSH
MW-49 (BDL)
MW-56 (BDL)
MW-38 (BDL)
MW-36 (BDL)
MW-37 (BDL)
MW-34 (BDL)
MW-35 (BDL)
MW-40 (BDL)
MW-57 (BDL)
EXISTING ROADWAY
FORMER 6-25,000 GALLON GASOLINE TANK LOCATIONS
MW-44 (BDL)
MW-45 (BDL)
MW-41 (BDL)
MW-39 (BDL)
PRIMITIVE TENT CAMPING AREA
MW-33 (BDL)
MW-58 (BDL)
MW-53 (BDL)
MW-46 (BDL)
MW-47 (320 PPB)
DMW-60 (BDL)
MW-42 (BDL)
MW-51 (BDL)
MW-48 (BDL)
MW-23 (880)
MW-54 (BDL)
MW-43 (BDL)
MW-28 (38 PPB)
MW-27 (100 PPB)
MW-22 (5 PPB)
MW-15 (BDL)
MW-14 (BDL)
MW-50 (BDL)
MW-32 (BDL)
FORMER 5,000 GALLON DIESEL UST LOCATION
MW-16 (BDL)
MW-13 (BDL)
MW-12 (BDL)
MW-55 (BDL)
MW-26 (BDL)
MW-5 (BDL)
MW-6 (BDL)
MW-11 (BDL)
MW-1 (BDL)
MW-3 (2 PPB)
MW-21 (BDL)
MW-59 (BDL)
MW-31 (BDL)
MW-17 (BDL)
DMW-61 (BDL)
MW-10 (BDL)
MW-25 (BDL)
BLDG 1159
MW-2 (BDL)
MW-18 (BDL)
MW-4 (BDL)
MW-8 (BDL)
MW-9 (BDL)
MW-20 (BDL)
MW-24 (4 PPB)
MW-7 (BDL)
MW-52 (BDL)
MW-19 (BDL)
MW-30 (BDL)
MW-29 (BDL)
PRIMITIVE TENT CAMPING AREA
SITE 1159
6200
6220
6210 B
1159
6210 A
N
DRY STORAGE AREA
6030
6020
6000
PERDIDO BAY
LEGEND
HOT CUTTINGS STORED ON PLASTIC SHEETING
● MW-6 MONITORING WELL
(5 PPB) BENZENE CONCENTRATION (1PPB)
(BDL) BELOW DETECTION LIMIT
ISOCONCENTRATION LINE (1 PPB)
FENCE
0' 10' 30' 50' 70'
N
NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA
SCALE:
FIGURE 2-5
DRAWN BY:
DWG. NO:
REVISED BY:
BENZENE CONTAMINATION DISTRIBUTION MAP
SITE 1159, BRONSON FIELD
CLIENT: NAS ENVIRONMENTAL DEPARTMENT, NAS PENSACOLA


TREES & BRUSH
MW-49 (BDL)
MW-56 (BDL)
TREES & BRUSH
EXISTING ROADWAY
MW-36 (BDL)
MW-38 (BDL)
MW-37 (BDL)
MW-34 (BDL)
MW-35 (BDL)
MW-40 (BDL)
MW-57 (BDL)
50
MW-44 (BDL)
MW-45 (4560)
MW-41 (66)
PRIMITIVE TENT CAMPING AREA
MW-39 (1)
MW-33 (BDL)
FORMER 6-25,000 GALLON GASOLINE TANK LOCATIONS
MW-58 (BDL)
TREES & BRUSH
50
MW-53 (BDL)
MW-46 (4820)
MW-47 (6780)
DMW-60 (BDL)
MW-42 (302)
MW-51 (BDL)
MW-48 (98)
MW-23 (6260)
MW-43 (186)
MW-54 (BDL)
MW-28 (4438)
MW-27 (1590)
TREES & BRUSH
MW-22 (85)
MW-15 (137)
MW-14 (291)
MW-50 (BDL)
MW-32 (2740)
FORMER 5,000 GALLON DIESEL UST LOCATION
MW-16 (228)
MW-13 (BDL)
50
TREES & BRUSH
MW-12 (130)
MW-5 (94)
MW-6 (78)
MW-59 (BDL)
MW-26 (763)
MW-11 (20)
MW-55 (1405)
MW-1 (319)
MW-3 (464)
MW-21 (86)
MW-31 (499)
MW-17 (479)
EXIST MW
DMW-61 (BDL)
MW-10 (BDL)
50
MW-25 (531)
BLDG 1159
MW-2 (49)
MW-18 (114)
MW-4 (181)
MW-9 (255)
MW-8 (131)
MW-20 (5)
MW-24 (226)
MW-7 (BDL)
MW-52 (BDL)
MW-19 (8)
MW-30 (9.1)
MW-29 (25.1)
PRIMITIVE TENT CAMPING AREA
SITE 1159
6200
6220
6210 B
1159
6210 A
N
DRY STORAGE AREA
6030
6020
6000
PERDIDO BAY
LEGEND
HOT CUTTINGS STORED ON PLASTIC SHEETING
MW-6 MONITORING WELL
(319) BTEX CONCENTRATION (PPB)
(BDL) BELOW DETECTION LIMIT
50 ISOCONCENTRATION CONTOUR(50 PPB)
FENCE
N
0' 10' 30' 50' 70'
NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA
SCALE:
FIGURE 2-6
DWG. FILENAME 1159BTEX.DWG
BTEX CONTAMINATION DISTRIBUTION MAP
SITE 1159, BRONSON FIELD
CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA




MW-1
5/22/96
MW-2 THRU MW-6
4/[illegible]/96
MW-7 THRU MW-10
6/4/96
MW-11 THRU MW-18
6/4/96
MW-19 THRU MW-20
8/14/96

MW-31 THRU MW-38
10/10/96
MW-39 THRU MW-48
10/22/96
MW-49 THRU MW-50
12/13/96
MW-51 THRU MW-59
12/13/96
DMW-60
3/10/97

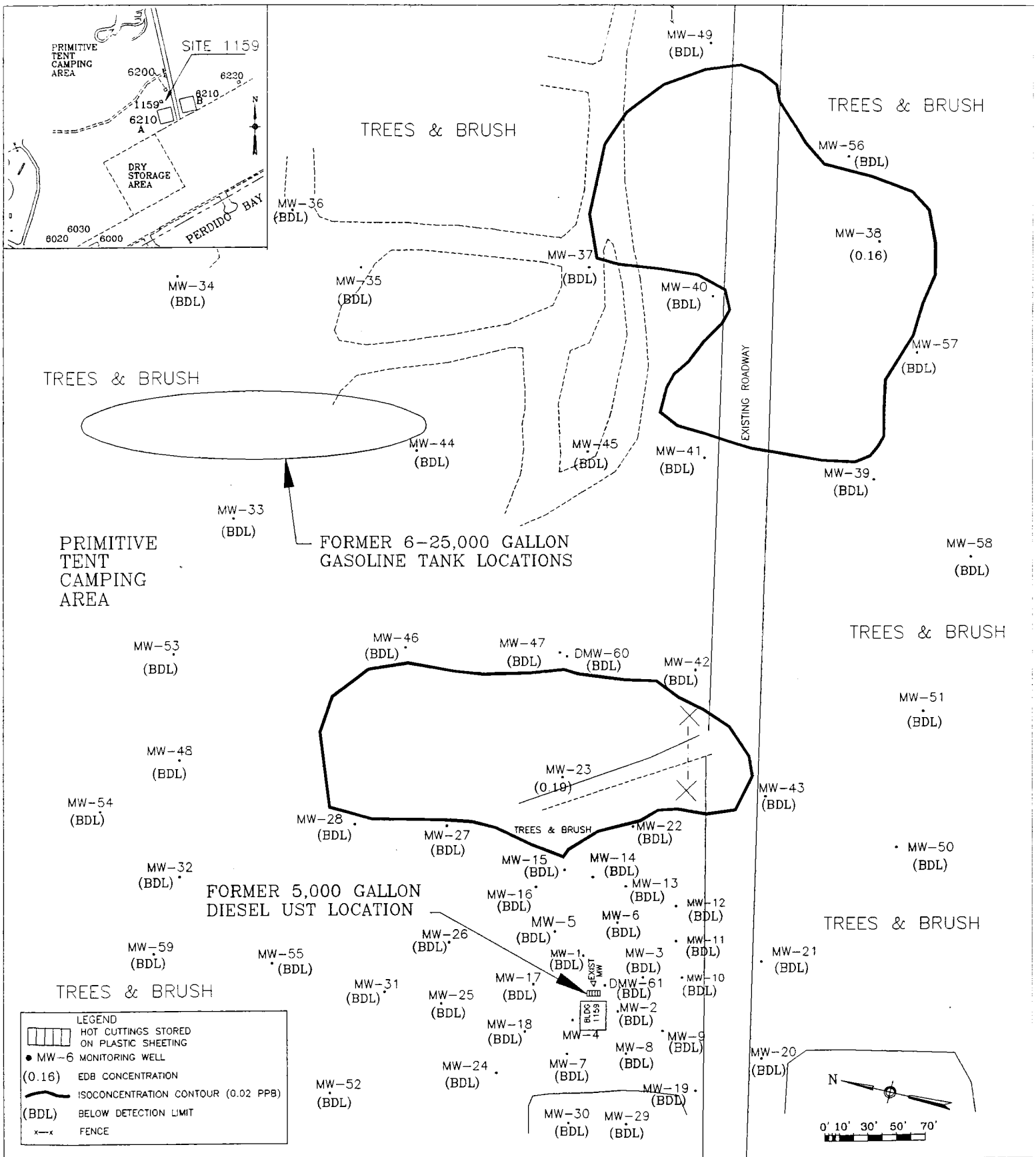
DMW-61
2/26/97

NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA

| SCALE: | FIGURE 2-7 | DWG. FILENAME 1159TPH.DWG |
|---|---|---|

TPH CONTAMINATION DISTRIBUTION MAP
SITE 1159, BRONSON FIELD

CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA




MW-1 THRU MW-6
4/24/96
MW-7 THRU MW-10
96
MW-11 THRU MW-18
6/4/96
MW-19 THRU MW-20
8/14/96
MW-29 THRU MW-30
8/23/96

MW-31 THRU MW-38
10/10/96
MW-39 THRU MW-48
10/22/96
MW-49 THRU MW-50
12/13/96
MW-51 THRU MW-59
12/13/96
DMW-60
3/10/97

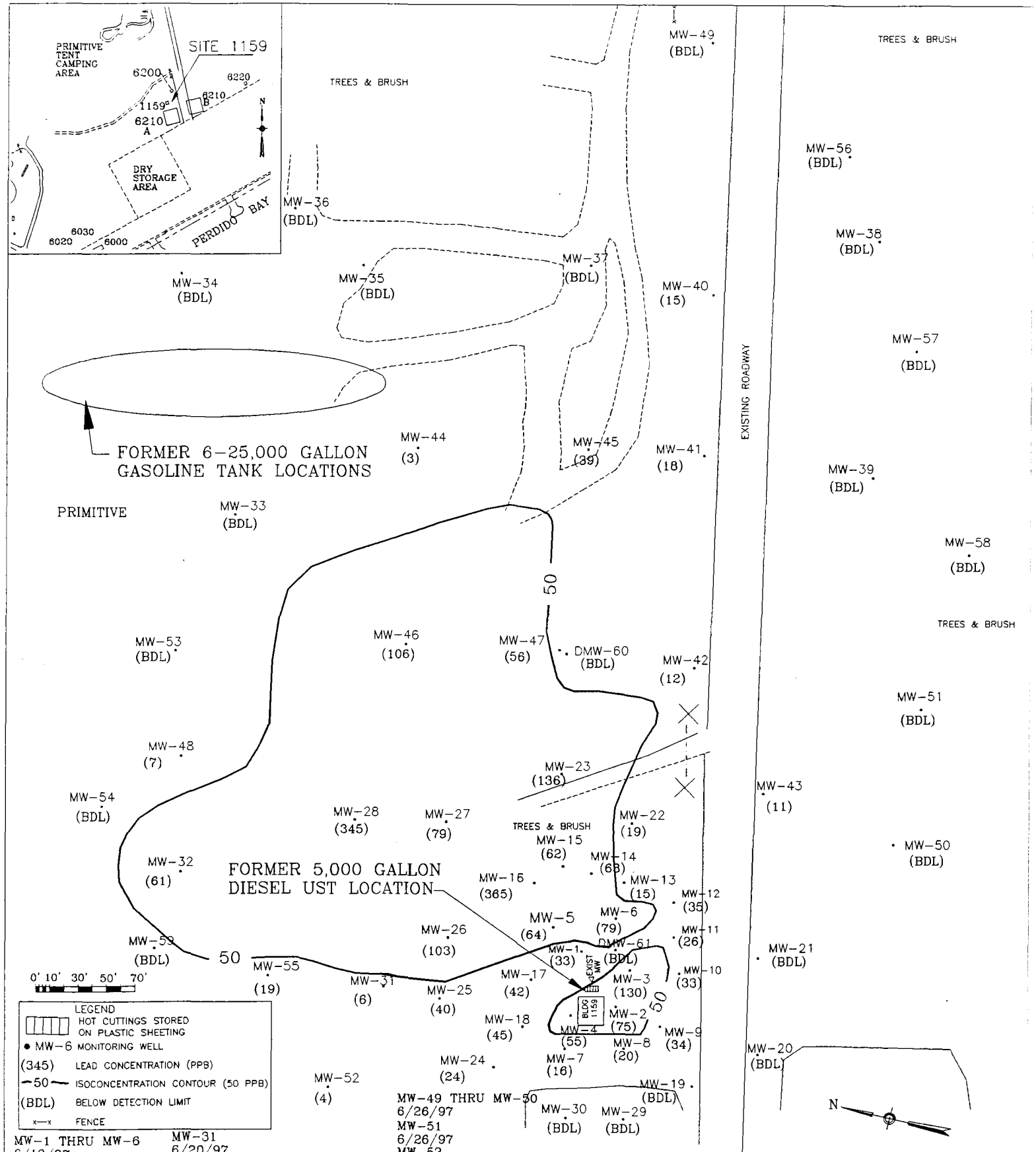
DMW-61
2/26/97

NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA

| SCALE: | FIGURE 2-8 | DRAWN BY: DWG. NO: REVISED BY: |
|---|---|---|

EDB CONTAMINATION DISTRIBUTION MAP
SITE 1159, BRONSON FIELD

CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA




MW-1 THRU MW-6
6/13/97
MW-7 THRU MW-10
6/16,17/97
M[illegible]1 THRU MW-18
6[illegible] 17/97
M[illegible] 19 THRU MW-20
6/19/97
MW-21 THRU MW-24
6/19/97
MW-25 THRU MW-30
6/20/97

MW-31
6/20/97
MW-32
6/23/97
MW-33 THRU MW-34
6/24,25/97
MW-35 THRU MW-37 & MW-40
6/25/97
MW-38 THRU MW-39
6/27/97
MW-41 THRU MW-43
6/26/97
MW-44 THRU MW-48
6/24,25/97

MW-49 THRU MW-50
6/26/97
MW-51
6/26/97
MW-52
6/20,23/97
MW-53
6/24,25/97
MW-54 THRU MW-55
6/23/97
MW-56 THRU MW-58
6/27/97
MW-59
6/23/97
DMW-60 THRU DMW-61
6/30/97 & 7/1/97



| NAVY PUBLIC WORKS CENTER PENSACOLA, FLORIDA | | |
|---|---|---|
| SCALE: | FIGURE 2-9 | DRAWN BY: DWG. NO: REVISED BY: |
| LEAD CONTAMINATION DISTRIBUTION MAP SITE 1159, BRONSON FIELD (08-04-97) | | |
| CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA | | |

0.19 and 0.16 ppb, respectfully, which is above the FDEP target level of 0.02 ppb for EDB. Ethylene dibromide (EDB) was not detected in groundwater samples collected from monitoring wells MW-1 thru MW-37 or MW-39 thru DMW-61. TPH was detected in the groundwater samples collected from monitoring wells MW-1 thru MW-7, MW-9 thru MW-20, MW-22 thru MW-28, MW-30 thru 32, MW-40 thru MW-48, and MW-55 at concentration levels of 680 ppb, 1400 ppb, 2300 ppb, 1300 ppb, 1700 ppb, 1800 ppb, 220 ppb, 190 ppb, 220 ppb, 210 ppb, 140 ppb, 120 ppb, 400 ppb, 730 ppb, 470 ppb 260 ppb, 280 ppb, 360 ppb, 340 ppb, 550 ppb, 6700 ppb, 760 ppb, 1800 ppb, 1900 ppb, 4800 ppb, 6000 ppb, 230 ppb, 2000 ppb, 4700 ppb, 2000 ppb, 440 ppb, 570 ppb, 380 ppb, 1100 ppb, 11 ppb, 65000 ppb, 61000 ppb, 1000 ppb, and 2000 ppb, respectfully. The TPH concentrations detected in monitoring wells MW-23 (6700 ppb), MW-28 (6000 ppb), MW-46 (65000 ppb), and MW-47 (61000 ppb), respectfully, were above the FDEP target level of 5000 ppb for TPH.

Lead was detected in shallow monitoring wells MW-1 thru MW-18, MW-22 thru MW-28, MW-31, MW-32, MW-40 thru MW-48, MW-52, and MW-55 at concentrations of 33 ppb, 75 ppb, 130 ppb, 55 ppb, 64 ppb, 79 ppb, 16 ppb, 20 ppb, 34 ppb, 33 ppb, 26 ppb, 35 ppb, 15 ppb, 63 ppb, 62 ppb, 365 ppb, 42 ppb, 45 ppb, 19 ppb, 136 ppb, 24 ppb, 40 ppb, 103 ppb, 79 ppb, 345 ppb, 6 ppb, 61 ppb, 15 ppb, 18 ppb, 12 ppb, 11 ppb, 3 ppb, 39 ppb, 106 ppb, 56 ppb, 7 ppb, 4 ppb, and 19 ppb. Lead concentrations detected in monitoring wells MW-2 (75 ppb), MW-3 (130 ppb), MW-4 (55 ppb), MW-5 (64 ppb), MW-6 (79 ppb), MW-14 (63 ppb), MW-15 (62 ppb), MW-16 (365 ppb), MW-23 (136 ppb), MW-26 (103 ppb), MW-27 (79 ppb), MW-28 (345 ppb) and MW-32 (61 ppb) were above the FDEP target level of 50 ppb for lead. Lead was not detected in groundwater samples collected from monitoring wells MW-19, MW-20, MW-21, MW-29, MW-30, MW-33 thru MW-39, MW-49 thru MW-51, MW-53, MW-54, and MW-56 thru DMW-61.

Free phase petroleum product levels were measured in each shallow and deep monitoring well on September 10 and 11, 1997 using an Advanced Remediation Technologies (A.R.T.) model number IS101-E, oil-water interface probe. Free phase petroleum product was measured in monitoring wells MW-45 and MW-47 at 0.48 inches and 6.24 inches, respectively. Free phase petroleum product was not detected in any of the other monitoring wells.

## 3.0 CONCLUSIONS AND RECOMMENDATIONS

### 3.1 CONCLUSIONS

- The source of the discharge has been eliminated and the approximate gallons of petroleum released is unknown.

- It appears that there is another source of discharge upgradient of site 1159 (six 25,000 gallon gasoline tanks) and this could possibly be the sole source of contamination upon review of the analytical results.

- No initial remedial actions were performed at the site.

- Free-phase petroleum product was detected in monitoring wells MW-45 and MW-47 at 0.48 inches and 6.24 inches, respectively.

- OVA screenings were performed on 117 soil borings, at varying depths in order to delineate the extent of contaminated soils. Soil samples collected from the soil borings were analyzed for volatile organic vapors using an OVA. Soil samples from SB-3, SB-4, SB-5, SB-6, SB-8, SB-12, SB-13, SB-14, SB-16, SB-17, SB-18, SB-19, SB-20, SB-21, SB-23, SB-32, SB-33, SB-34, SB-39, and DMW-60 met or exceeded the 50 ppm level for soil considered to be excessively contaminated from diesel contamination. The OVA results indicate the soil contamination is located directly above the water table in the capillary fringe.

- Fifty-nine shallow groundwater monitoring wells (MW-1 thru MW-59) and two vertical extent monitoring wells (DMW-60 and DMW-61) were installed at the site and groundwater samples were collected from each well and analyzed for the kerosene analytical group listed in FDEP Rule 62-770.600(8)(b).

- Two potable water wells are located within a quarter mile radius of the site. Tetrachloroethylene was detected in the groundwater samples collected monthly since 1987 at concentrations below the FDEP Groundwater Guidance Concentration for tetrachloroethylene (3 ppb).

- Groundwater depths measured in monitoring wells MW-1 thru MW-59 on June 12, 1997 indicate the groundwater flow direction at the site to be toward the west direction.

- No petroleum contaminants were detected in the groundwater samples collected from groundwater monitoring wells MW-33 thru MW-37, MW-39, MW-49 thru MW-51, MW-53 thru DMW-61.

- Benzene was detected in the groundwater samples collected from monitoring wells MW-3, MW-22, MW-23, MW-24, MW-27, MW-28, and MW-47 at concentrations of 2 ppb, 5 ppb, 880 ppb, 4 ppb, 100 ppb, 38 ppb, and 320 ppb which is above the FDEP target level of 1 ppb for benzene.

- The total BTEX concentration in monitoring wells MW-1 (319 ppb), MW-3 (464 ppb), MW-4 (181 ppb), MW-5 (94 ppb), MW-6 (78 ppb), MW-8 (131 ppb), MW-9 (255 ppb), MW-12 (130 ppb), MW-14 (291 ppb), MW-15 (137 ppb), MW-16 (228 ppb), MW-17 (479 ppb), MW-18 (114 ppb), MW-21 (86 ppb), MW-22 (85 ppb), MW-24 (226 ppb), MW-25 (531 ppb), MW-26 (763 ppb), MW-27 (1590 ppb), MW-28 (4438 ppb), MW-31 (499 ppb), MW-32 (2740 ppb), MW-41 (66 ppb), MW-42 (302 ppb), MW-43 (186 ppb), MW-45 (4560 ppb), MW-46 (4820 ppb), MW-47 (ppb), MW-48 (98 ppb), and MW-55 (1405 ppb) is above the FDEP target level of 50 ppb.

- Fluoranthene, phenanthrene, and pyrene were detected in shallow monitoring well MW-40 at concentrations of 7 ppb, 8 ppb, and 5 ppb. No PAHs were detected in the groundwater samples collected from groundwater samples collected from monitoring wells MW-1 thru 39 or MW-41 thru DMW-61.

- EDB was detected in shallow monitoring wells MW-23 and MW-38 at concentrations of 0.19 and 0.16 ppb which were above the FDEP target level of 0.02 ppb.

- TPH concentrations detected in groundwater samples collected from monitoring wells MW-23 (6700 ppb), MW-28 (6000 ppb), MW-46 (65000 ppb), and MW-47 (61000 ppb) were above the FDEP target level of 5000 ppb for TPH.

- Lead concentrations detected in groundwater samples collected from monitoring wells MW-2 (75 ppb), MW-3 (130 ppb), MW-4 (55 ppb), MW-5 (65 ppb), MW-6 (79 ppb), MW-14 (63 ppb), MW-15 (62 ppb), MW-16 (365 ppb), MW-23 (136 ppb), MW-26 (103 ppb), MW-27 (79 ppb), MW-28 (345 ppb), and MW-32 (61 ppb) were above the FDEP target level of 50 ppb for lead.

- The areal extent of the groundwater contamination at the site is significant and appears dispersed over a wide area.

- The average horizontal conductivity at the site was estimated to be 0.6130 ft/day.

- The average pore water velocity is estimated to be 0.0088 ft/day (3.201 ft/yr).

## 3.2 RECOMMENDATIONS

Contaminants were detected in the soil and groundwater at levels that exceeded the FDEP regulatory limits. The extent of the groundwater contamination is widespread and covers a somewhat extensive area. Therefore, the preparation of a soil and groundwater remedial action plan in accordance with FDEP Rule 62-770 is recommended at the site.

## 4.0 PROFESSIONAL REVIEW CERTIFICATION

The Contamination Assessment contained in this report was prepared using sound, hydrogeologic principles and judgement. This assessment is based on the geologic investigation and associated information detailed in the text and appended to this report. If conditions are determined to exist that differ from those described, the undersigned engineer should be notified to evaluate the effects of any additional information on the assessment described in this report. This Contamination Assessment Report was developed for U.S. Navy Outlying Landing Field (OLF) Bronson, Site 1159, Pensacola, Florida, and should not be construed to apply to any other site.

Gregory Allen Campbell

**G. A. Campbell**
**Professional Engineer**
**P.E. No. 38572**

11/20/97

**Date**

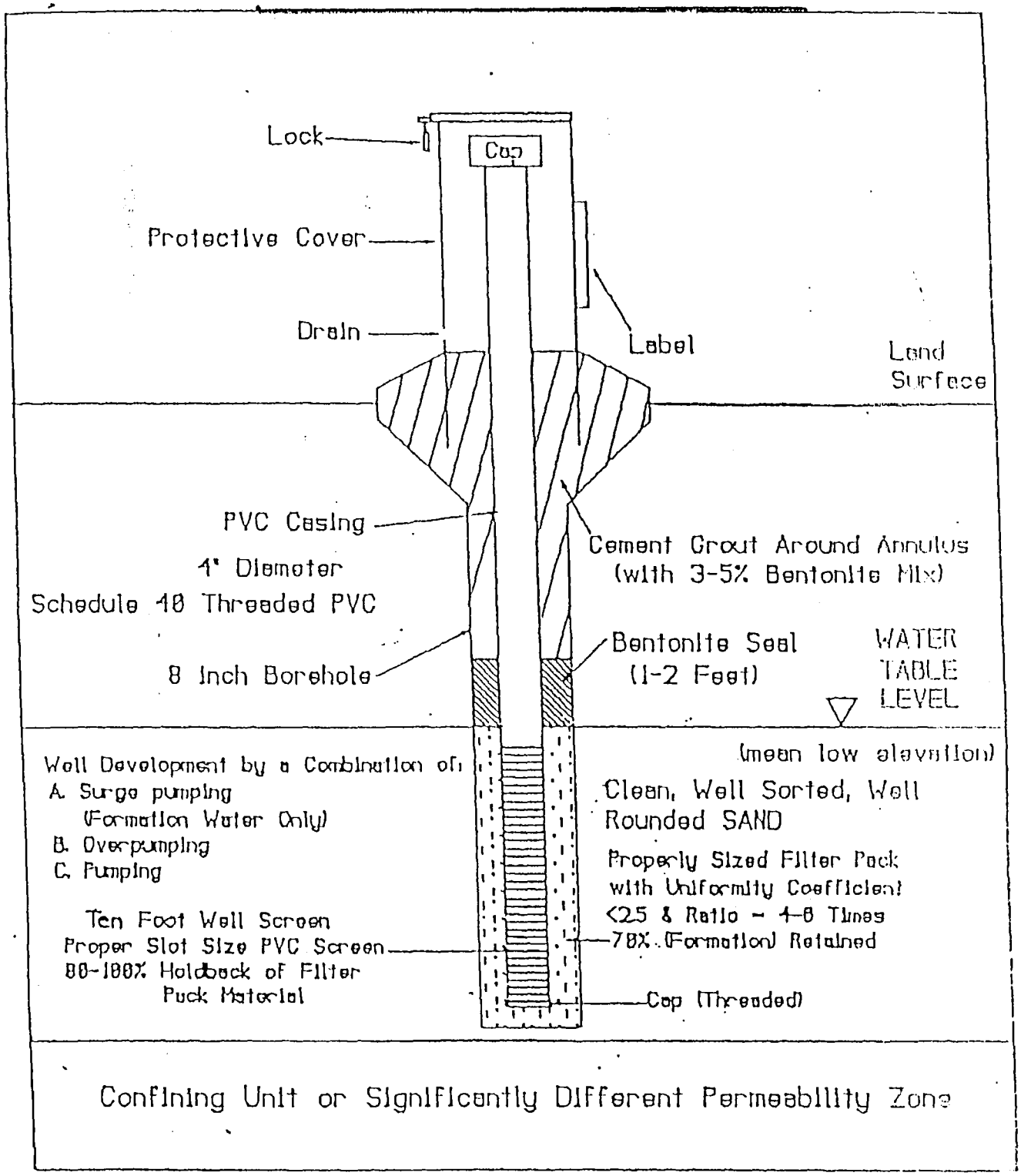
## 5.0 REFERENCES

Naval Energy and Environmental Support Activity, Port Hueneme, California, Preliminary Assessment Report of Outlying Landing Field (OLF) Bronson, Escambia County, Florida, January 1991.

# APPENDICES

# APPENDIX A

## TYPICAL MONITORING WELL CONSTRUCTION DIAGRAMS




DECEMBER, 1991
M. KENNEDY &
D. STAPLES

BASIC MONITOR WELL
DESIGN IN A WATER
TABLE AQUIFER

new copy of MW's

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Environmental Division

6389 Tower Lane
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(941) 378-5218 Fax

# MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Cloyd Griffey
WELL NUMBER: MW-2

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 4/3/96 Finish: 4/3/96
TIME Start: 0830 Finish: 0915

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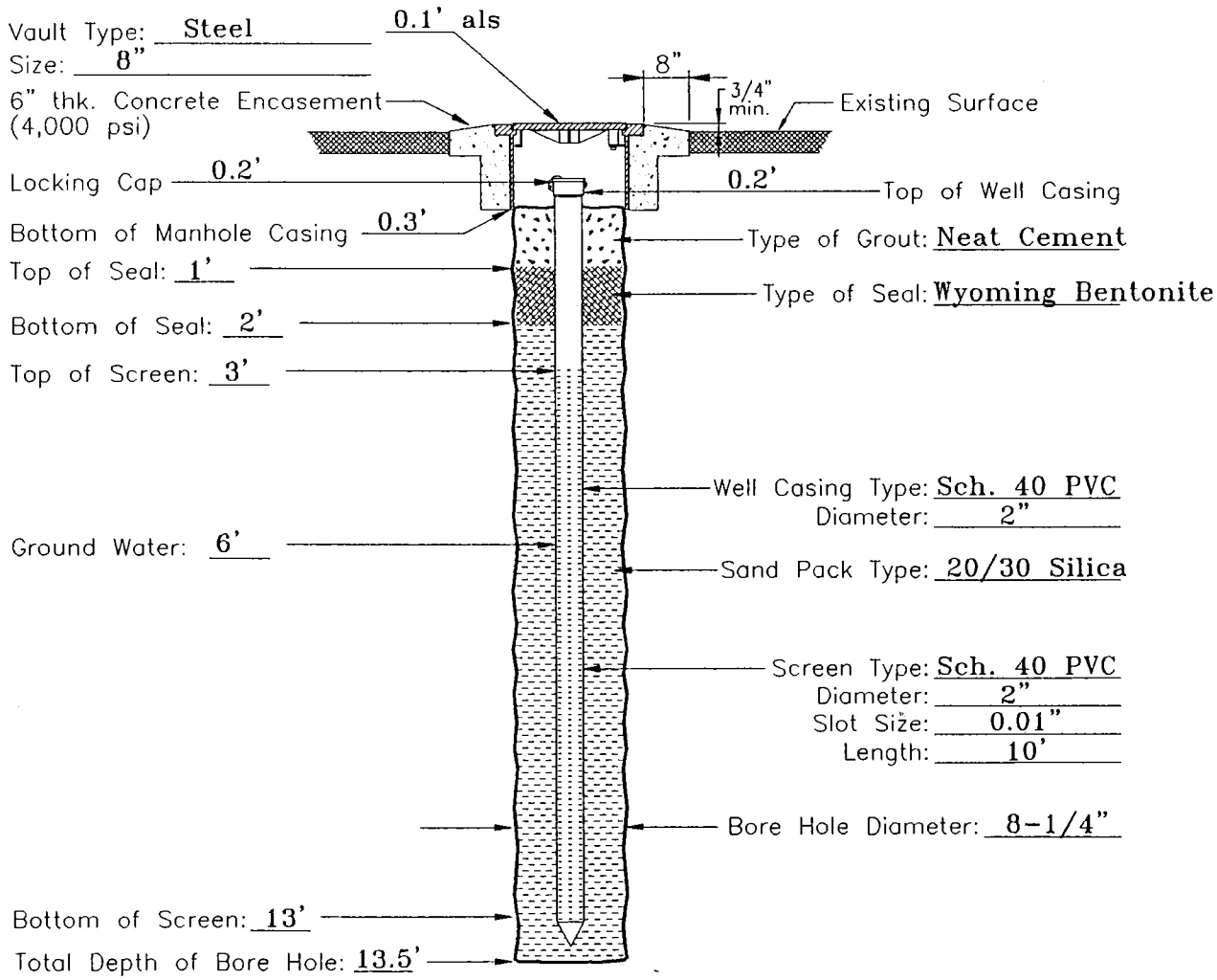


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A-2

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Environmental Division

6389 Tower Lane
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# MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Cloyd Griffey
WELL NUMBER: MW-3

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 4/3/96 Finish: 4/3/96
TIME Start: 0915 Finish: 1000

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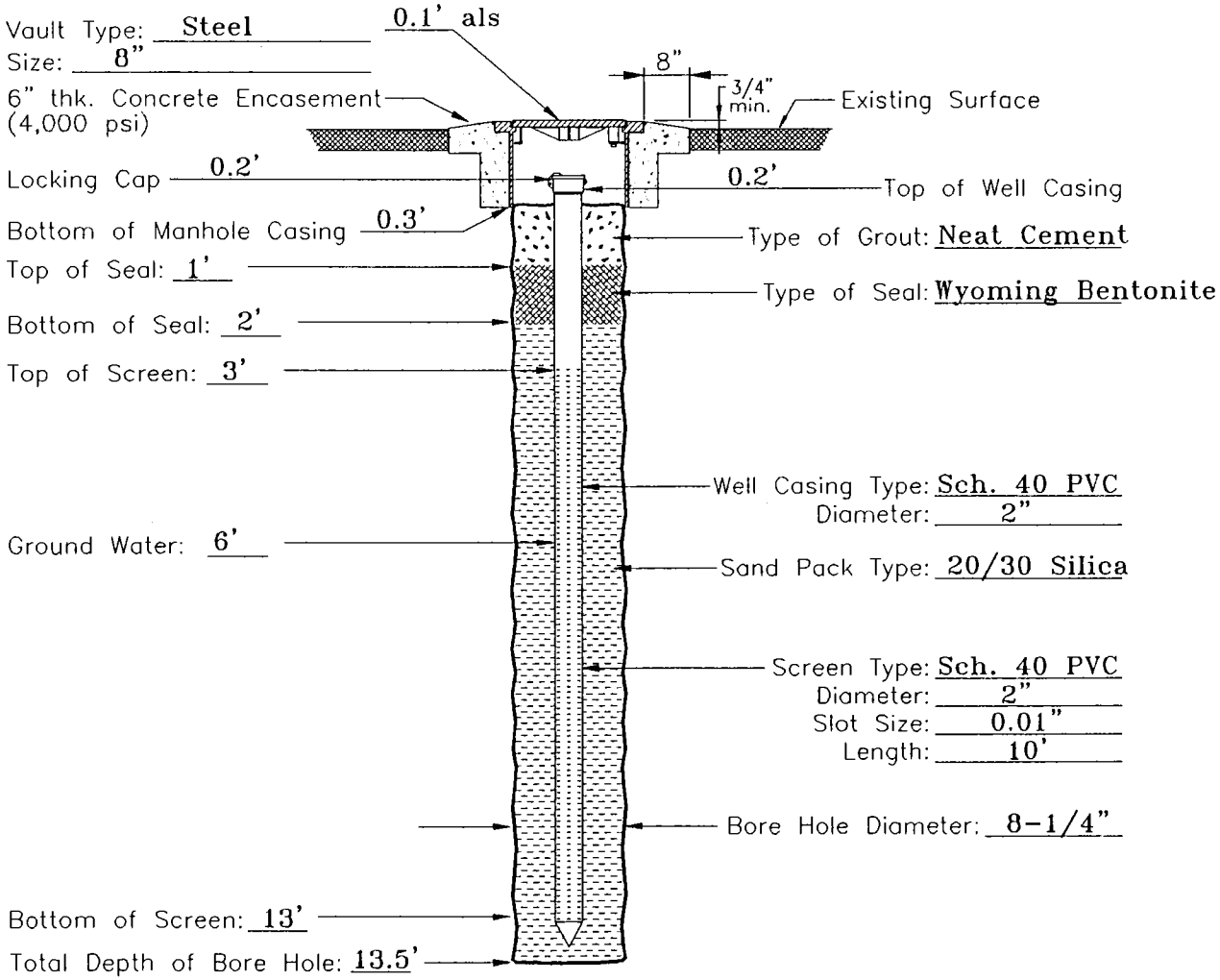


NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

A-3

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Environmental Division

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# MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Cloyd Griffey
WELL NUMBER: MW-4

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
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TIME Start: 1000 Finish: 1045

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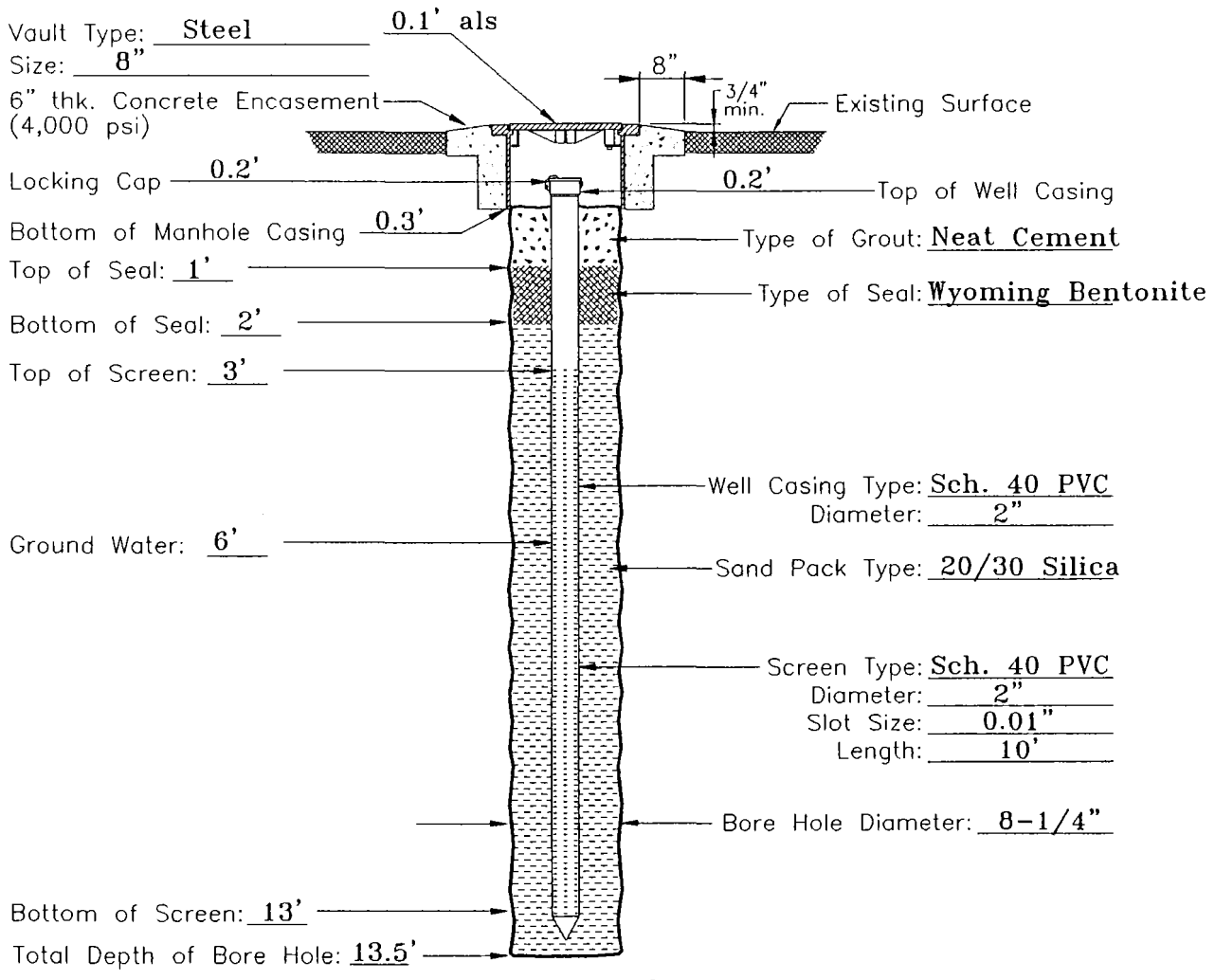


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# MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Cloyd Griffey
WELL NUMBER: MW-5

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 4/3/96 Finish: 4/3/96
TIME Start: 1045 Finish: 1130

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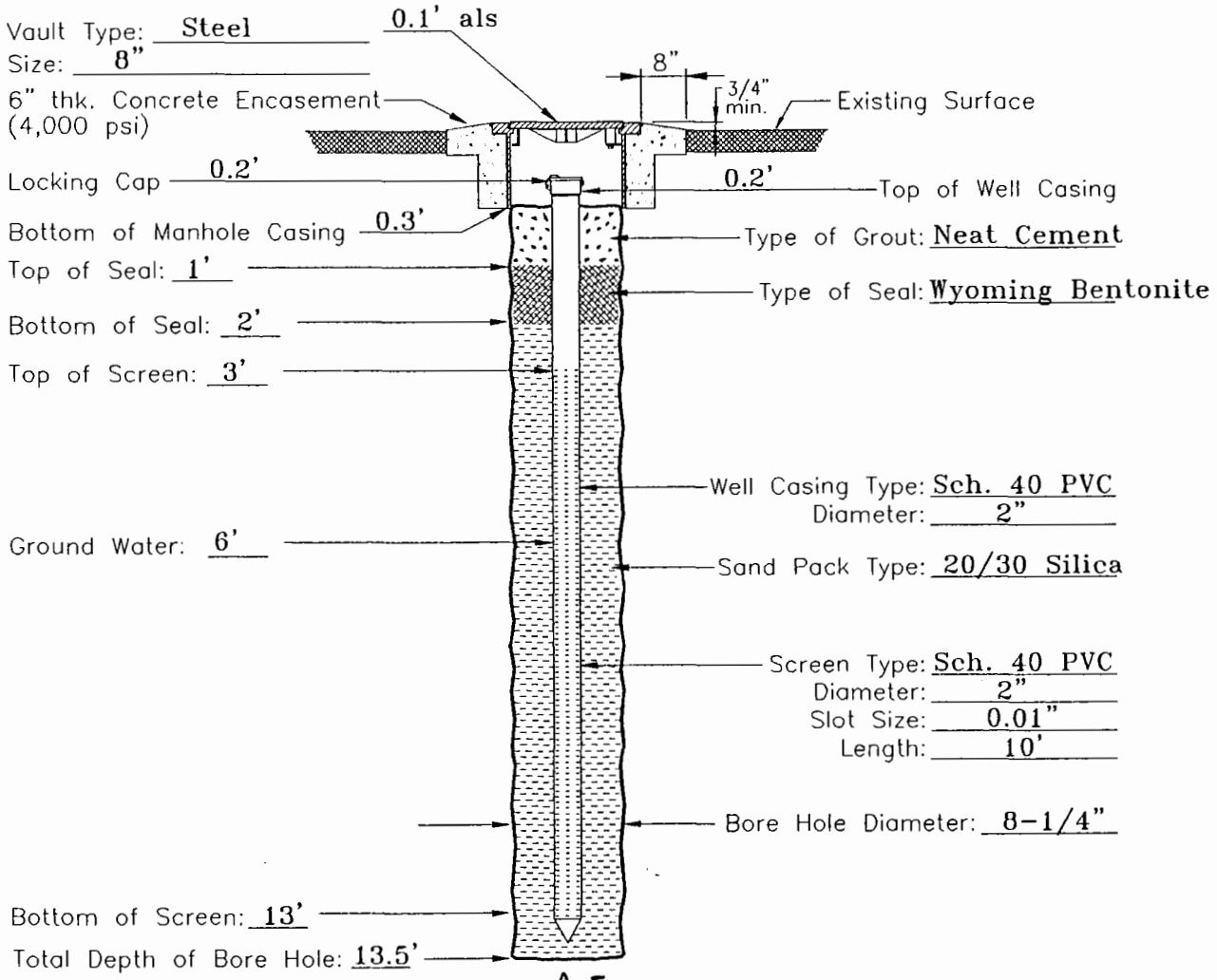


A-5

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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# MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Cloyd Griffey
WELL NUMBER: MW-6

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 4/3/96 Finish: 4/3/96
TIME Start: 1130 Finish: 1215

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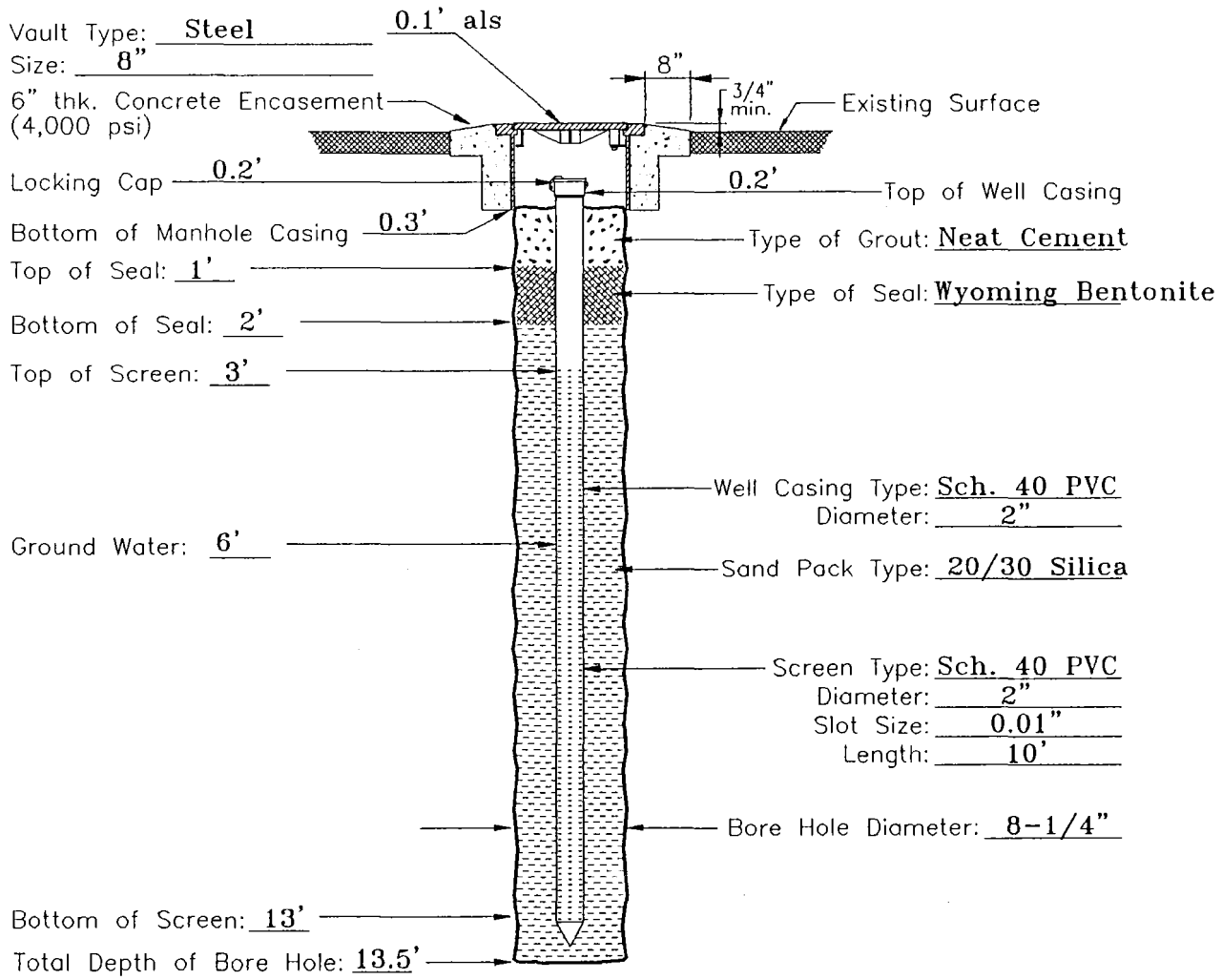


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NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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LOGGED BY: Lisa M. Greer
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-7

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/22/96 Finish: 5/22/96
TIME Start: 1230 Finish: 1300

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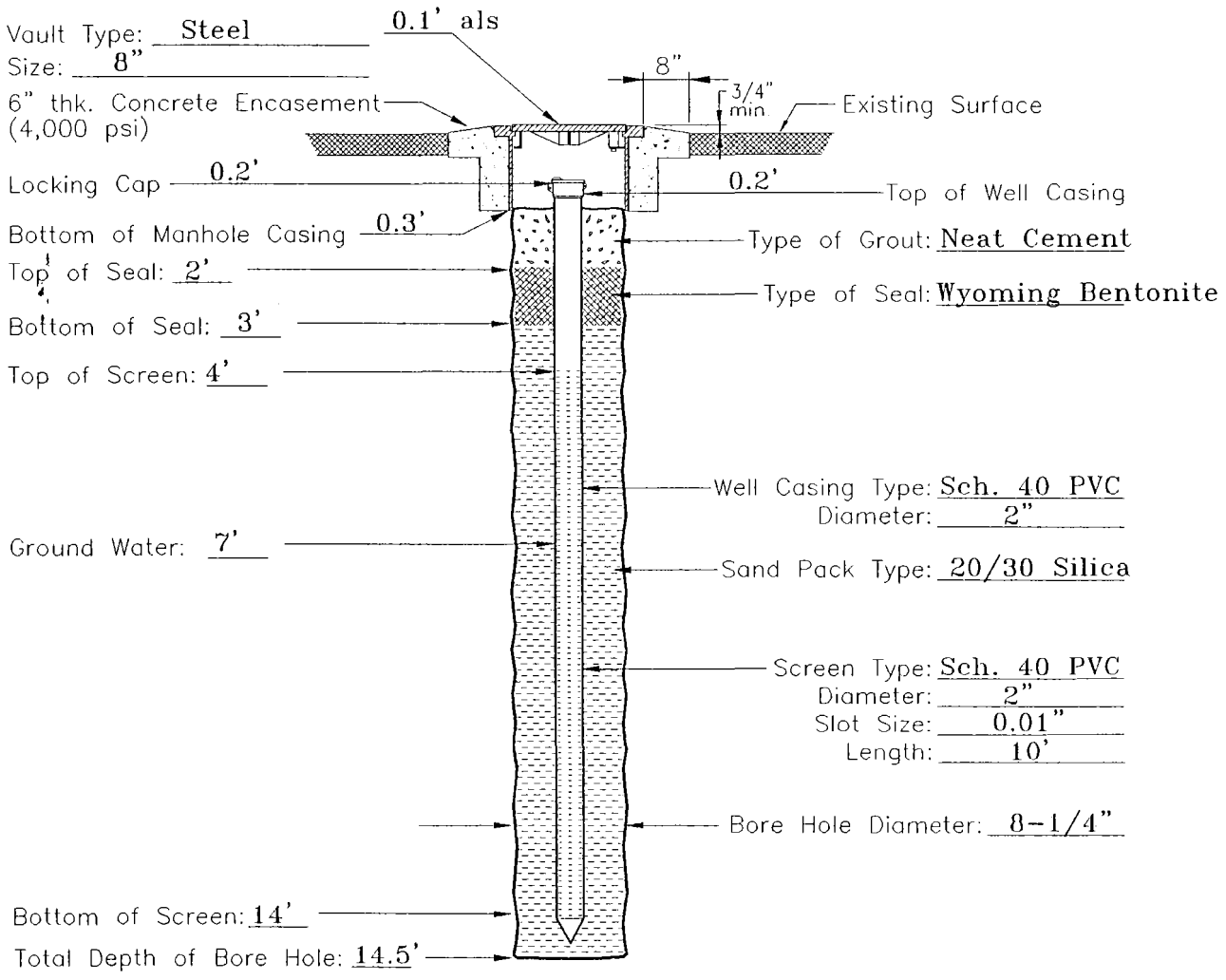


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NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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LOGGED BY: Lisa M. Greer
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-8

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/22/96 Finish: 5/22/96
TIME Start: 1300 Finish: 1330

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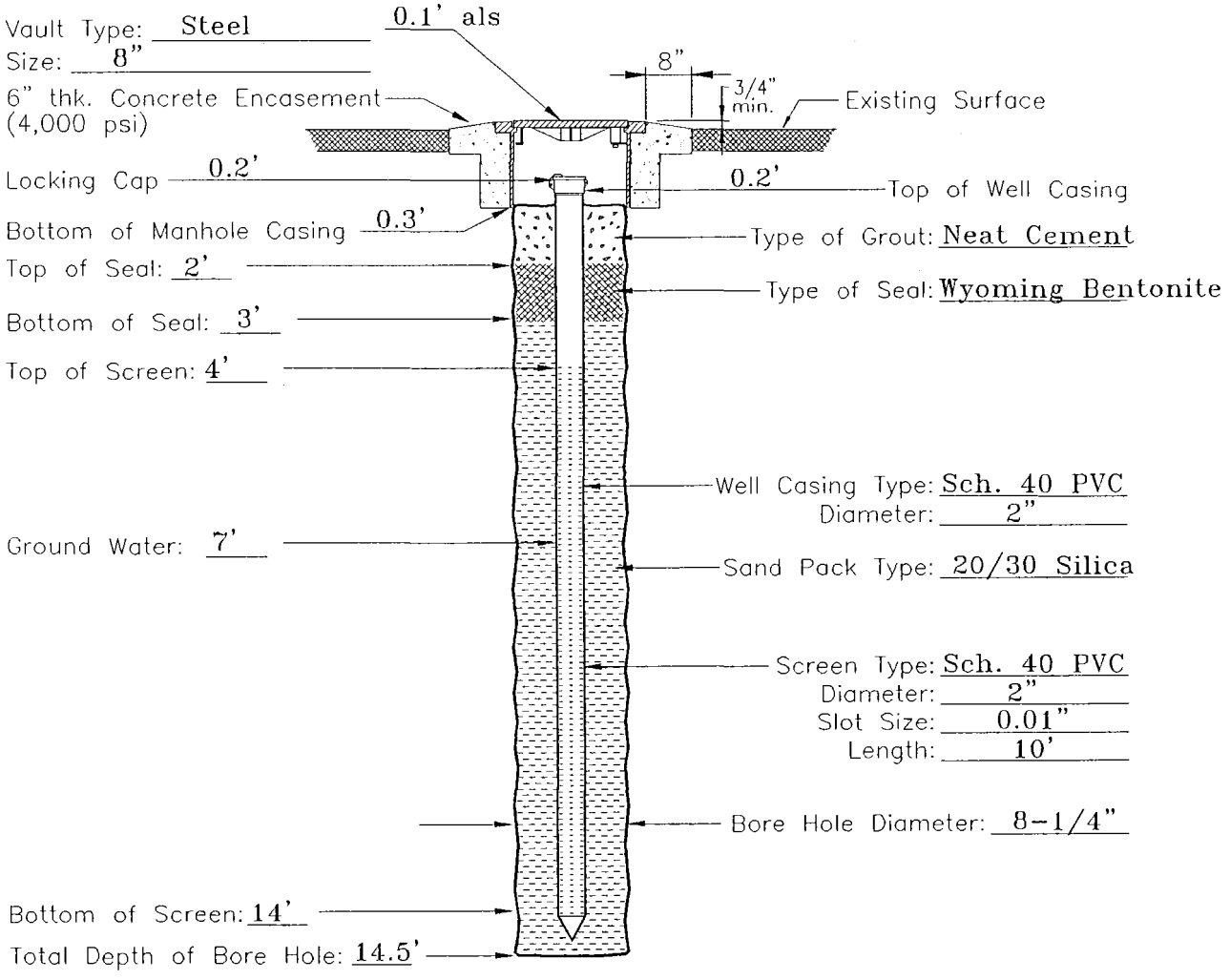


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NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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LOGGED BY: Lisa M. Greer
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-9

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/22/96 Finish: 5/22/96
TIME Start: 1330 Finish: 1400

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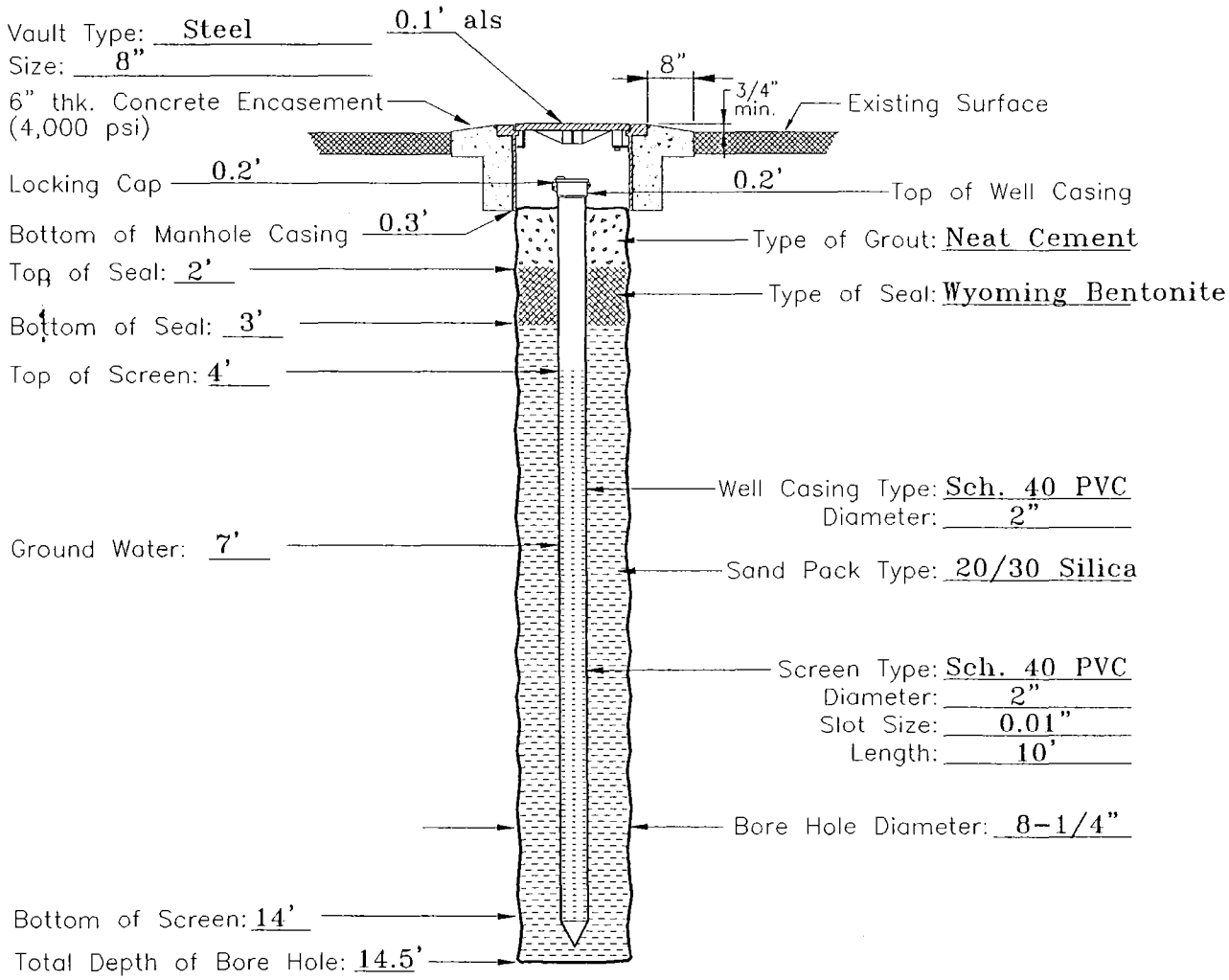


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LOGGED BY: Lisa M. Greer
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-10

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/22/96 Finish: 5/22/96
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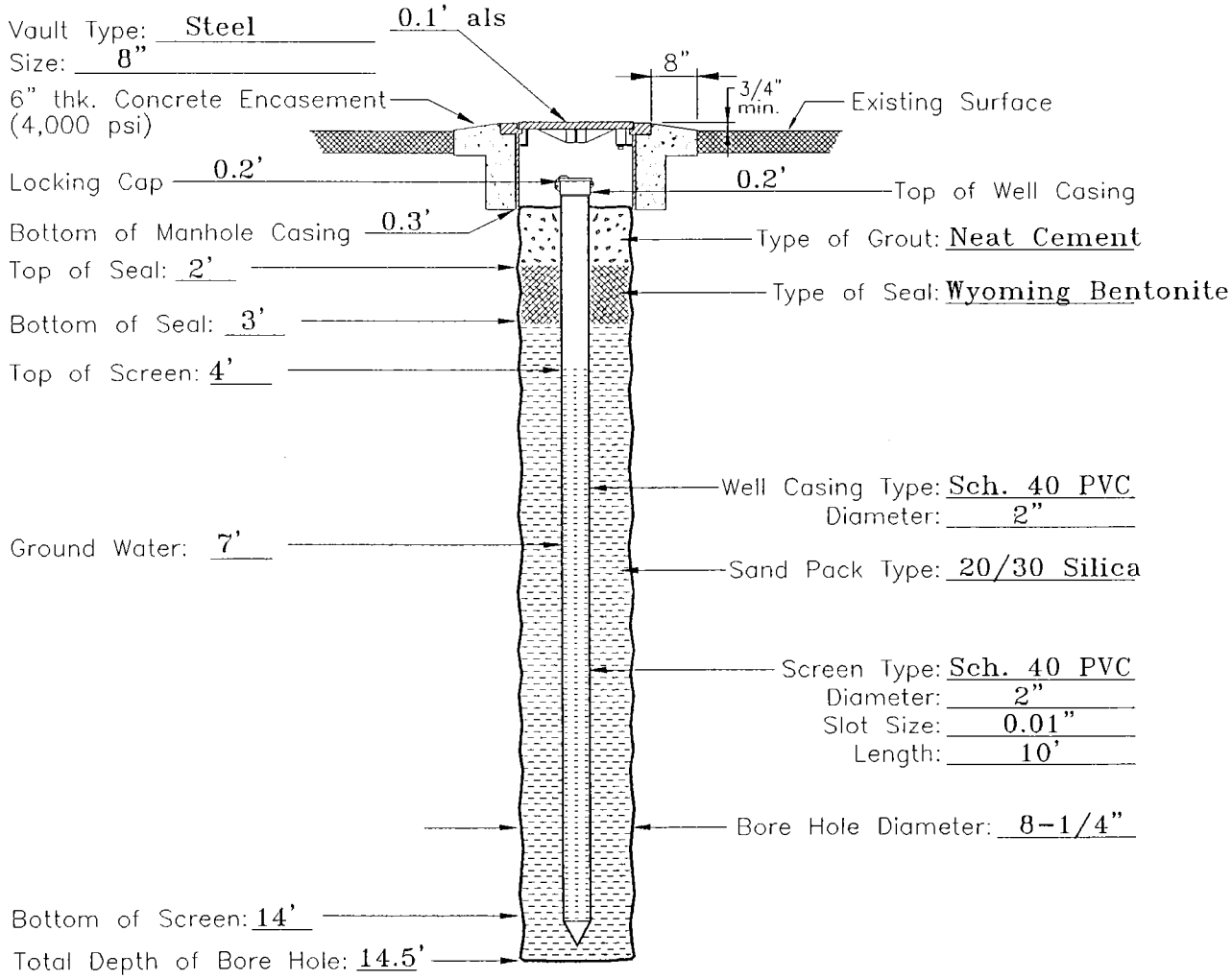


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LOGGED BY: Lisa M. Greer
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-11

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/22/96 Finish: 5/22/96
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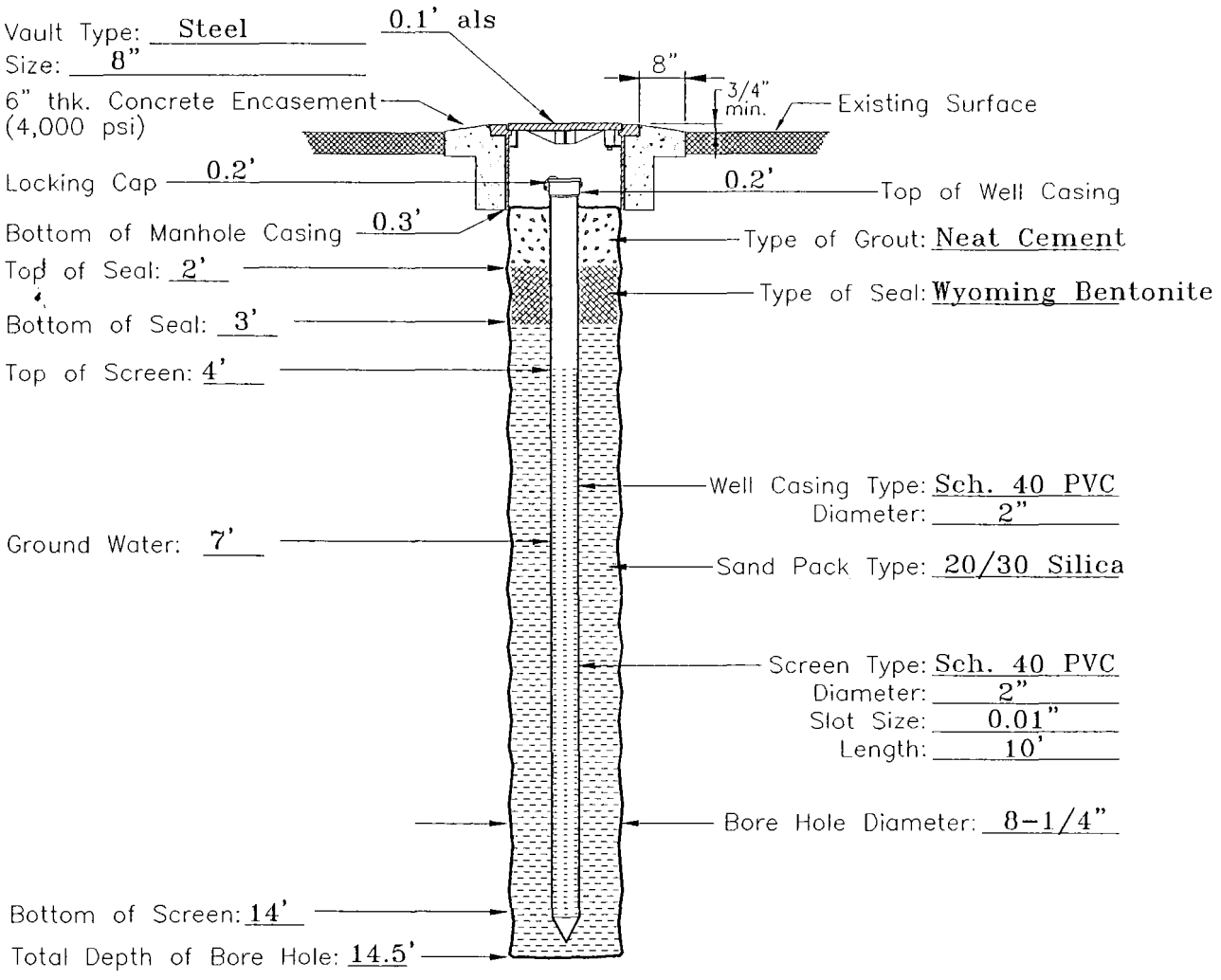


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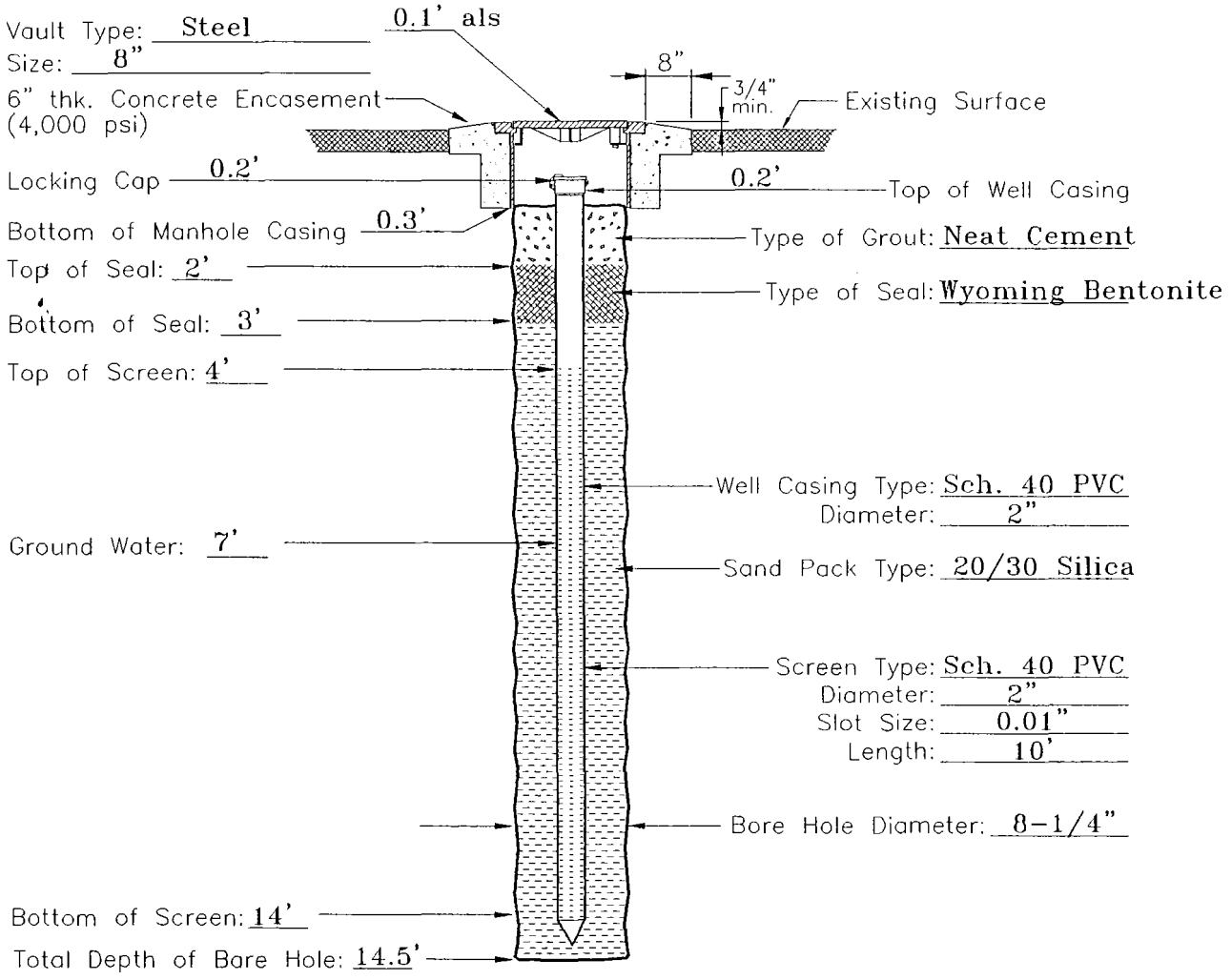
# MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Lisa M. Greer
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-12

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/22/96 Finish: 5/22/96
TIME Start: 1500 Finish: 1530

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):

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Sarasota, FL 34240-8810
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(941) 378-5218 Fax

LOGGED BY: Lisa M. Greer
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-13

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/22/96 Finish: 5/22/96
TIME Start: 1530 Finish: 1600

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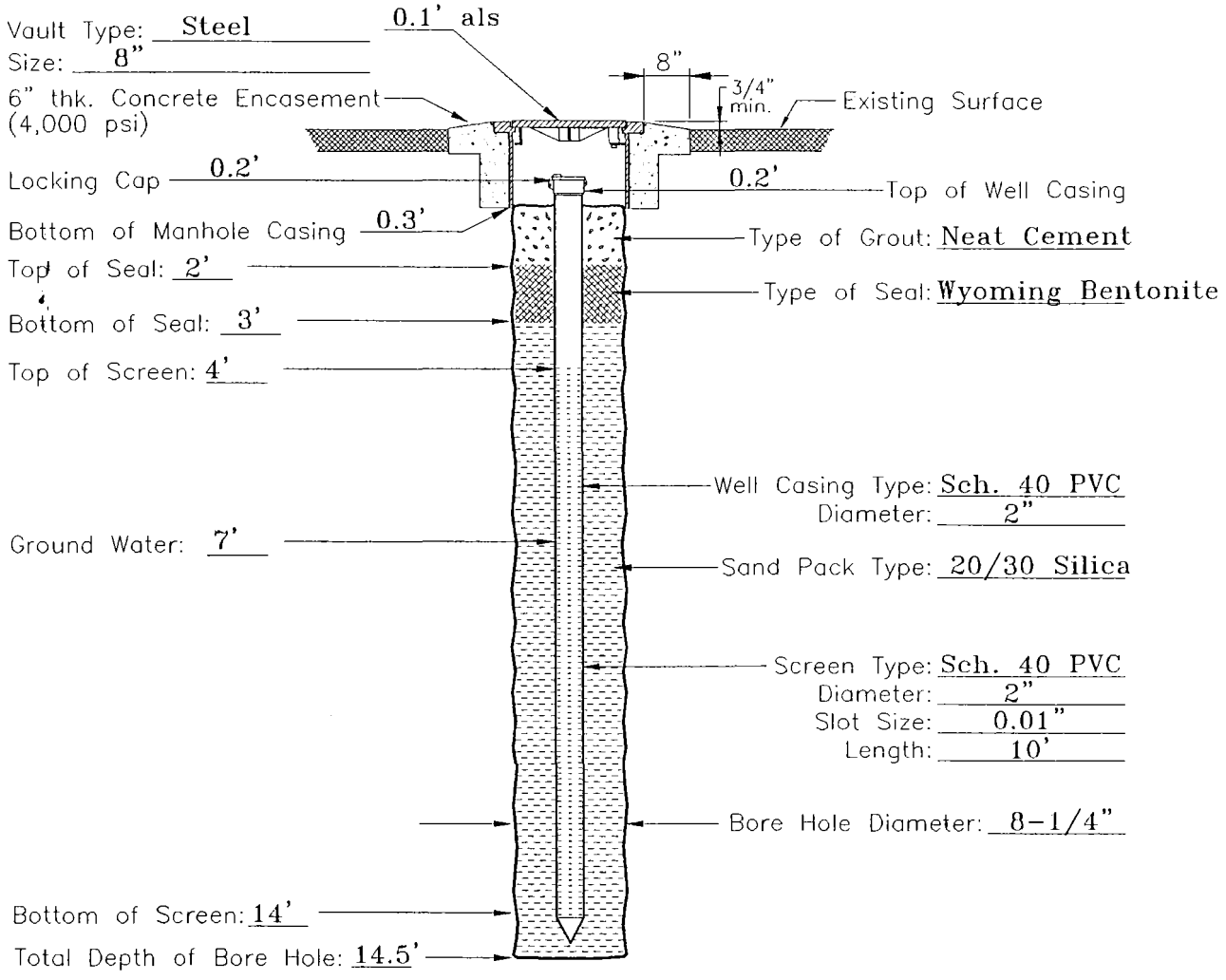


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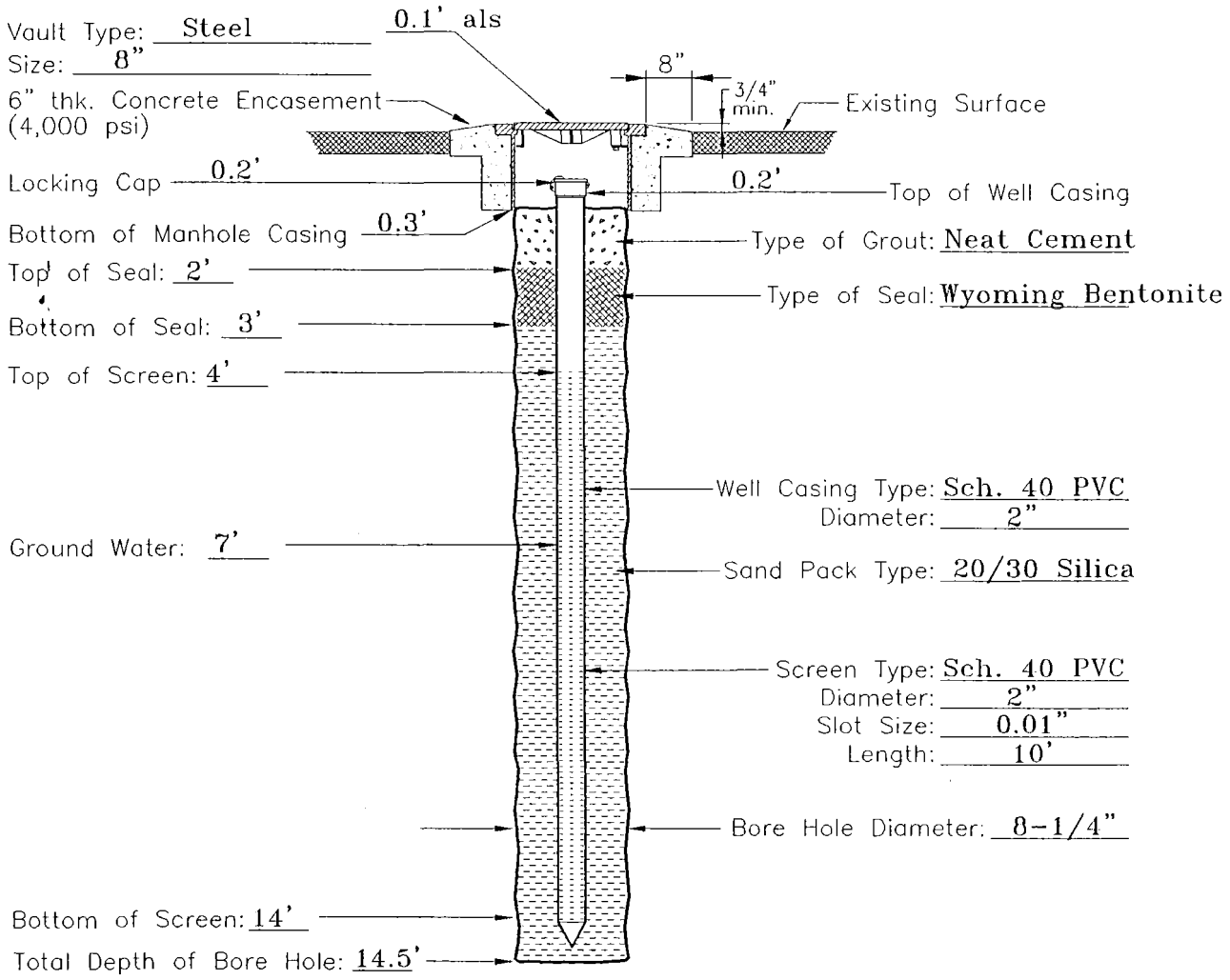
LOGGED BY: Lisa M. Greer
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-14

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/23/96 Finish: 5/23/96
TIME Start: 0915 Finish: 0945

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):

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# MONITOR WELL CONSTRUCTION DETAIL

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Sarasota, FL 34240-8810
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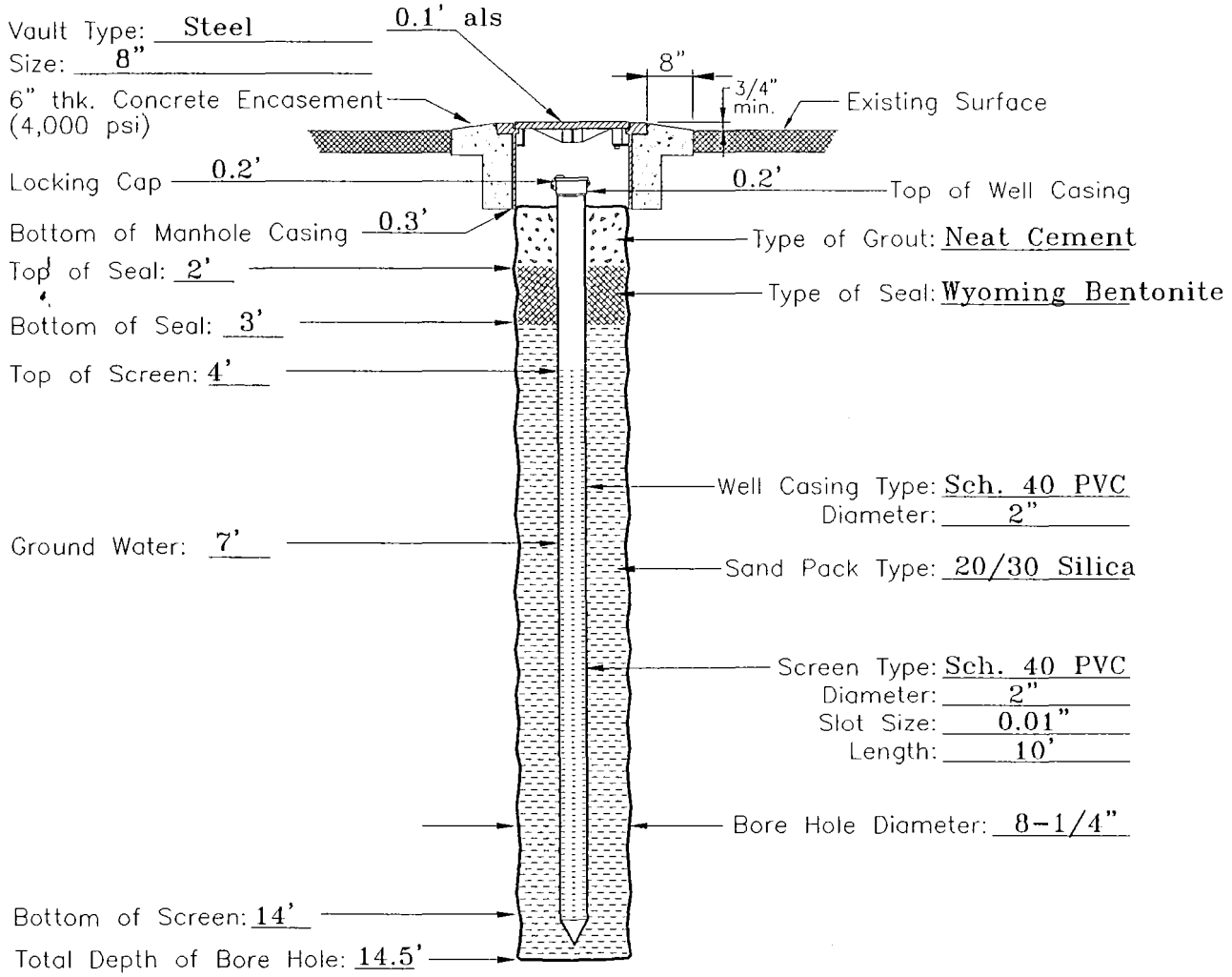
(941) 378-5218 Fax

LOGGED BY: Lisa M. Greer
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-15

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/23/96 Finish: 5/23/96
TIME Start: 0945 Finish: 1015

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):

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Environmental Division

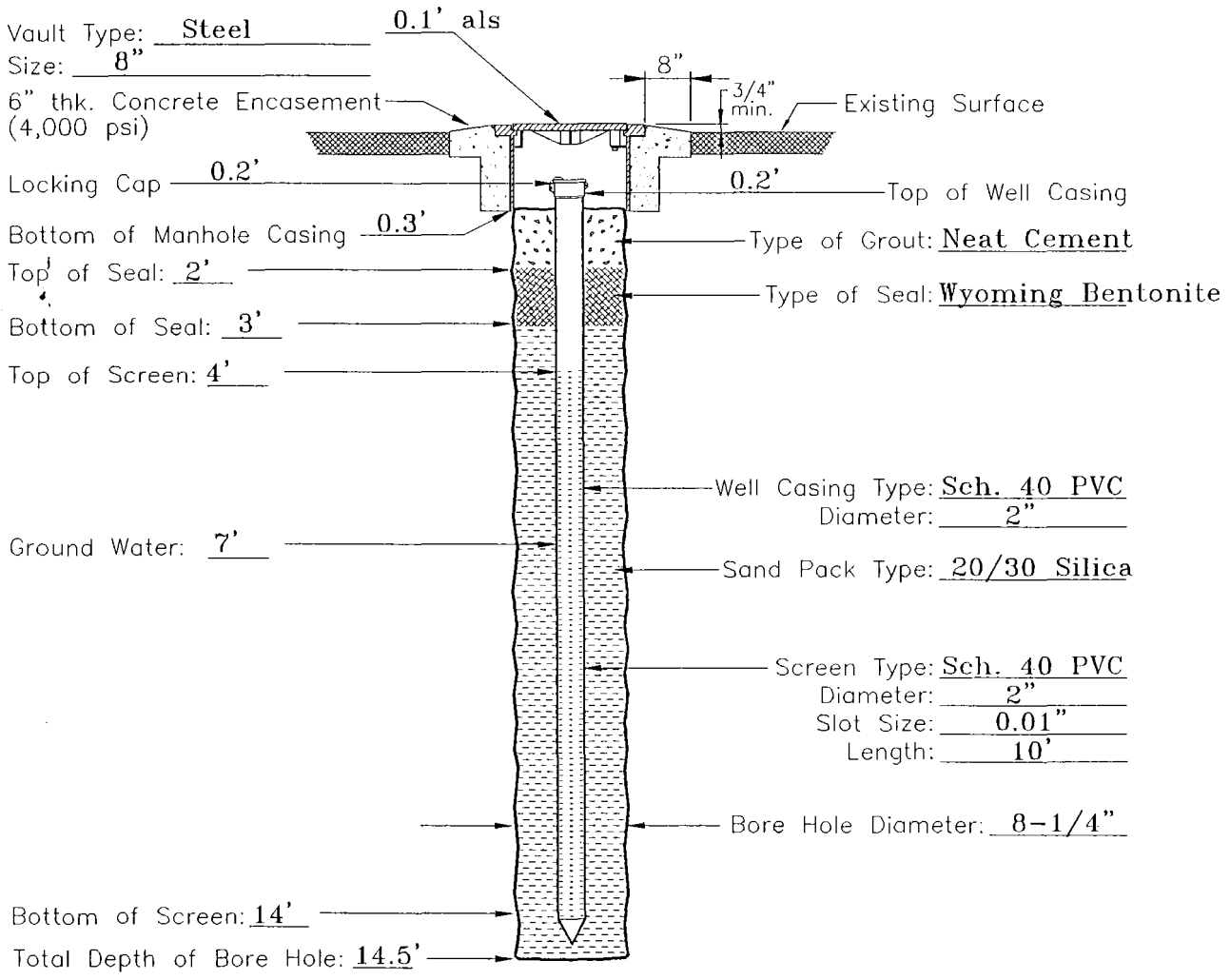
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Lisa M. Greer
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-16

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/23/96 Finish: 5/23/96
TIME Start: 1330 Finish: 1400

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):

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Environmental Division

# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Lisa M. Greer
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-17

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/23/96 Finish: 5/23/96
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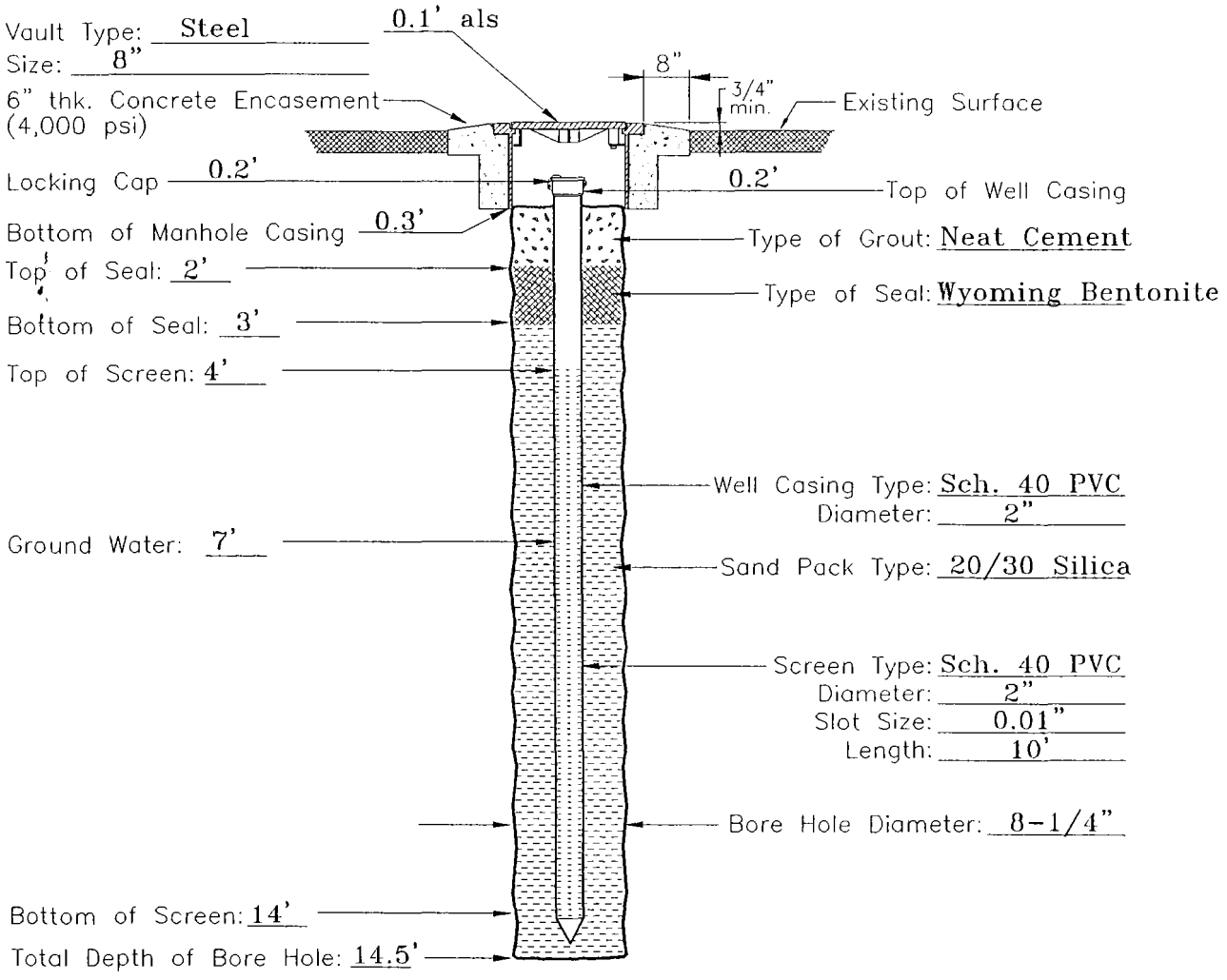


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NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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Environmental Division

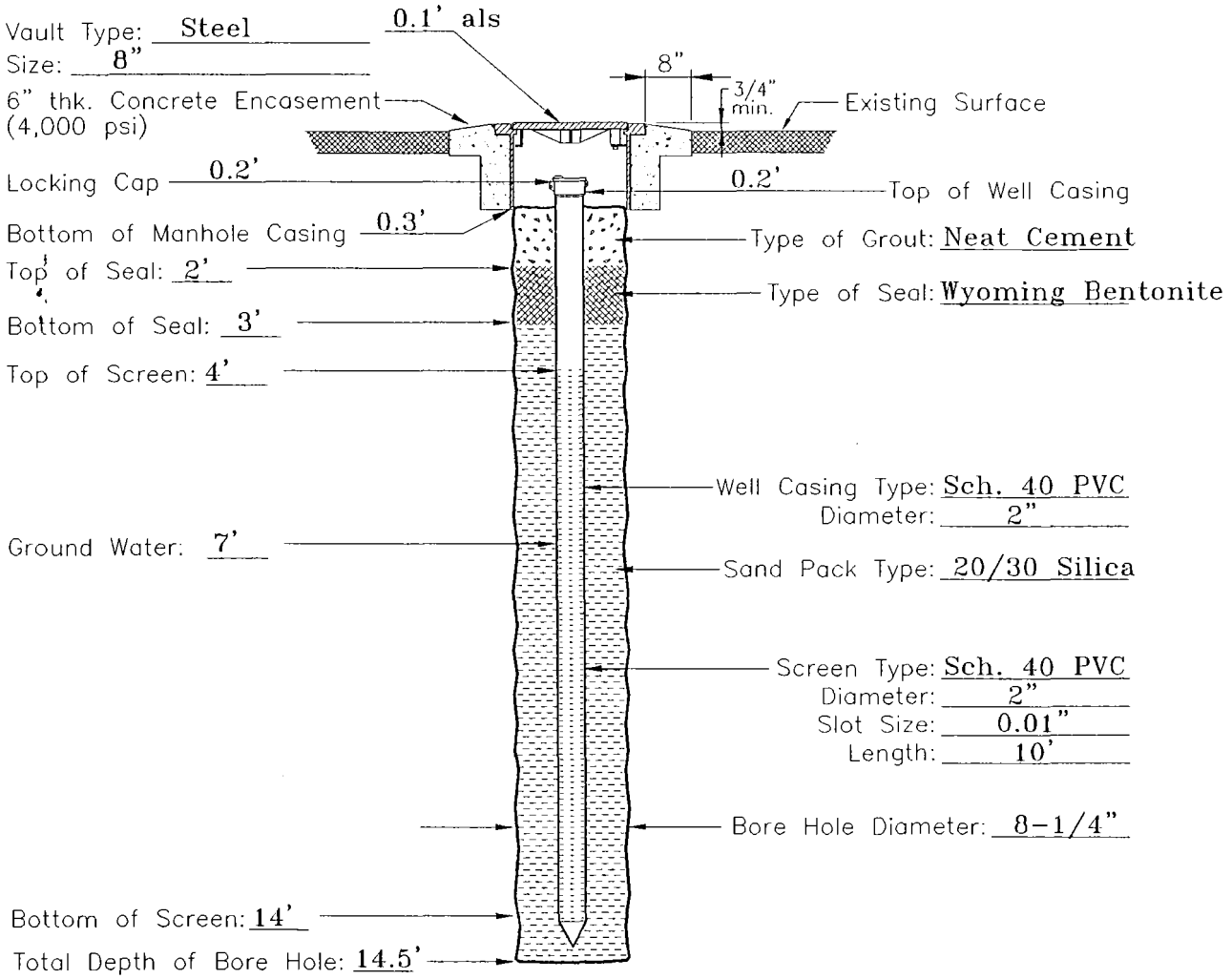
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Lisa M. Greer
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-18

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/23/96 Finish: 5/23/96
TIME Start: 1530 Finish: 1600

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-18

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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Environmental Division

6389 Tower Lane
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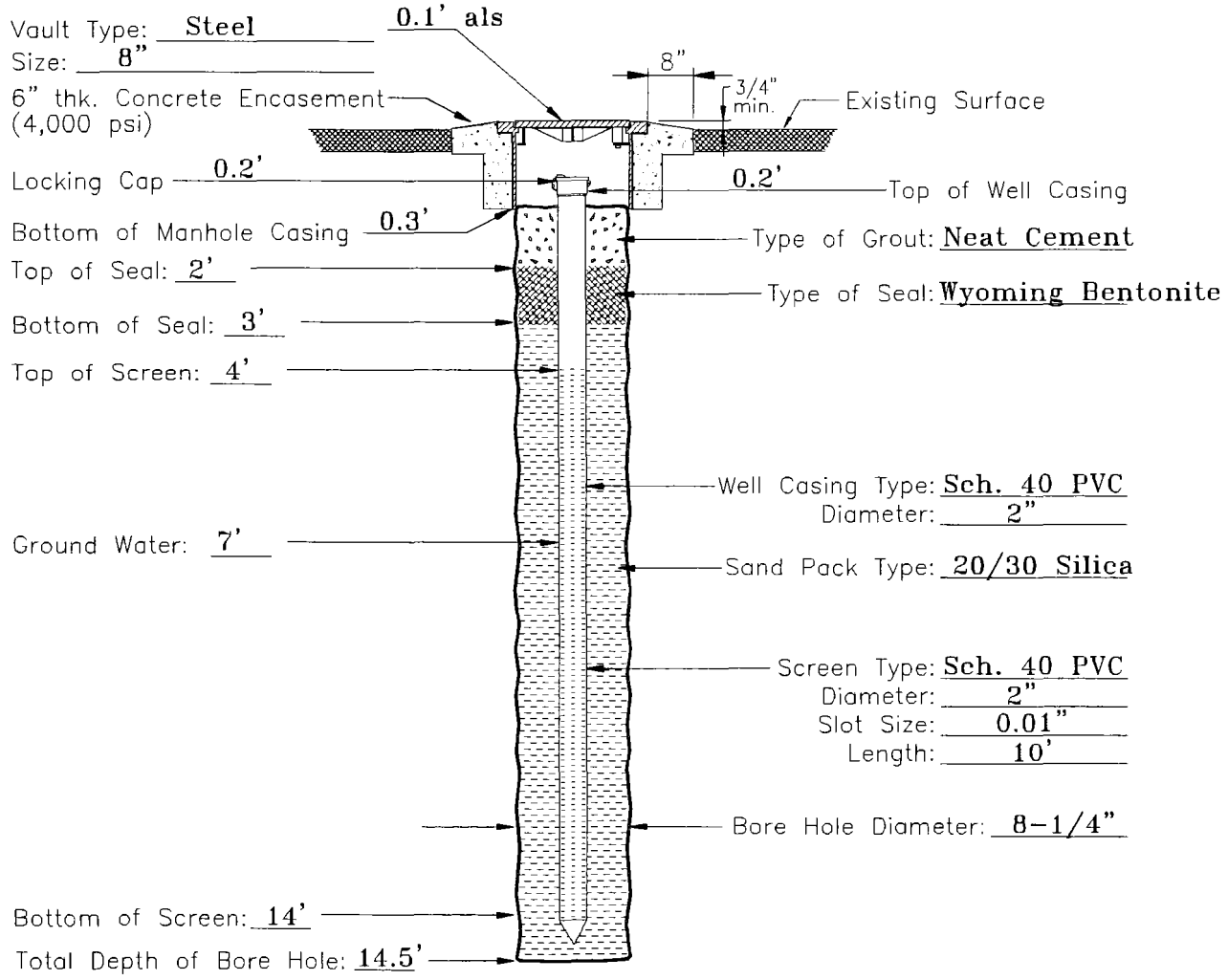
(941) 378-5218 Fax

# MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Stoney Pope
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-19

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 7/30/96 Finish: 7/30/96
TIME Start: 1157 Finish: 1215

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

A-19

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# MONITOR WELL CONSTRUCTION DETAIL

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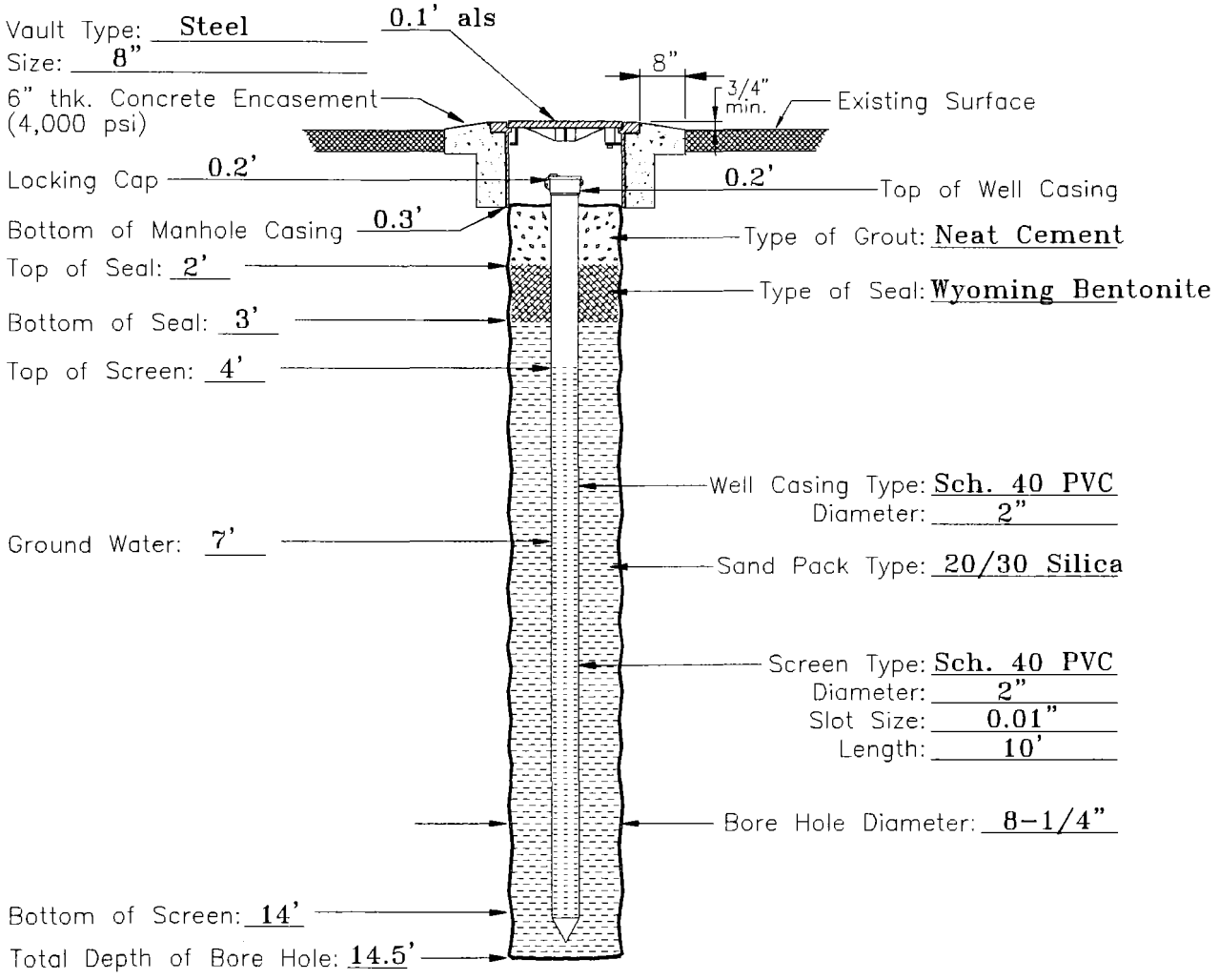
LOGGED BY: Stoney Pope
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-20

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 7/30/96 Finish: 7/30/96
TIME Start: 1223 Finish: 1240

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-20

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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# MONITOR WELL CONSTRUCTION DETAIL

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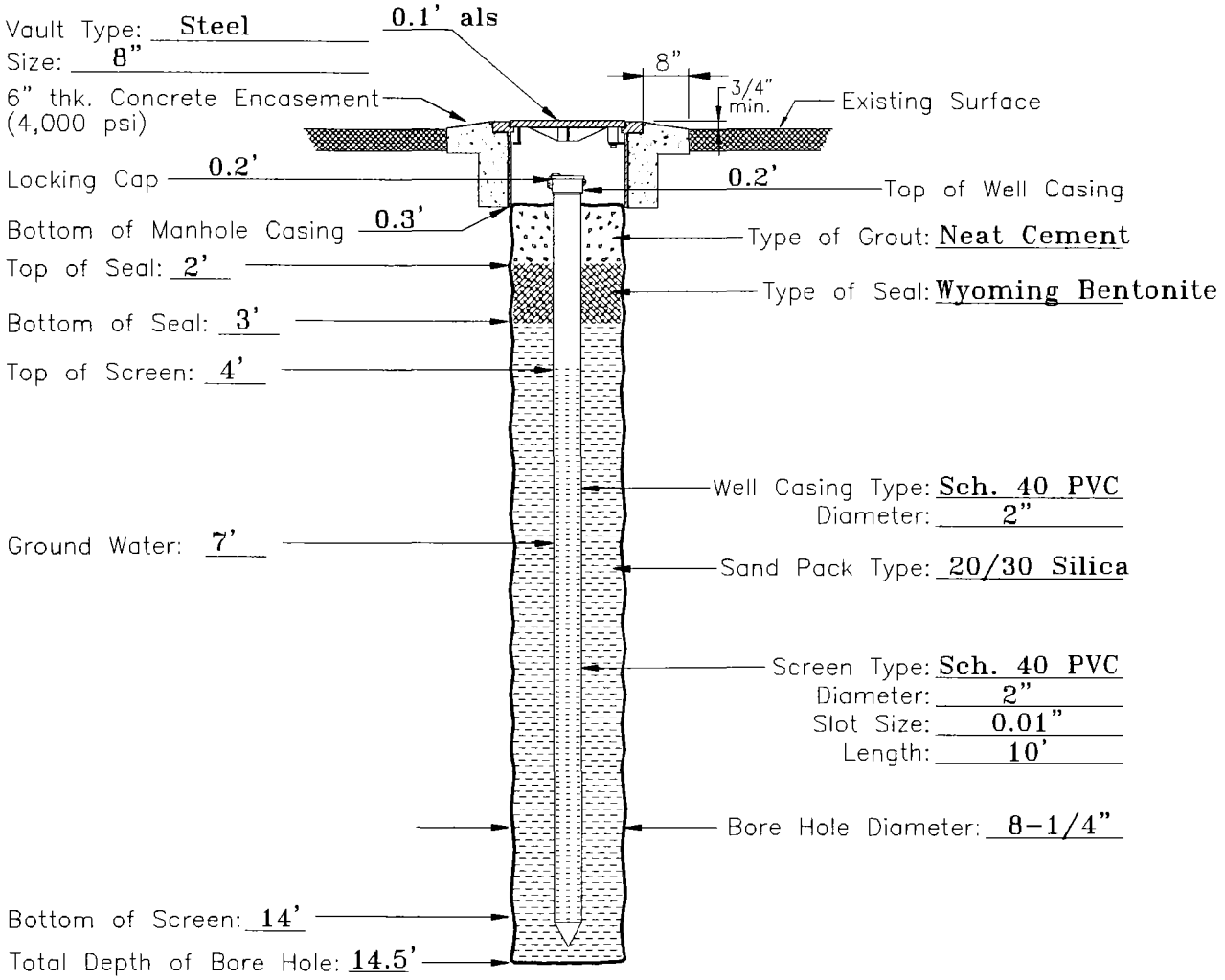
(941) 378-5218 Fax

LOGGED BY: Stoney Pope
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-21

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 7/30/96 Finish: 7/30/96
TIME Start: 1250 Finish: 1315

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-21

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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# MONITOR WELL CONSTRUCTION DETAIL

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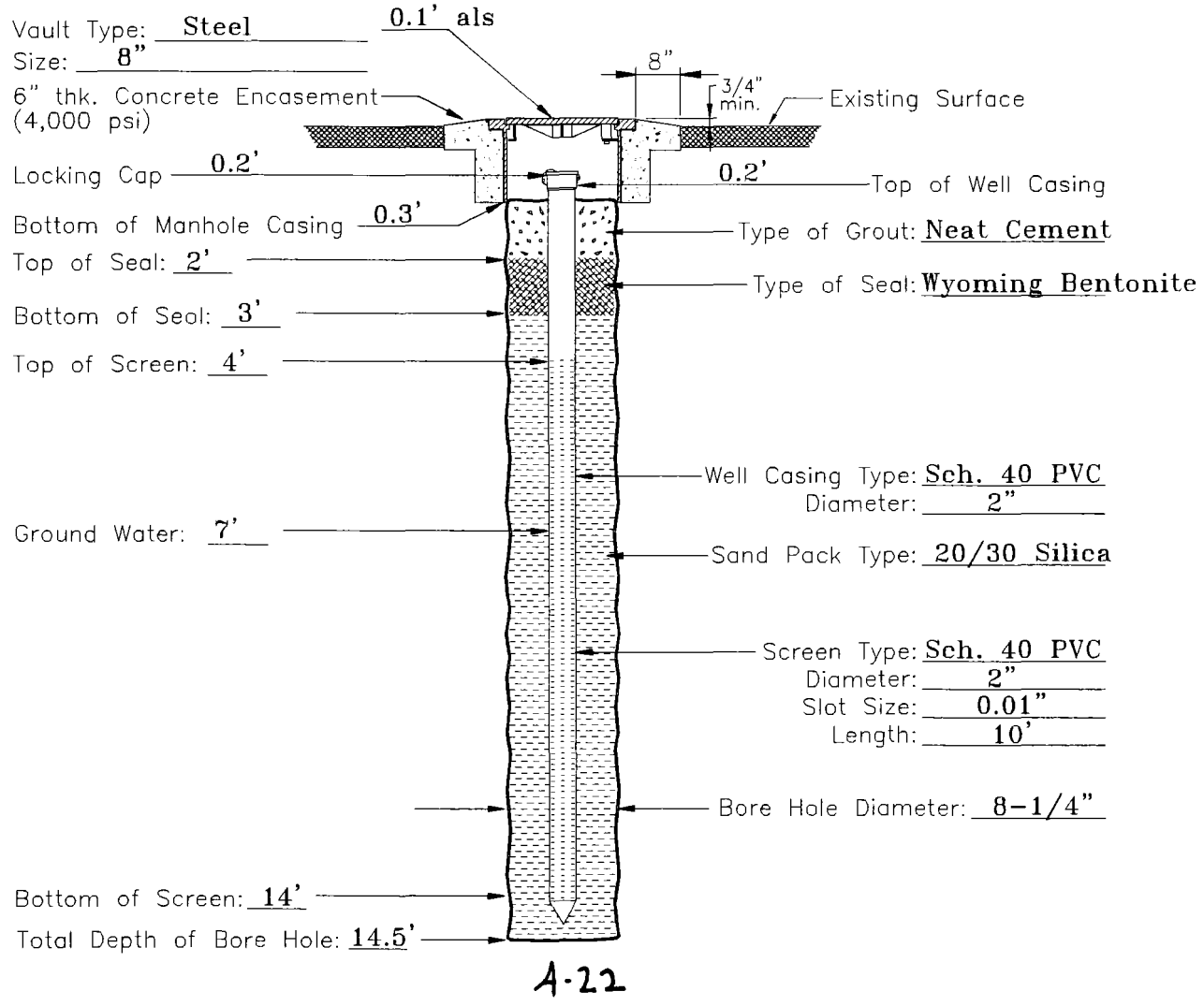
(941) 378-5218 Fax

LOGGED BY: Stoney Pope
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-22

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 7/30/96 Finish: 7/30/96
TIME Start: 1430 Finish: 1455

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-22

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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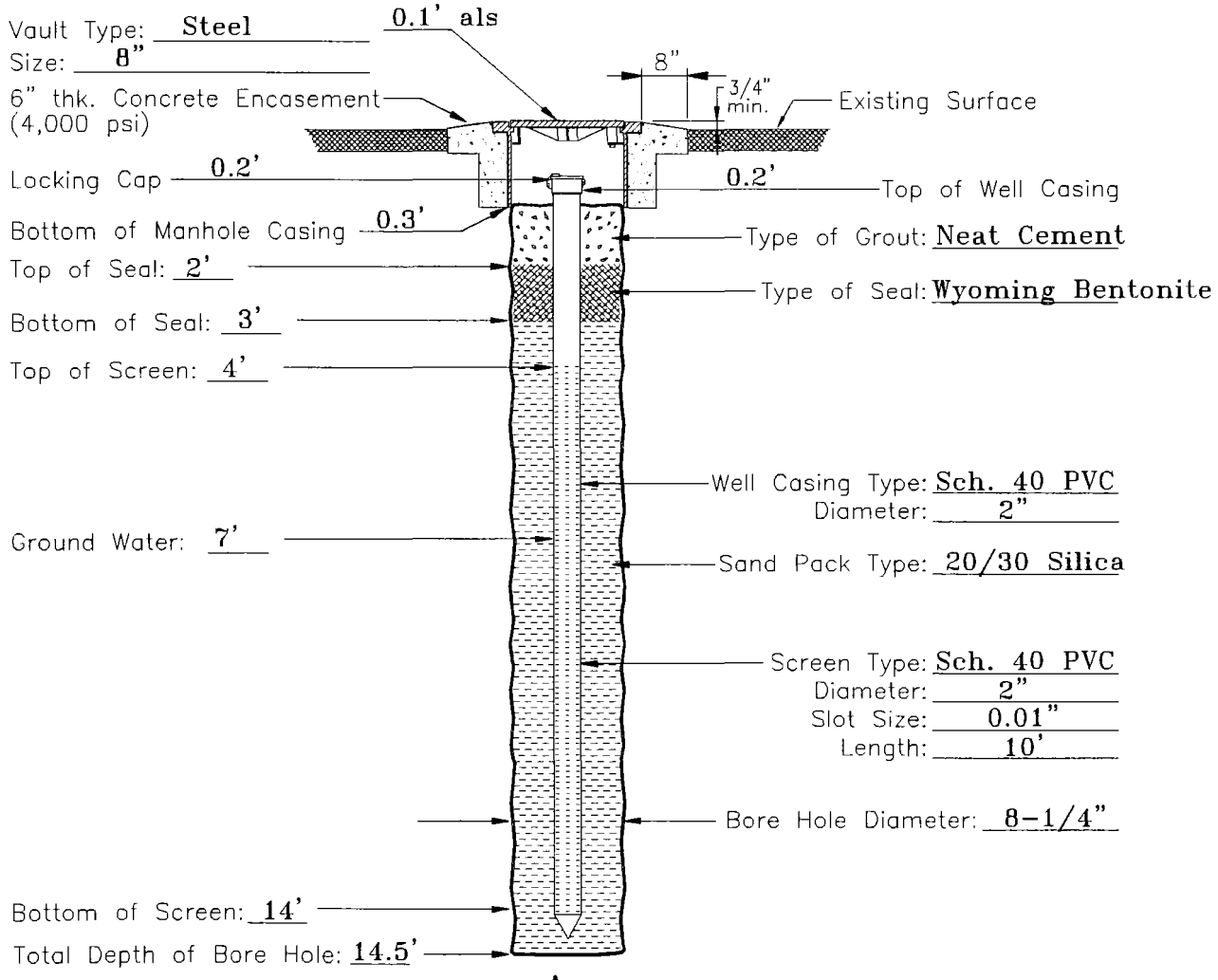
(941) 378-5218 Fax

# MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Stoney Pope
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-23

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 7/30/96 Finish: 7/30/96
TIME Start: 1505 Finish: 1525

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-23

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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# MONITOR WELL CONSTRUCTION DETAIL

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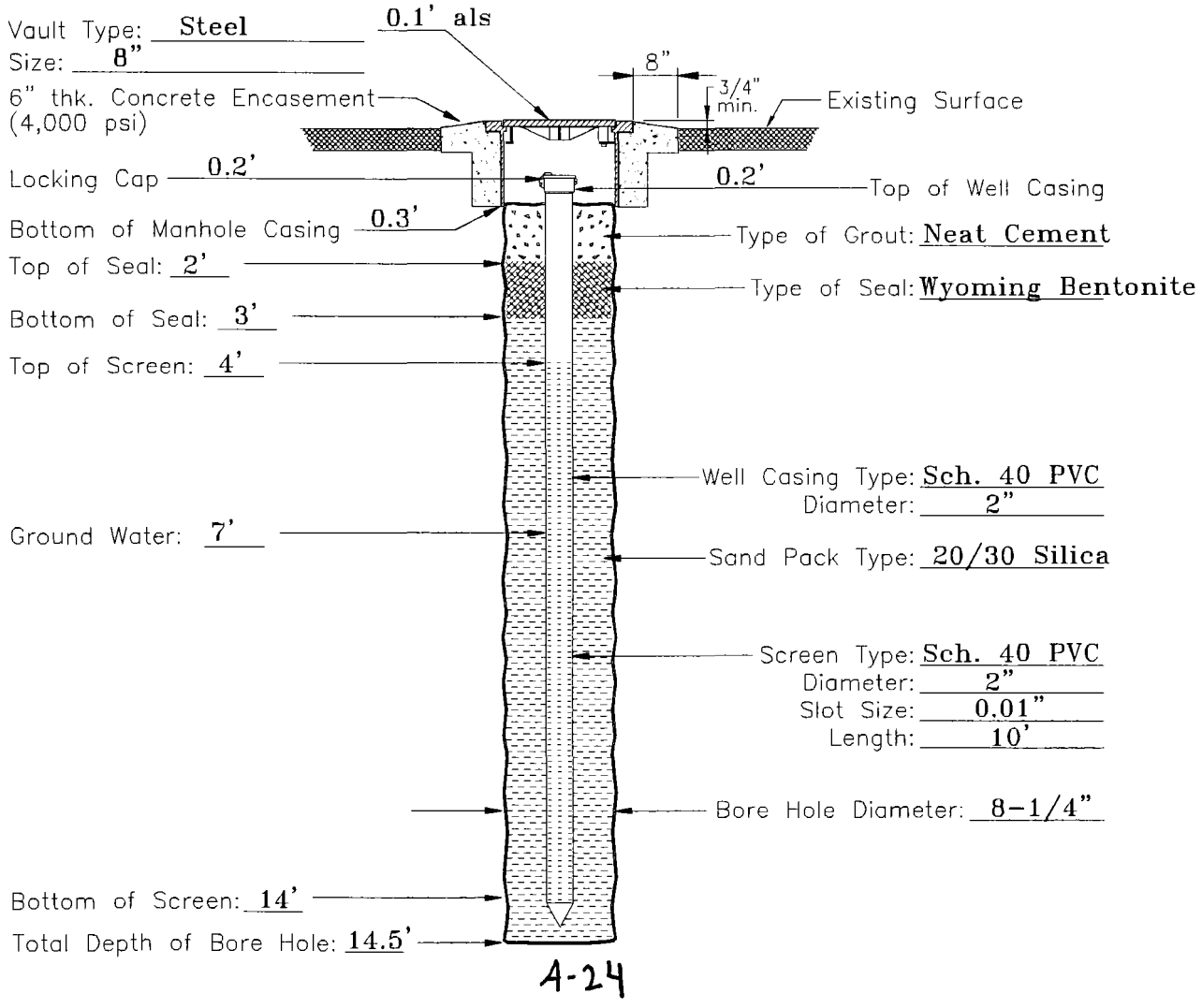
LOGGED BY: Stoney Pope
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-24

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 7/30/96 Finish: 7/30/96
TIME Start: 1540 Finish: 1600

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-24

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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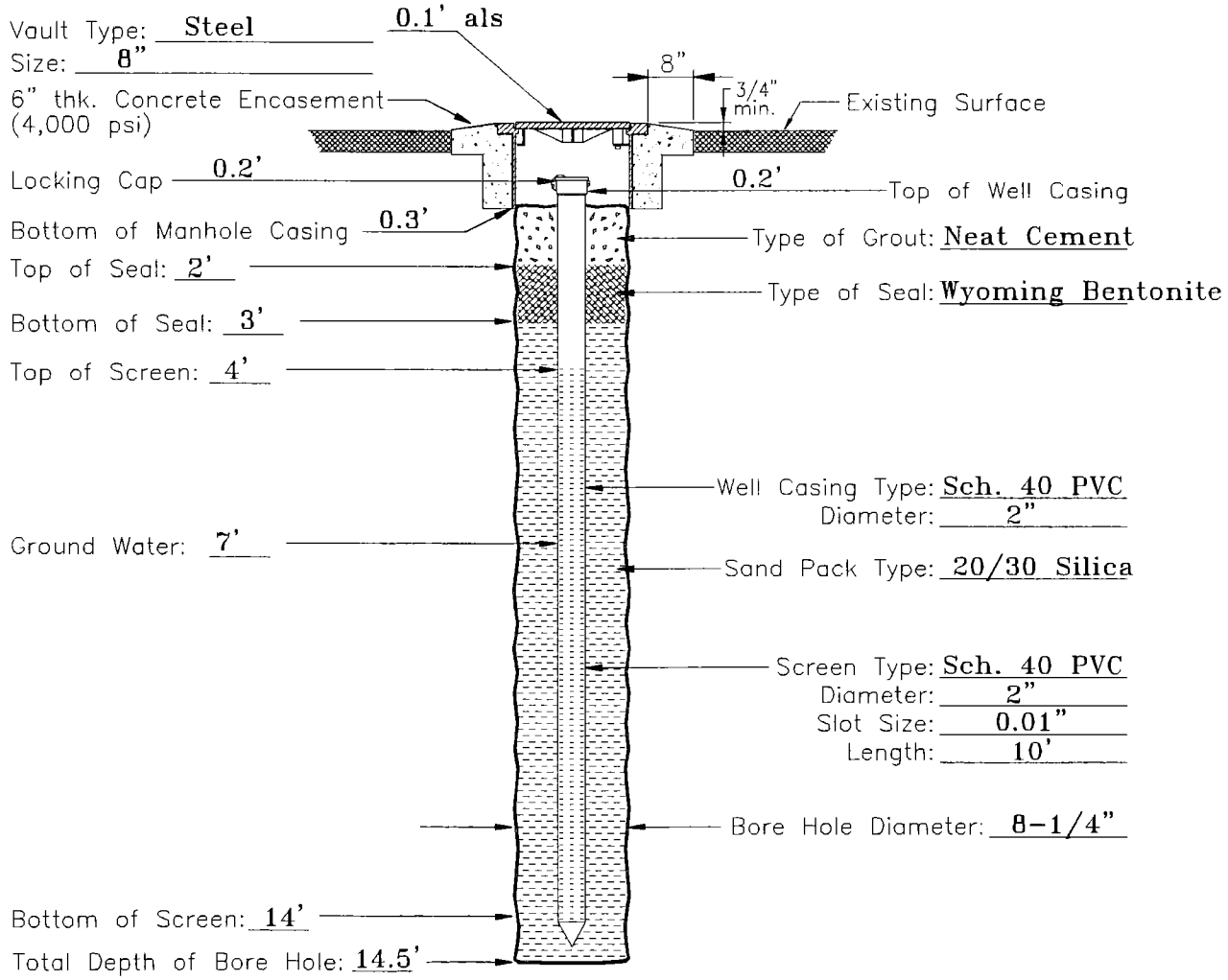
LOGGED BY: Stoney Pope
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-25

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 7/31/96 Finish: 7/31/96
TIME Start: 0945 Finish: 1010

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-25

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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# MONITOR WELL CONSTRUCTION DETAIL

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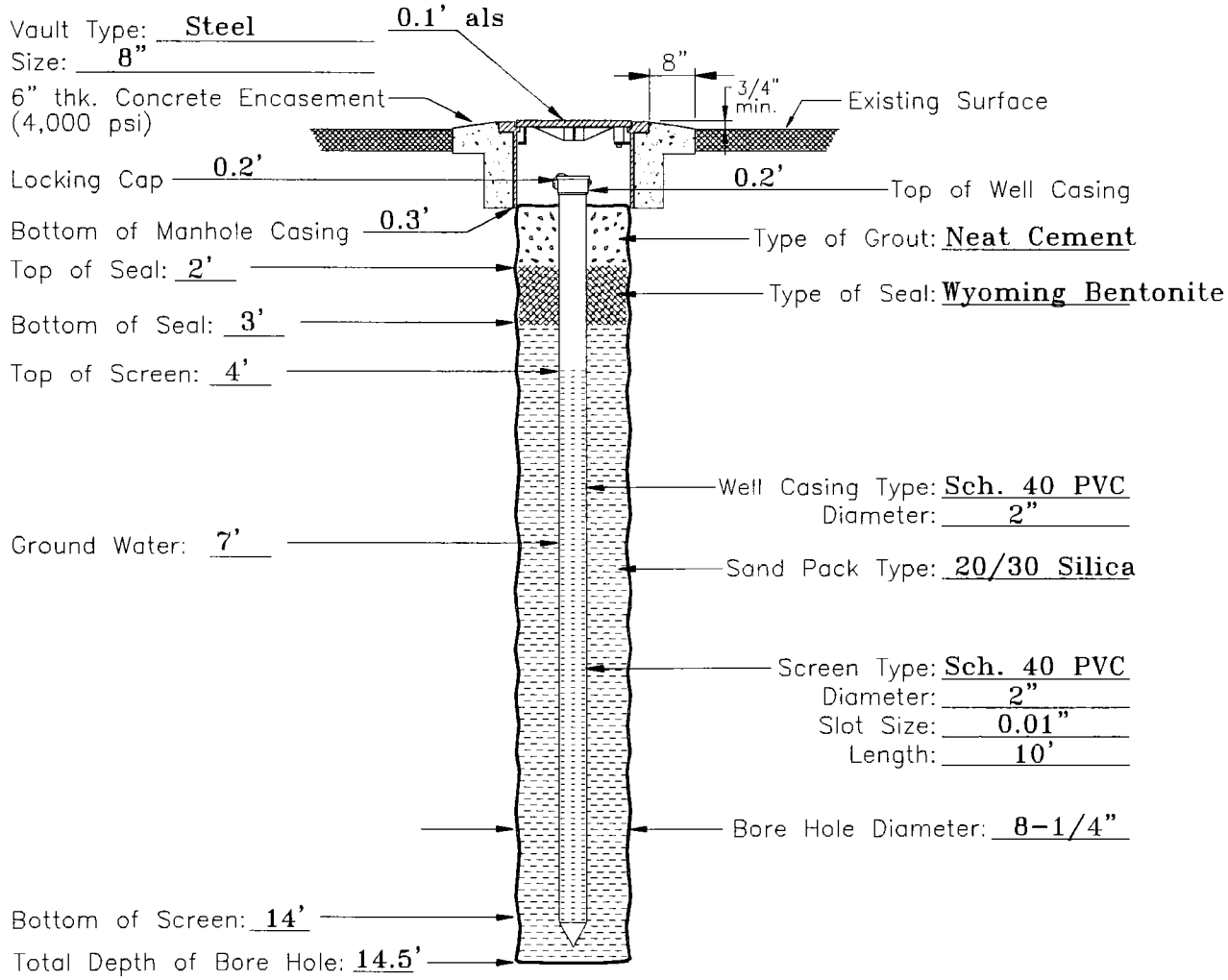
LOGGED BY: Stoney Pope
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-26

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 7/31/96 Finish: 7/31/96
TIME Start: 1100 Finish: 1125

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-26

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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# MONITOR WELL CONSTRUCTION DETAIL

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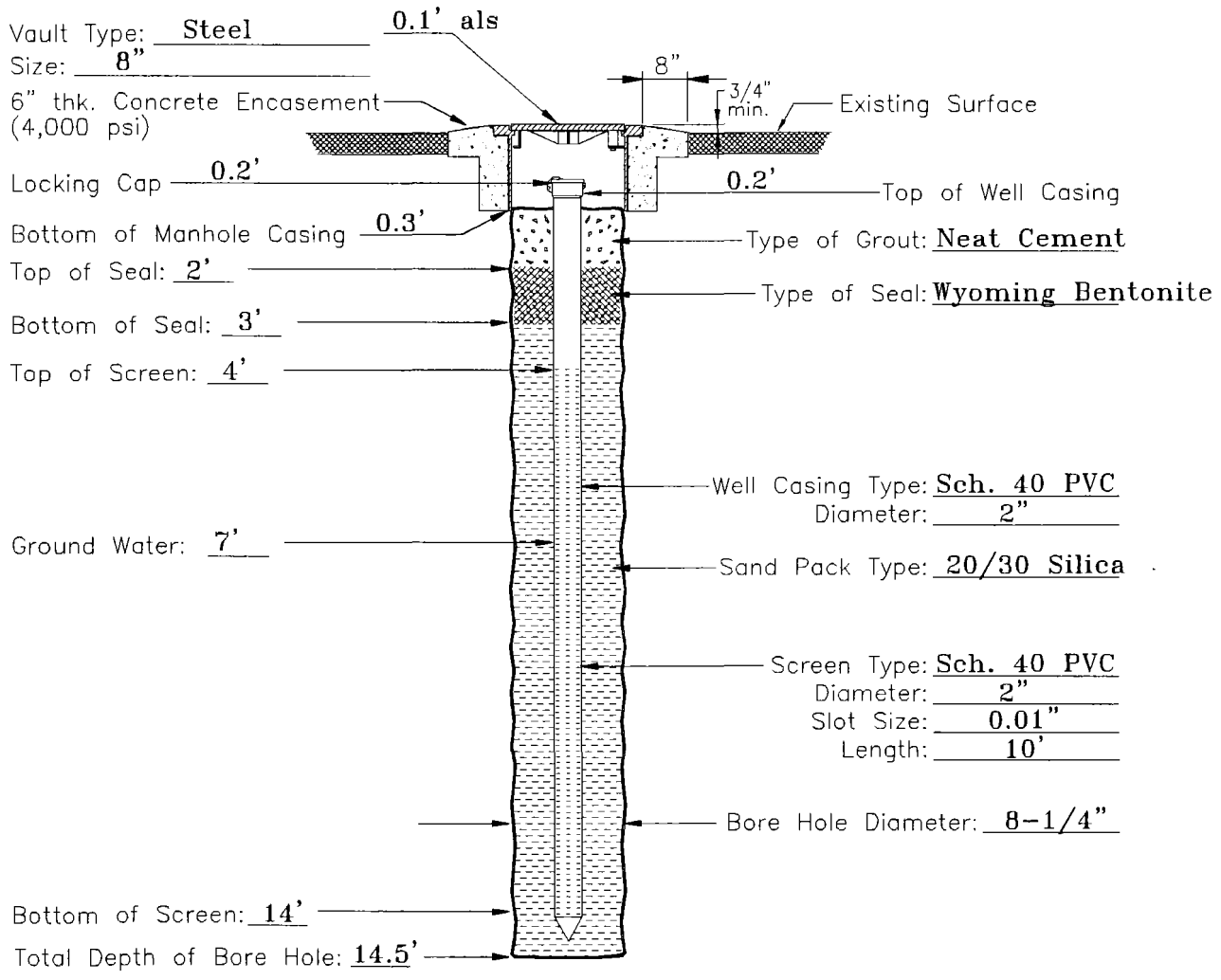
LOGGED BY: Stoney Pope
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-27

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 7/31/96 Finish: 7/31/96
TIME Start: 1215 Finish: 1230

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-27

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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# MONITOR WELL CONSTRUCTION DETAIL

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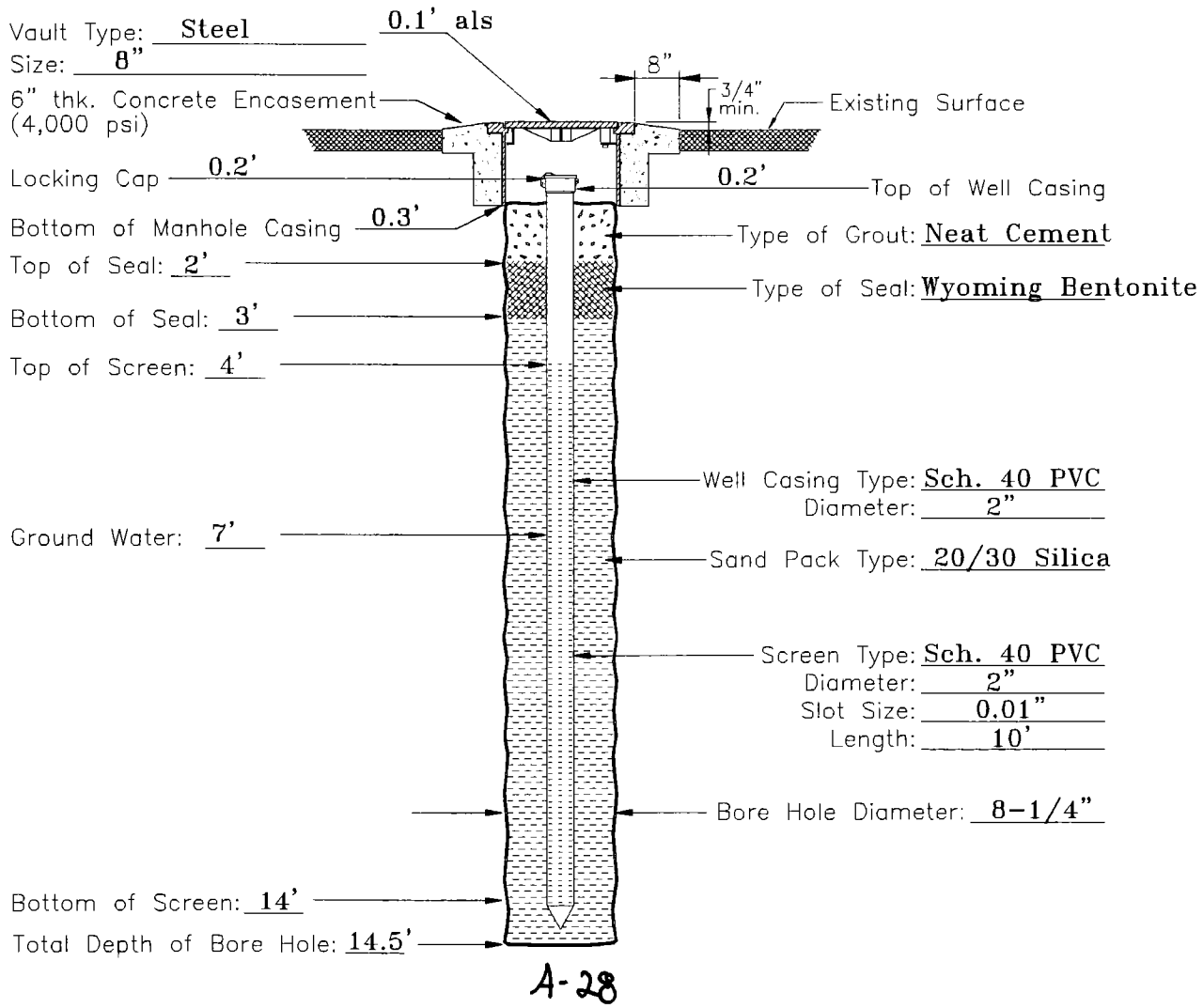
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Stoney Pope
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-28

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 7/31/96 Finish: 7/31/96
TIME Start: 1240 Finish: 1300

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-28

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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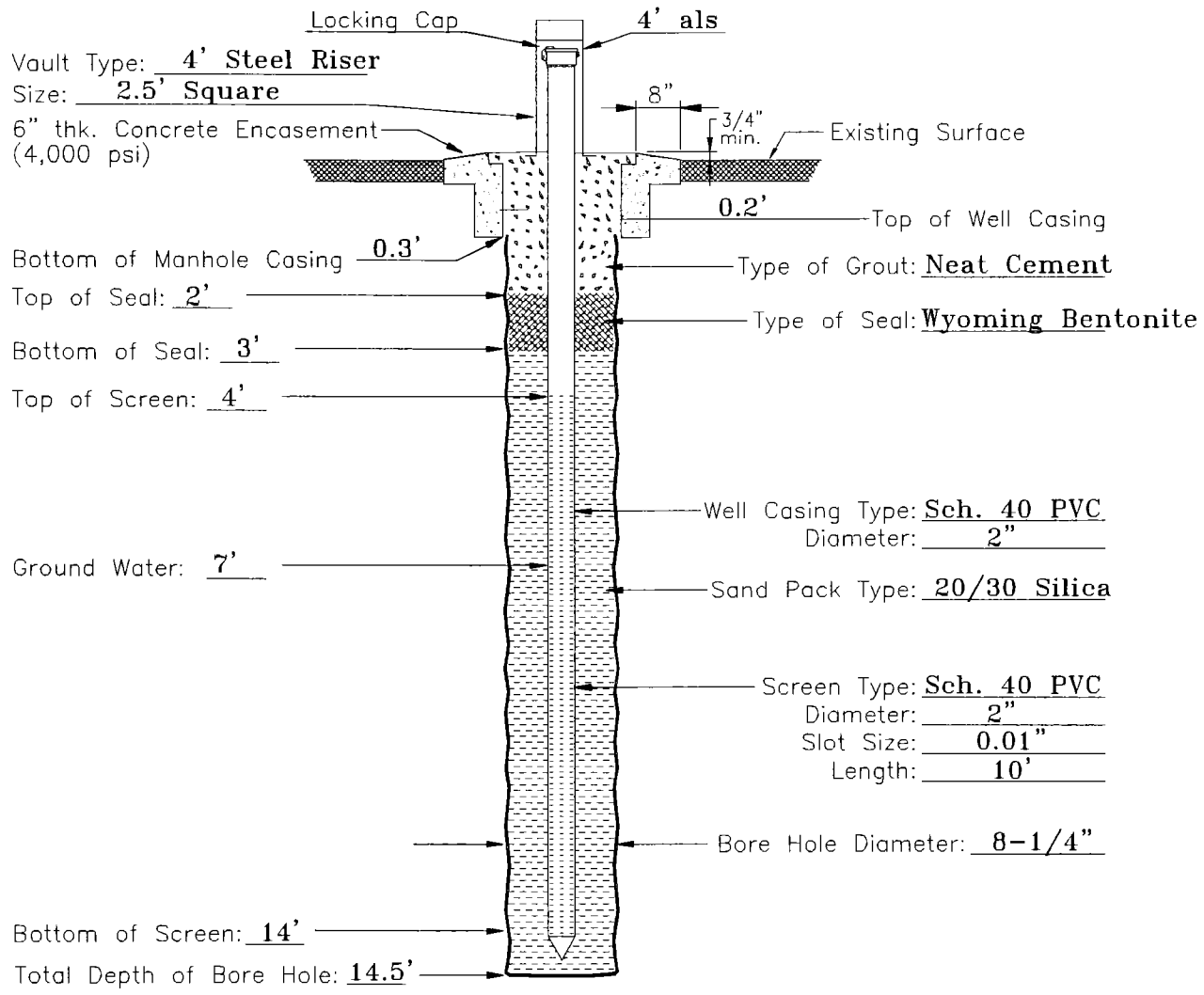
# MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-29

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 8/14/96 Finish: 8/14/96
TIME Start: 1000 Finish: 1045

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




4-29

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

CAD FILE @STA3> C:\ACADR13\MW-DETL1.DWG STA3-19951128.1143

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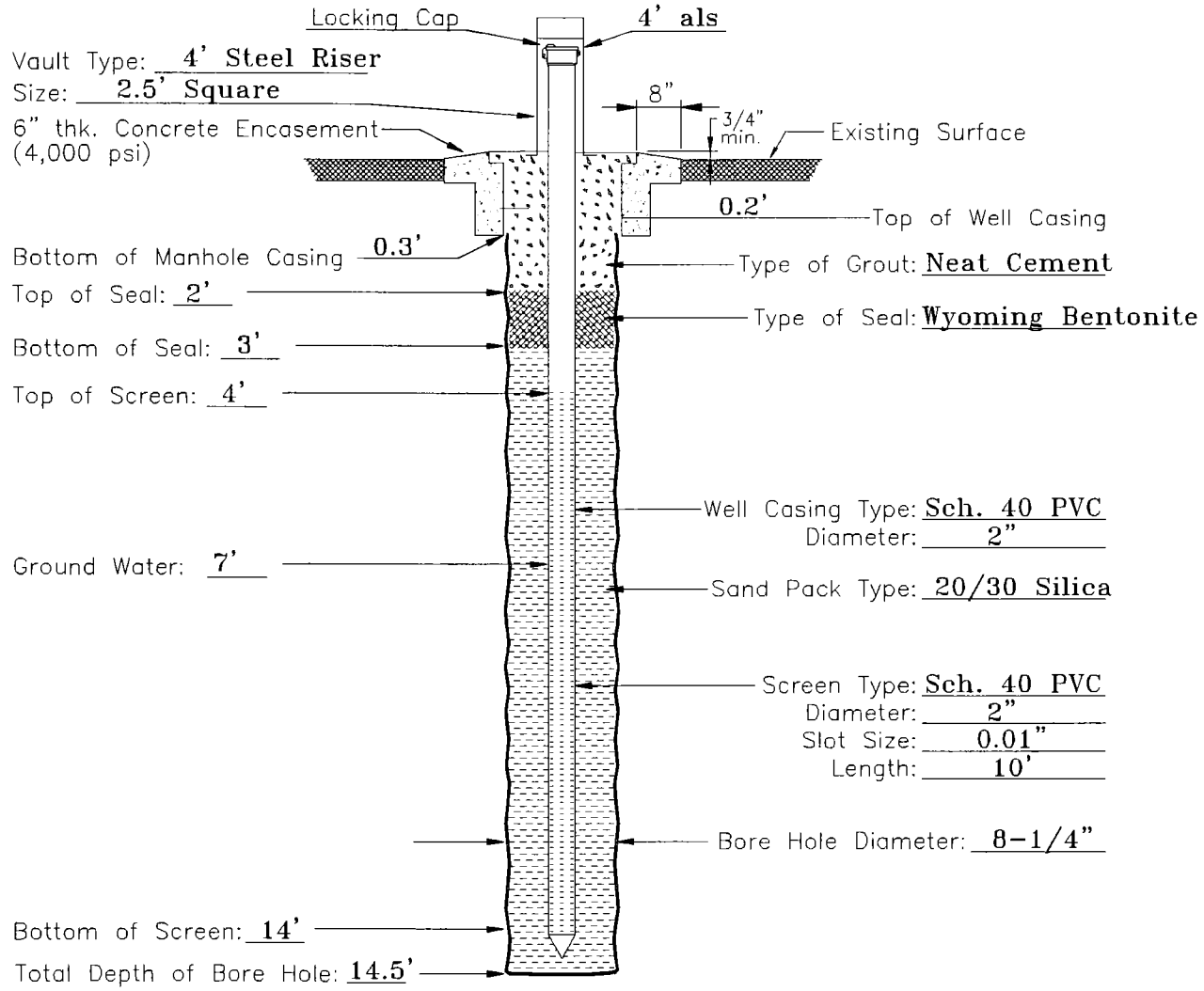
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-30

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 8/14/96 Finish: 8/14/96
TIME Start: 1100 Finish: 1145

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-30

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
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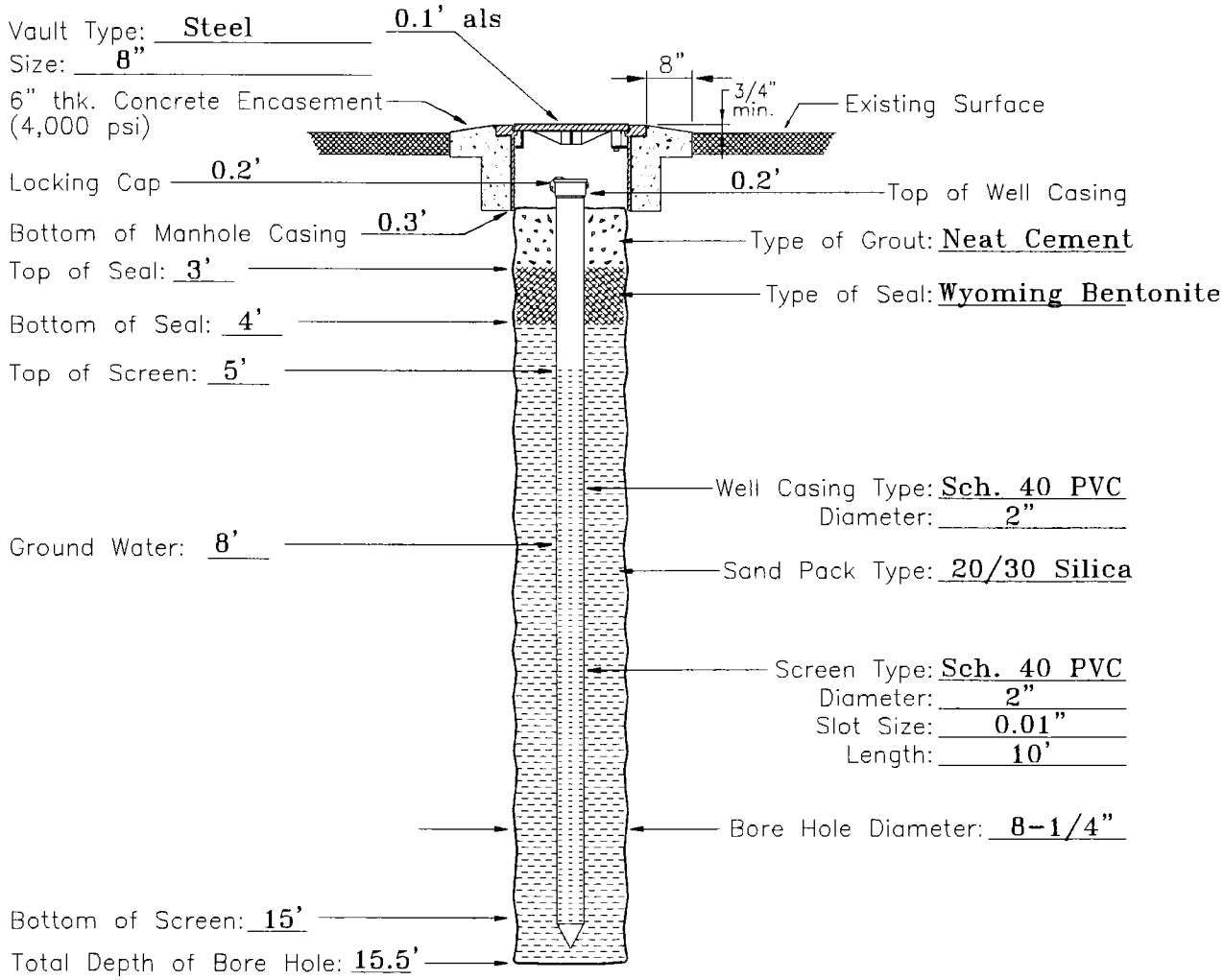
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-31

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 9/26/96 Finish: 9/26/96
TIME Start: 0900 Finish: 0945

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-31

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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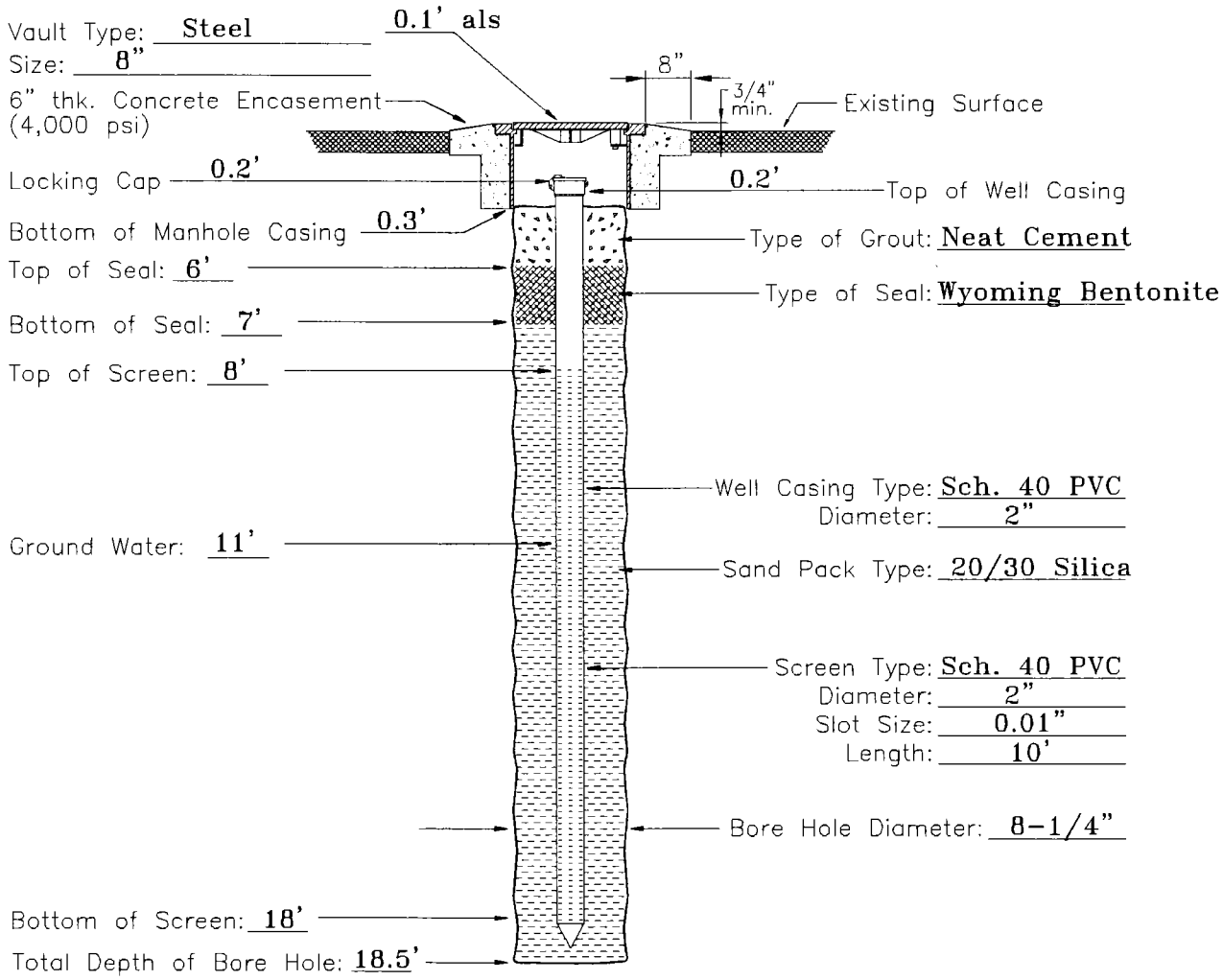
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-32

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 9/26/96 Finish: 9/26/96
TIME Start: 1000 Finish: 1045

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-32

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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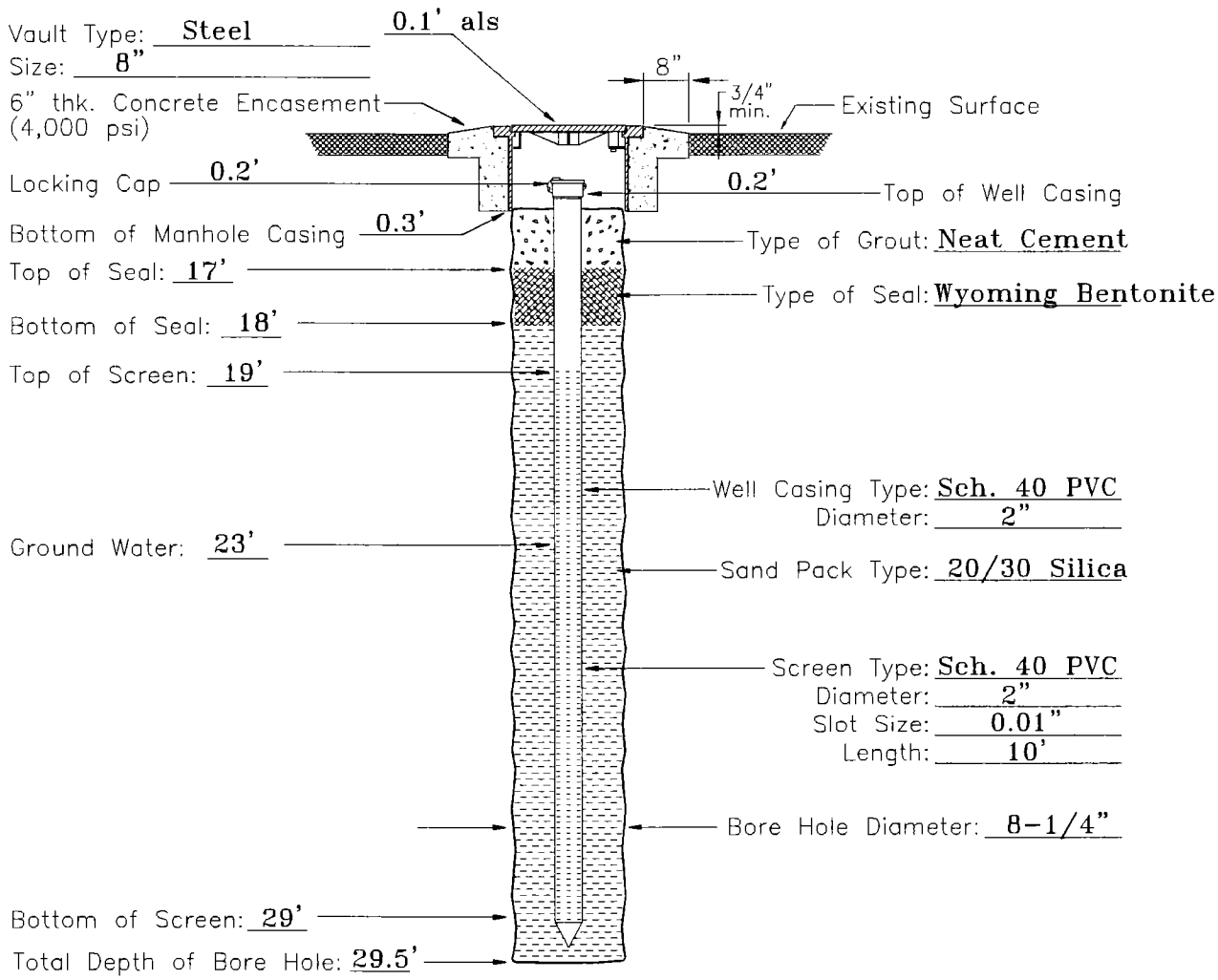
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-33

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 9/26/96 Finish: 9/26/96
TIME Start: 1100 Finish: 1145

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-33

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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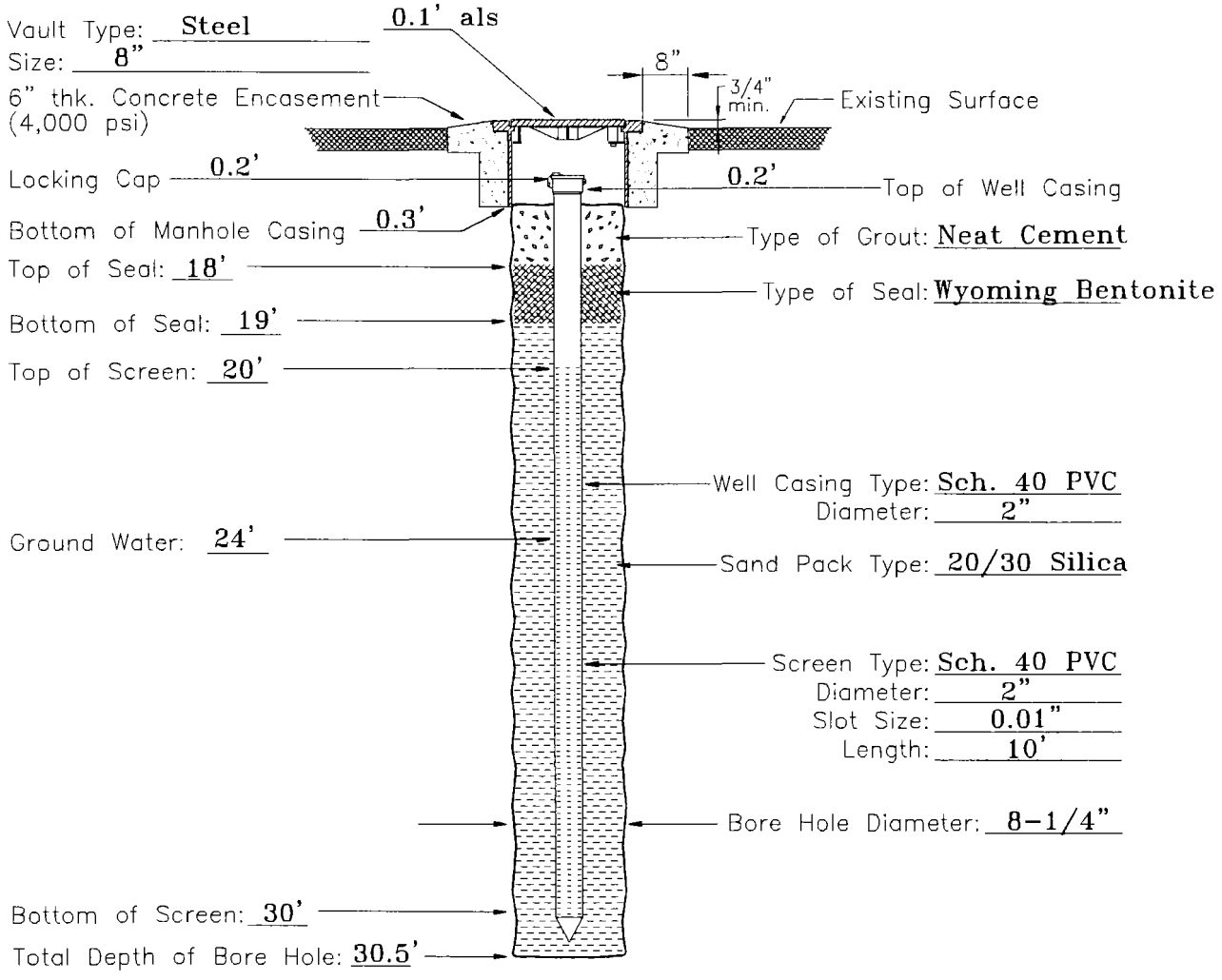
# MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-34

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 9/26/96 Finish: 9/26/96
TIME Start: 1300 Finish: 1345

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-34

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
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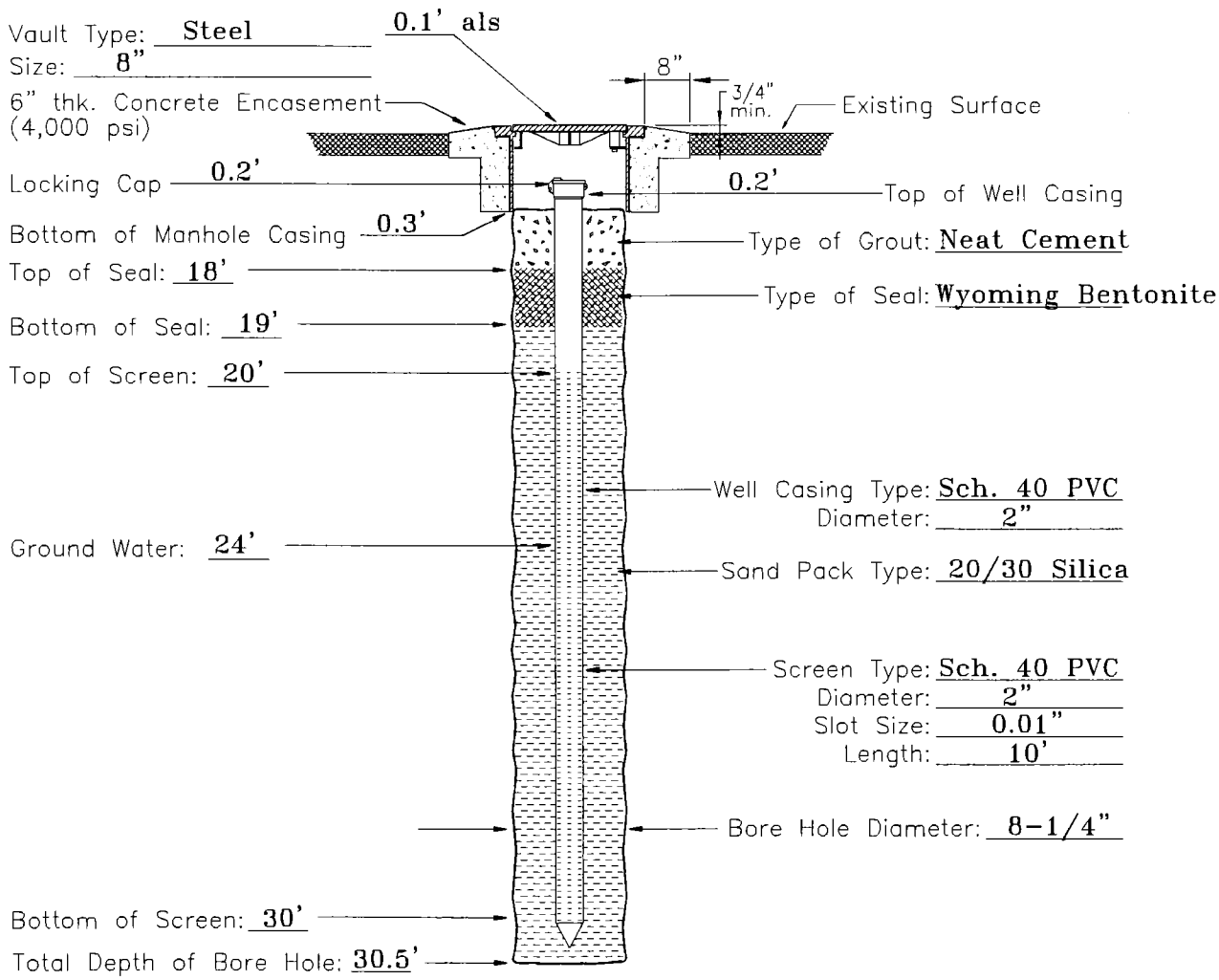
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-35

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 9/26/96 Finish: 9/26/96
TIME Start: 1400 Finish: 1445

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-35

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
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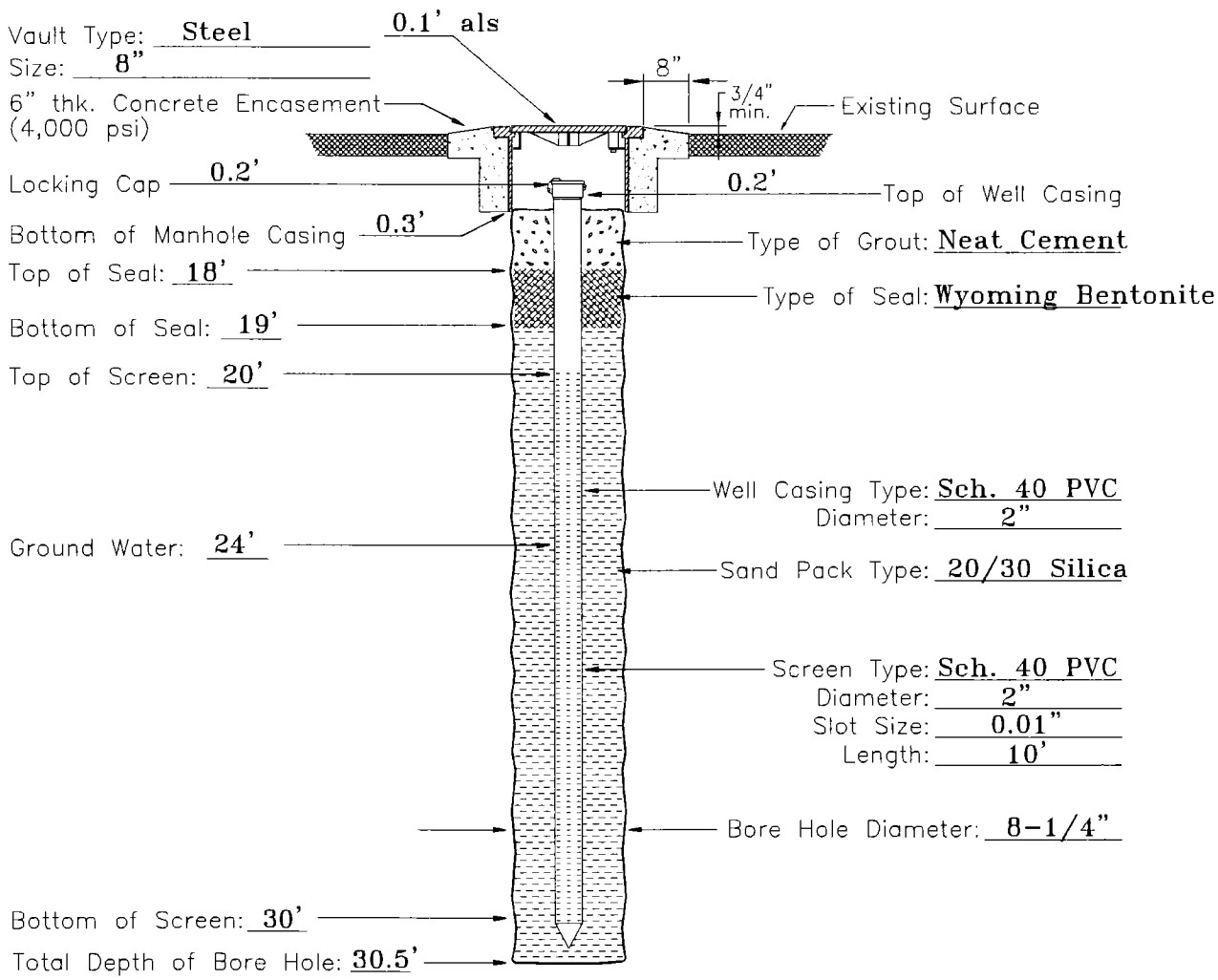
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-36

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 9/26/96 Finish: 9/26/96
TIME Start: 1500 Finish: 1545

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-36

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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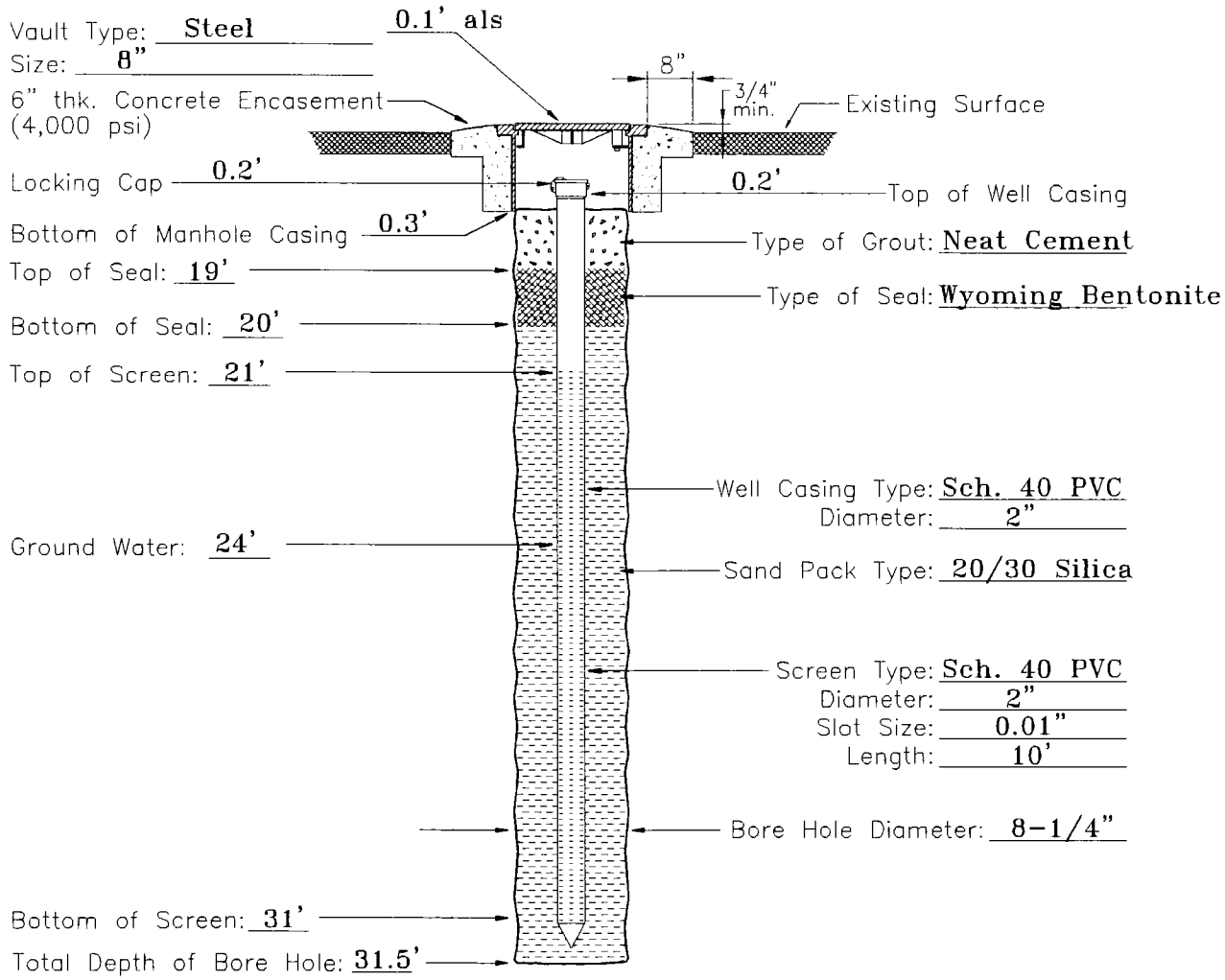
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-37

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 10/01/96 Finish: 10/01/96
TIME Start: 0900 Finish: 1000

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-37

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

CAD FILE @STA3> C:\ACADR13\MW-DETL1.DWG STA3-19951128.1143

W.E.S., Inc.
Environmental Division

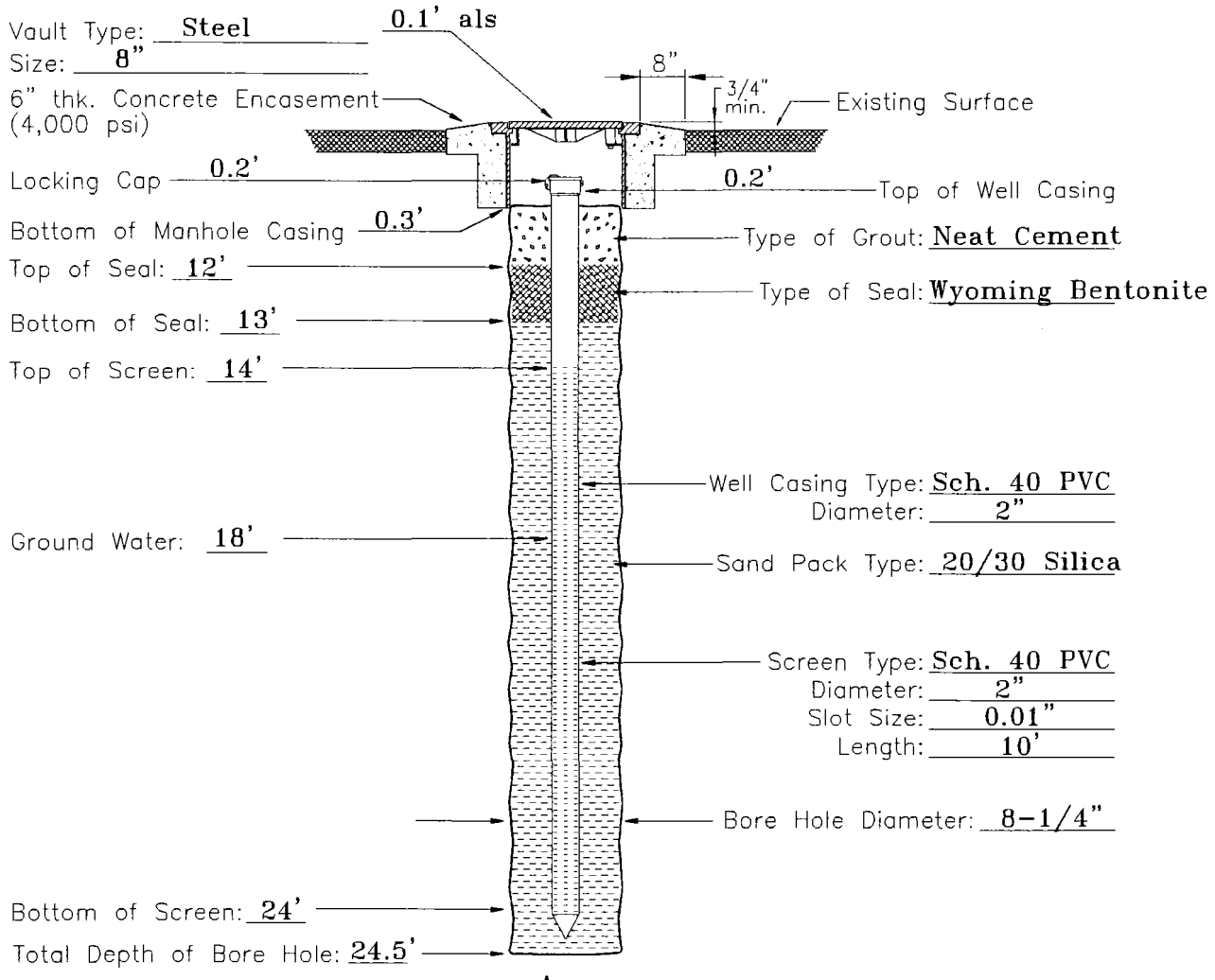
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-38

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 10/01/96 Finish: 10/01/96
TIME Start: 1015 Finish: 1115

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-38

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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W.E.S., Inc.
Environmental Division

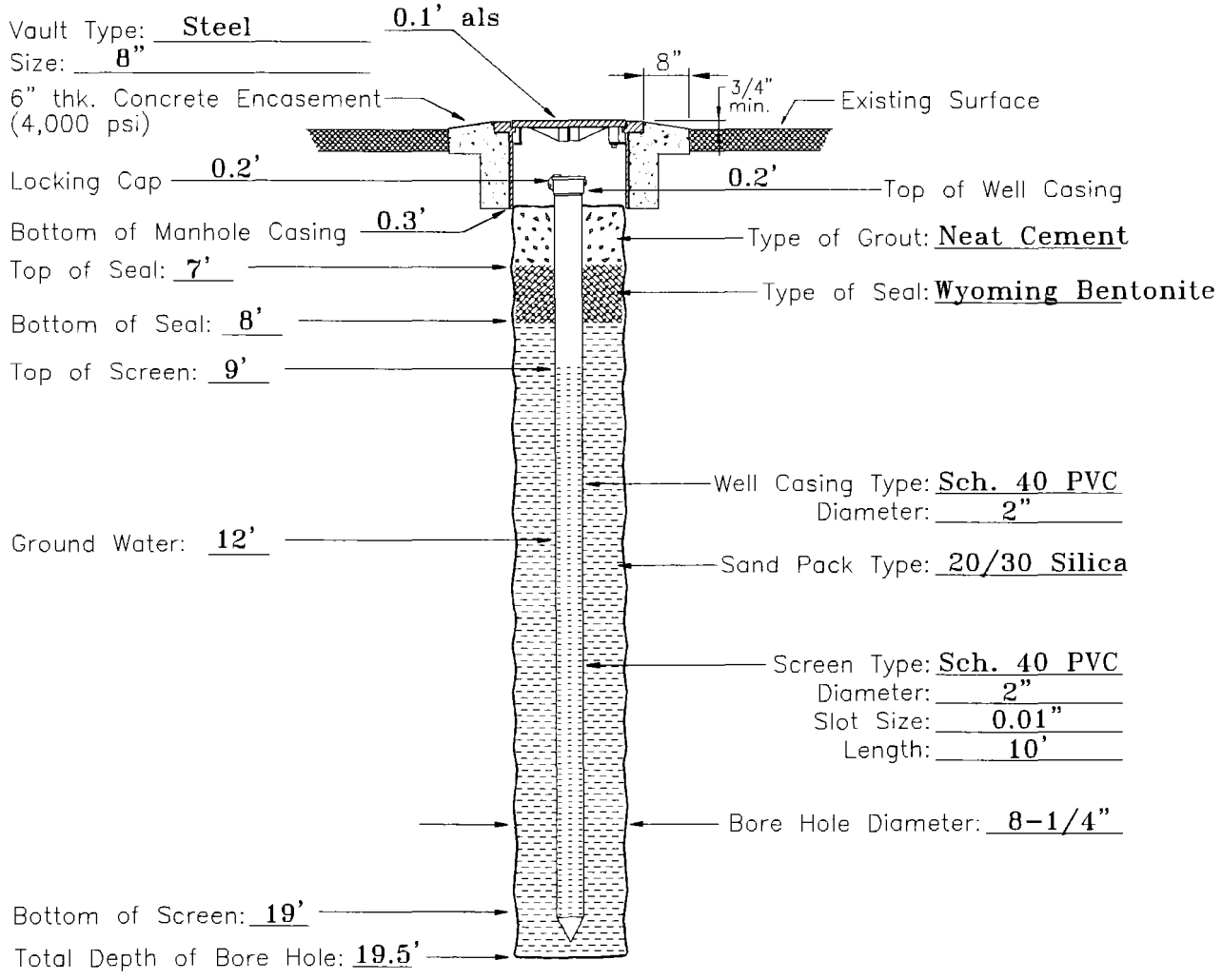
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-39

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 10/01/96 Finish: 10/01/96
TIME Start: 1300 Finish: 1400

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




4-39

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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W.E.S., Inc.
Environmental Division

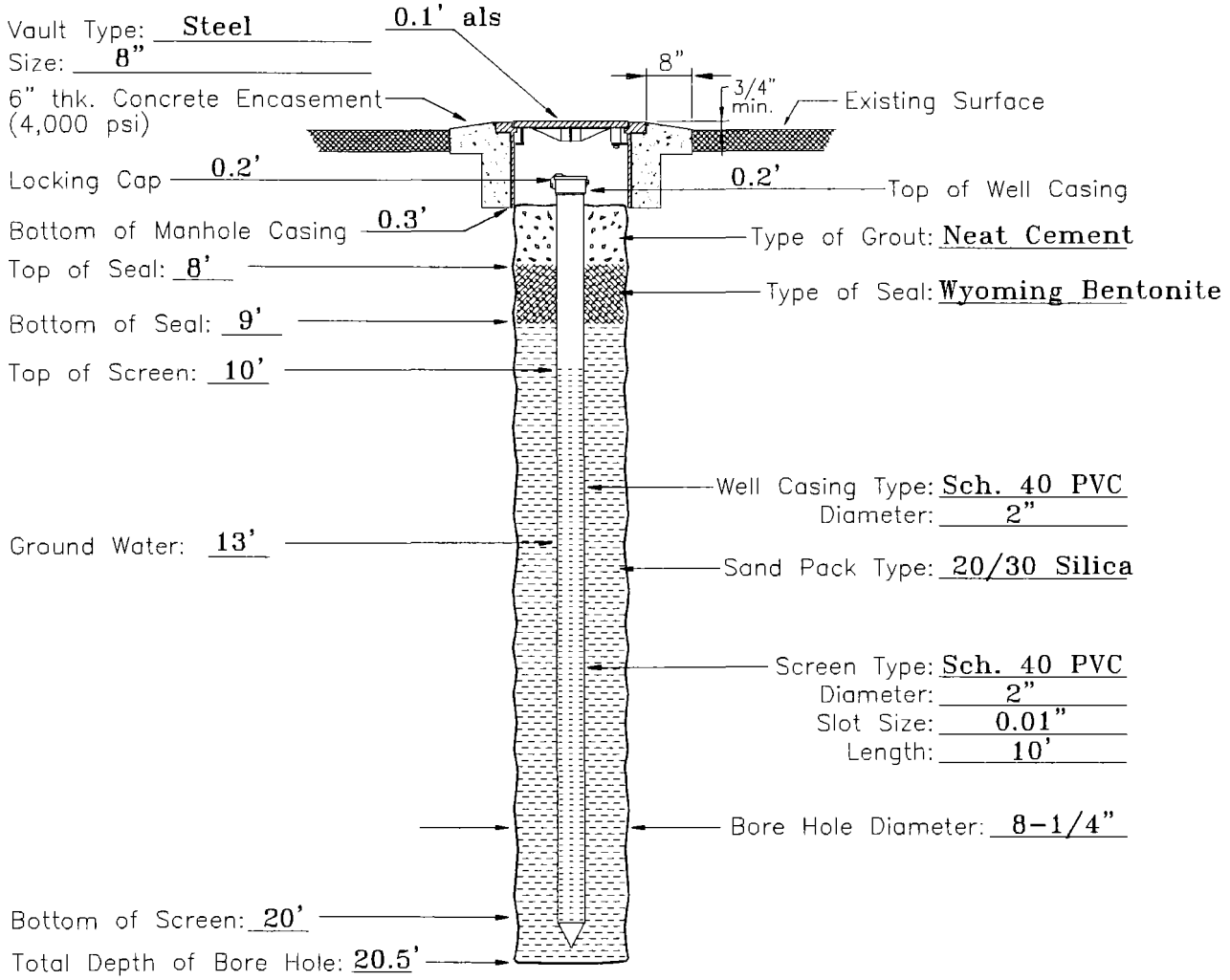
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-40

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 10/01/96 Finish: 10/01/96
TIME Start: 1430 Finish: 1530

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-40

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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W.E.S., Inc.
Environmental Division

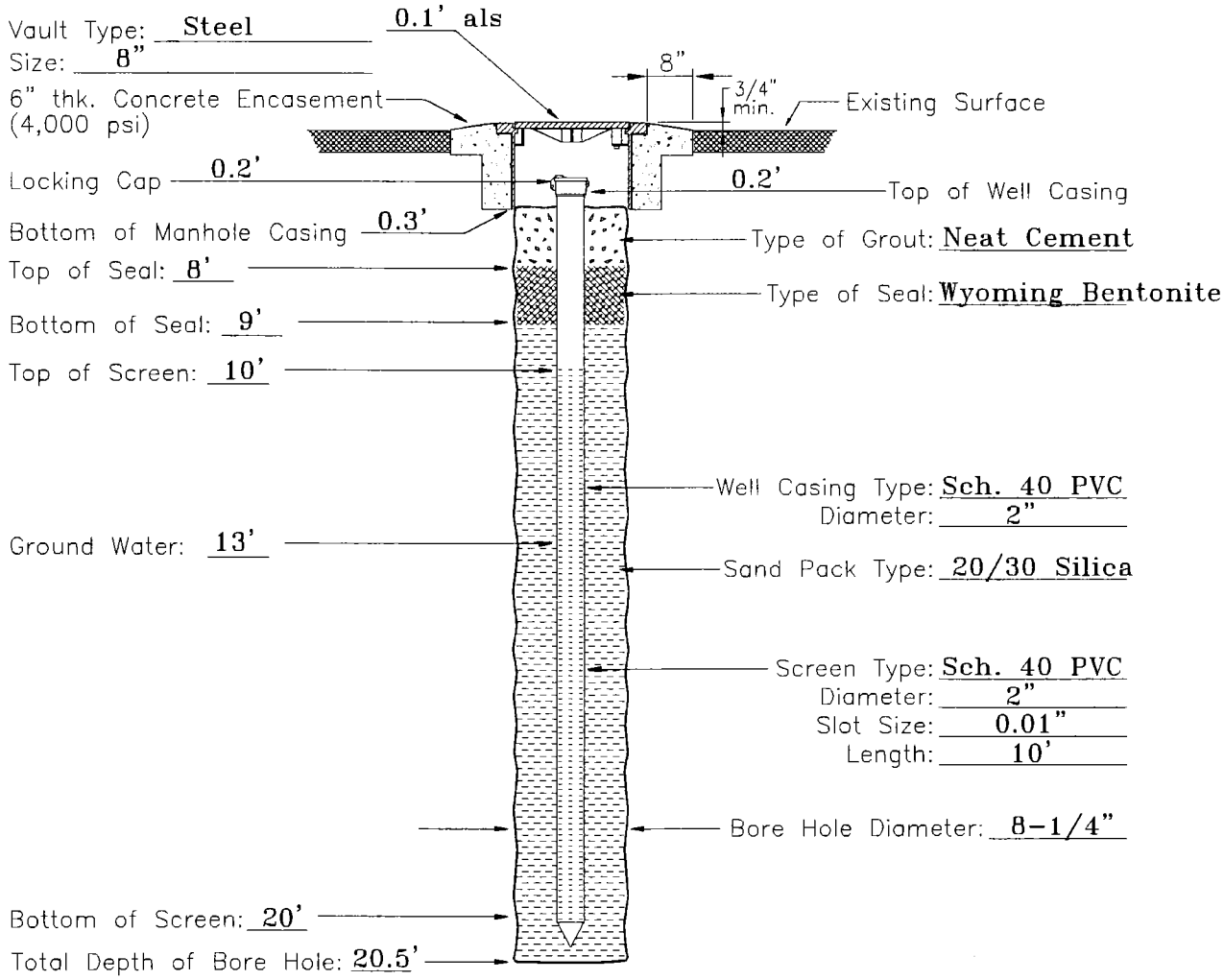
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-41

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 10/02/96 Finish: 10/02/96
TIME Start: 0900 Finish: 1000

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




4-41

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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W.E.S., Inc.
Environmental Division

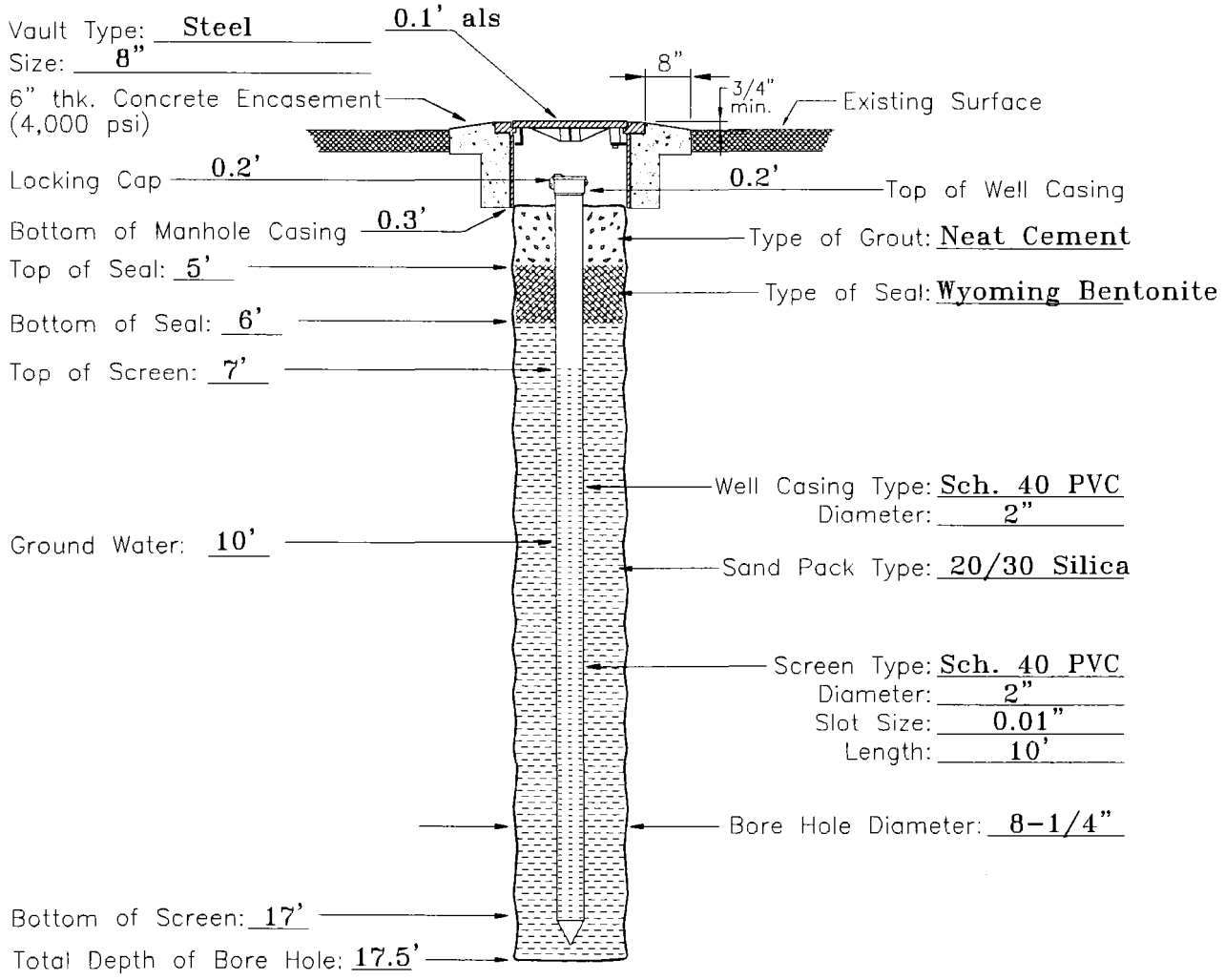
6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

# MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-42

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 10/02/96 Finish: 10/02/96
TIME Start: 1000 Finish: 1100

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-42

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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W.E.S., Inc.
Environmental Division

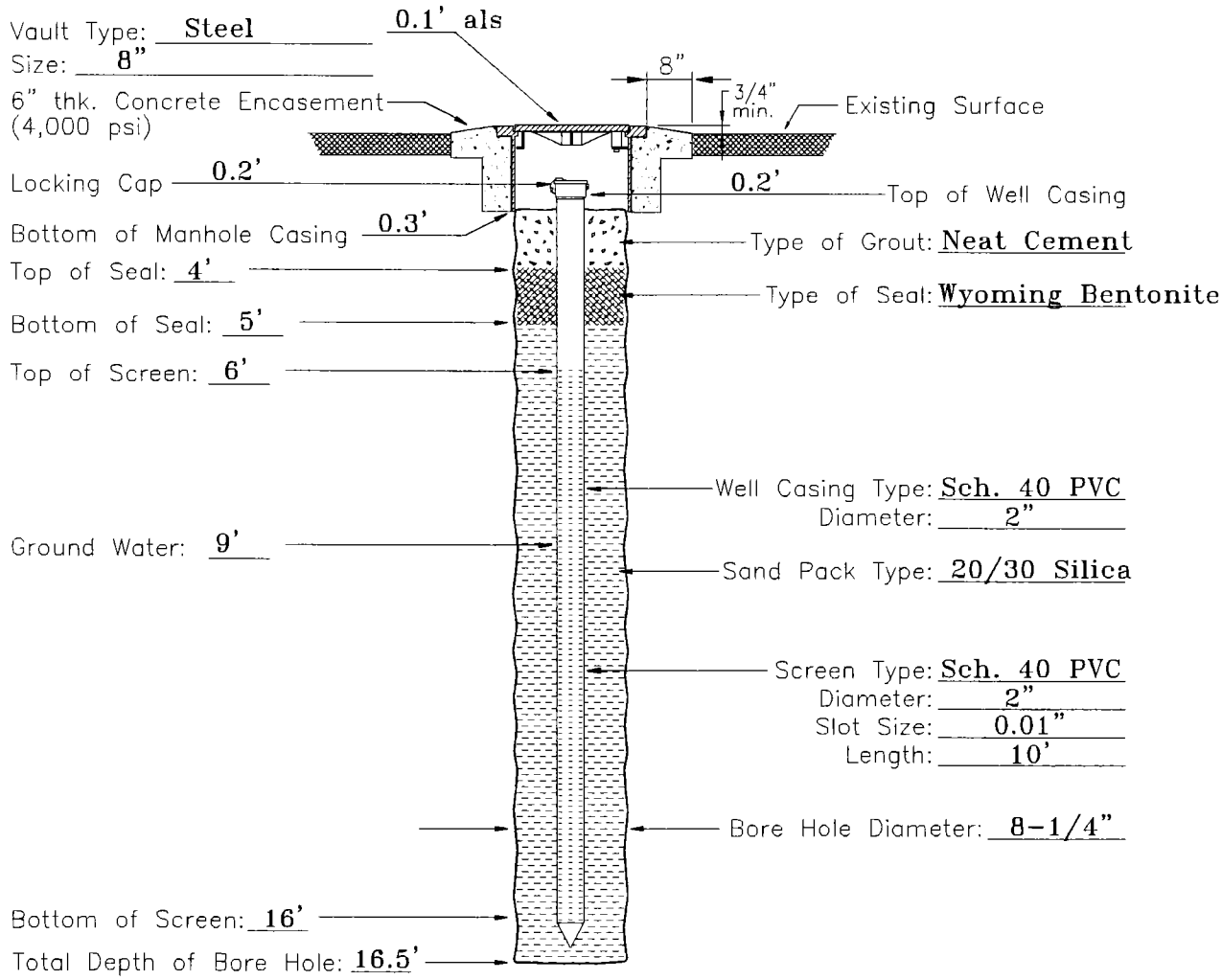
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-43

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 10/02/96 Finish: 10/02/96
TIME Start: 1100 Finish: 1200

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-43

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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W.E.S., Inc.
Environmental Division

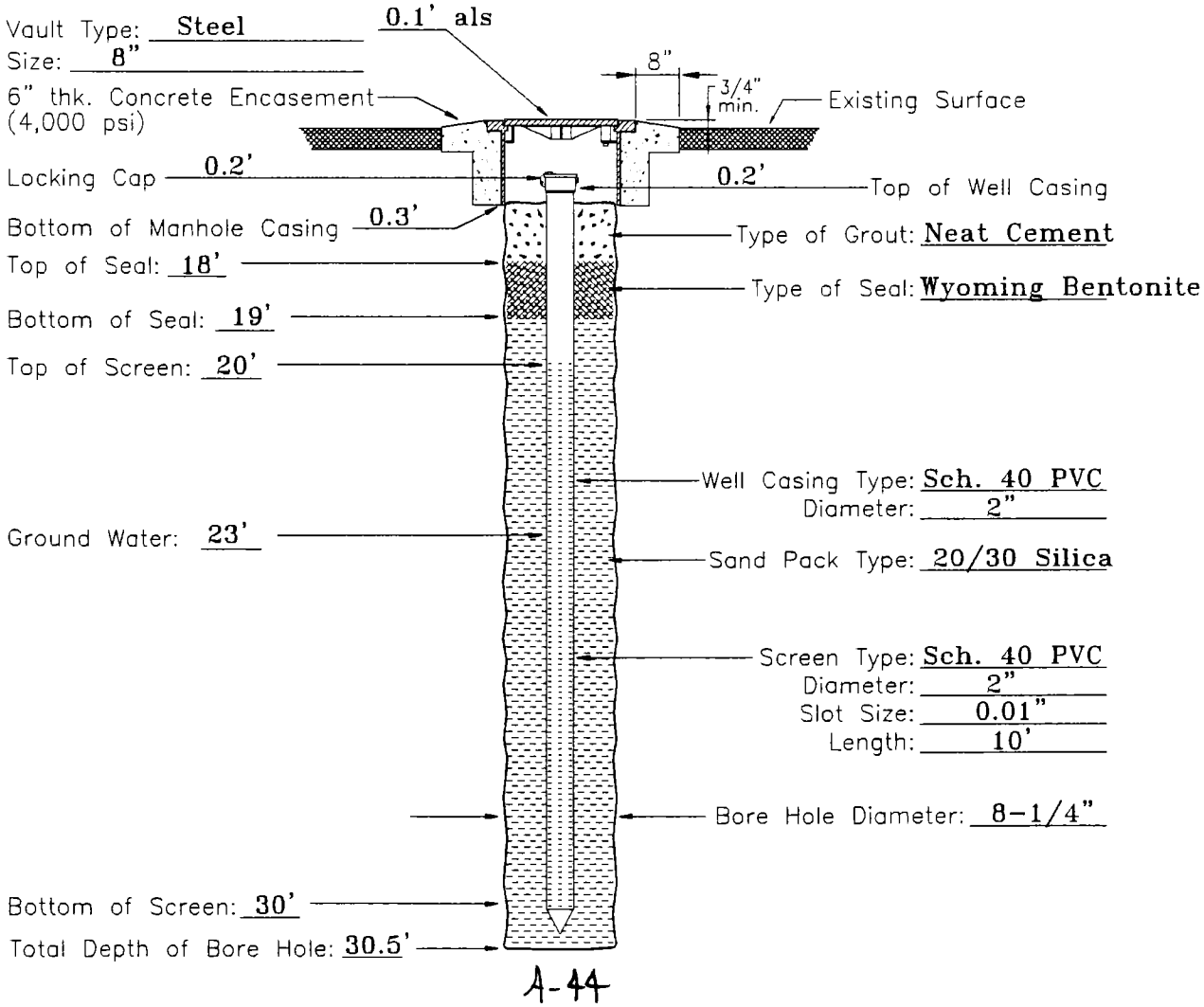
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-44

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 10/02/96 Finish: 10/02/96
TIME Start: 1300 Finish: 1400

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-44

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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Environmental Division

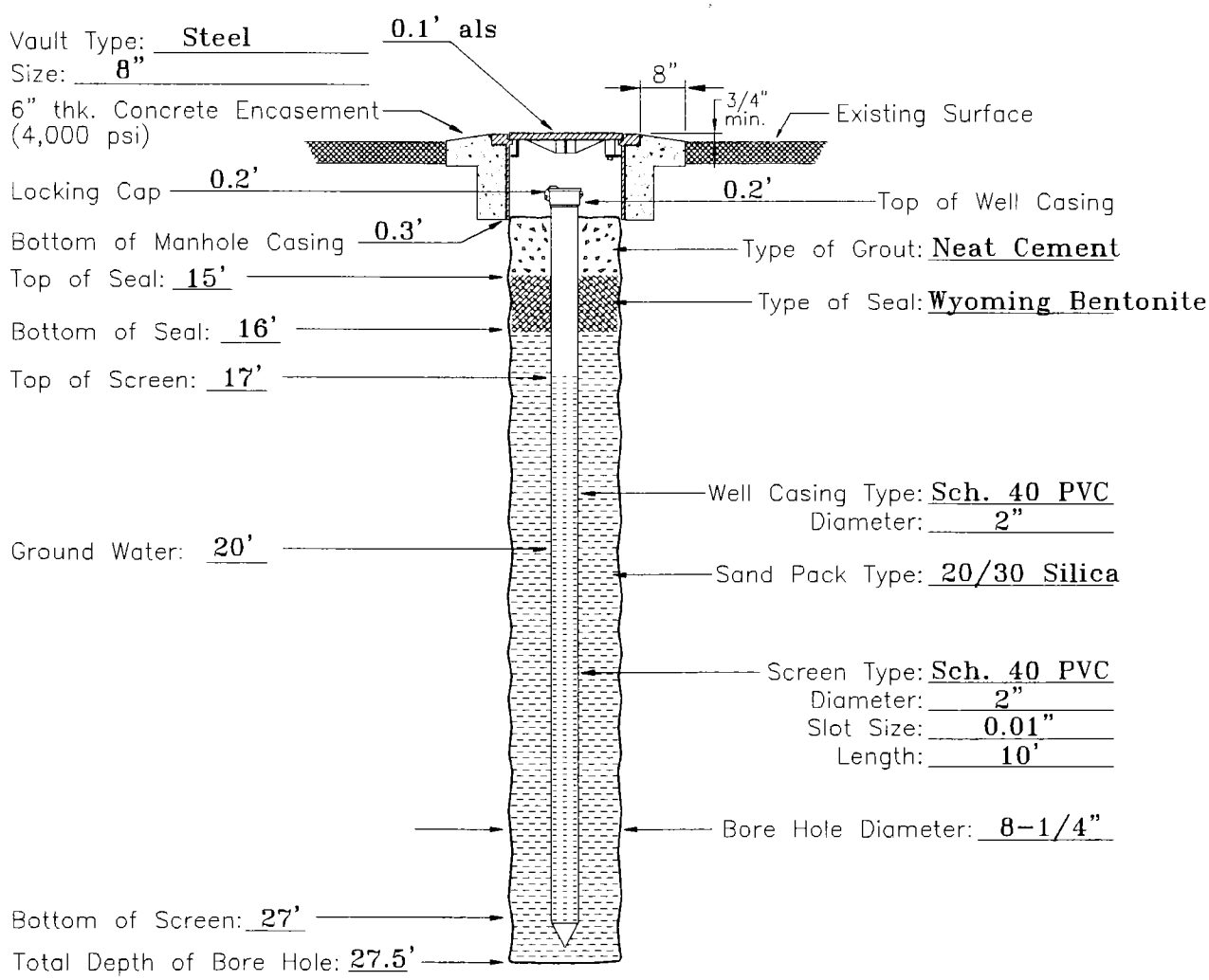
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-45

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 10/02/96 Finish: 10/02/96
TIME Start: 1400 Finish: 1500

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-45

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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Environmental Division

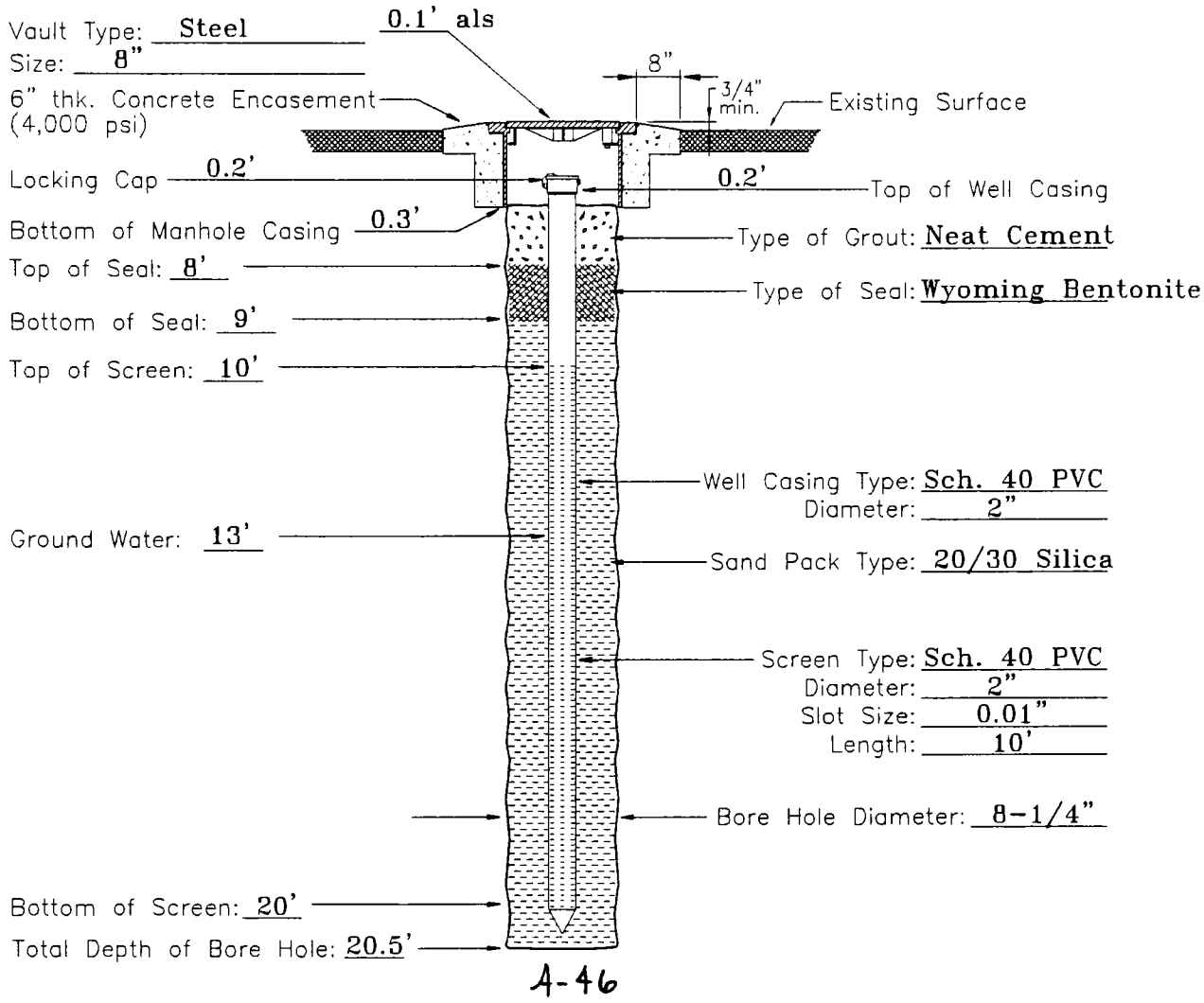
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-46

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 10/03/96 Finish: 10/03/96
TIME Start: 0900 Finish: 1000

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-46

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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W.E.S., Inc.
Environmental Division

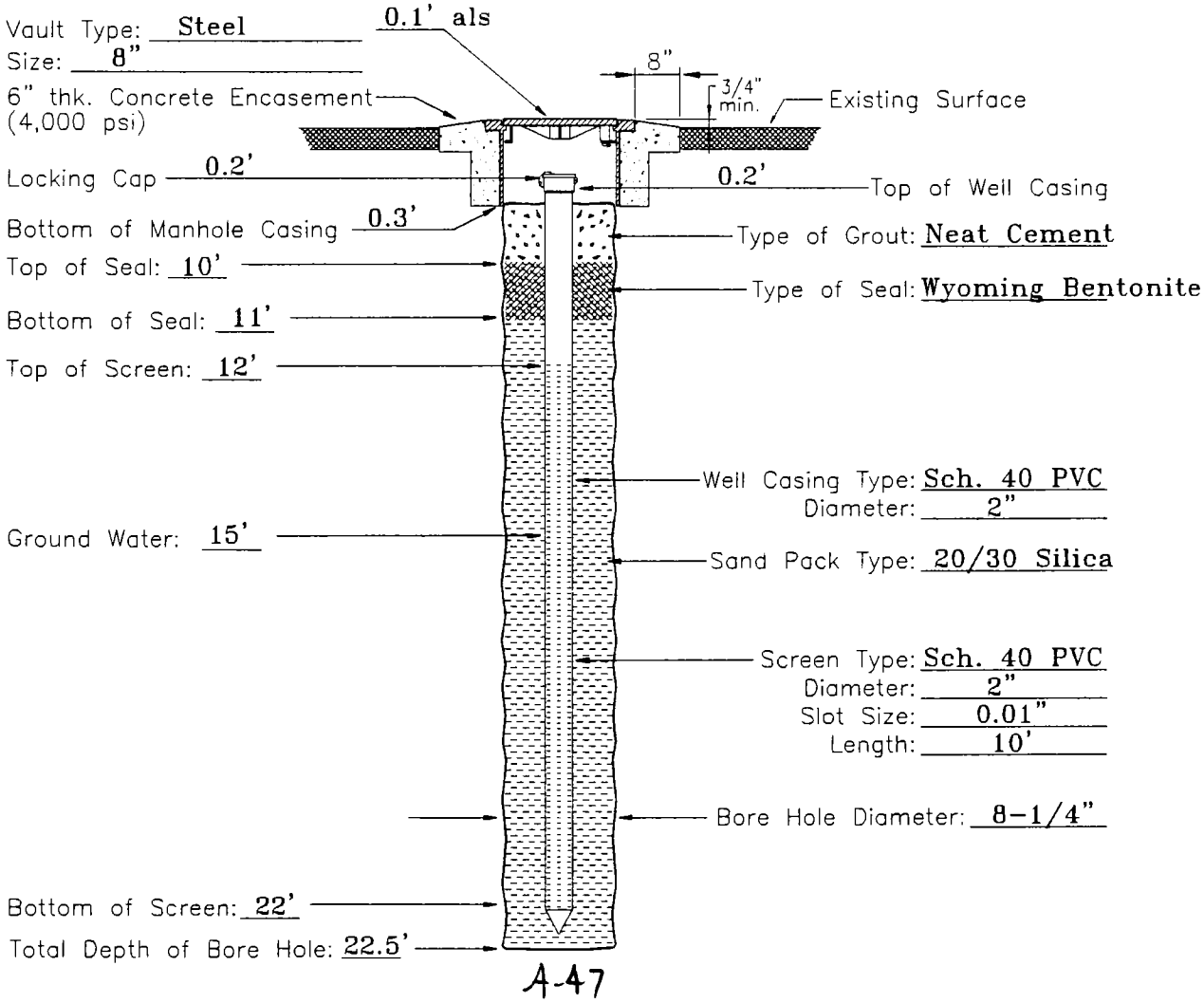
6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

# MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-47

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 10/03/96 Finish: 10/03/96
TIME Start: 1015 Finish: 1130

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-47

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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Environmental Division

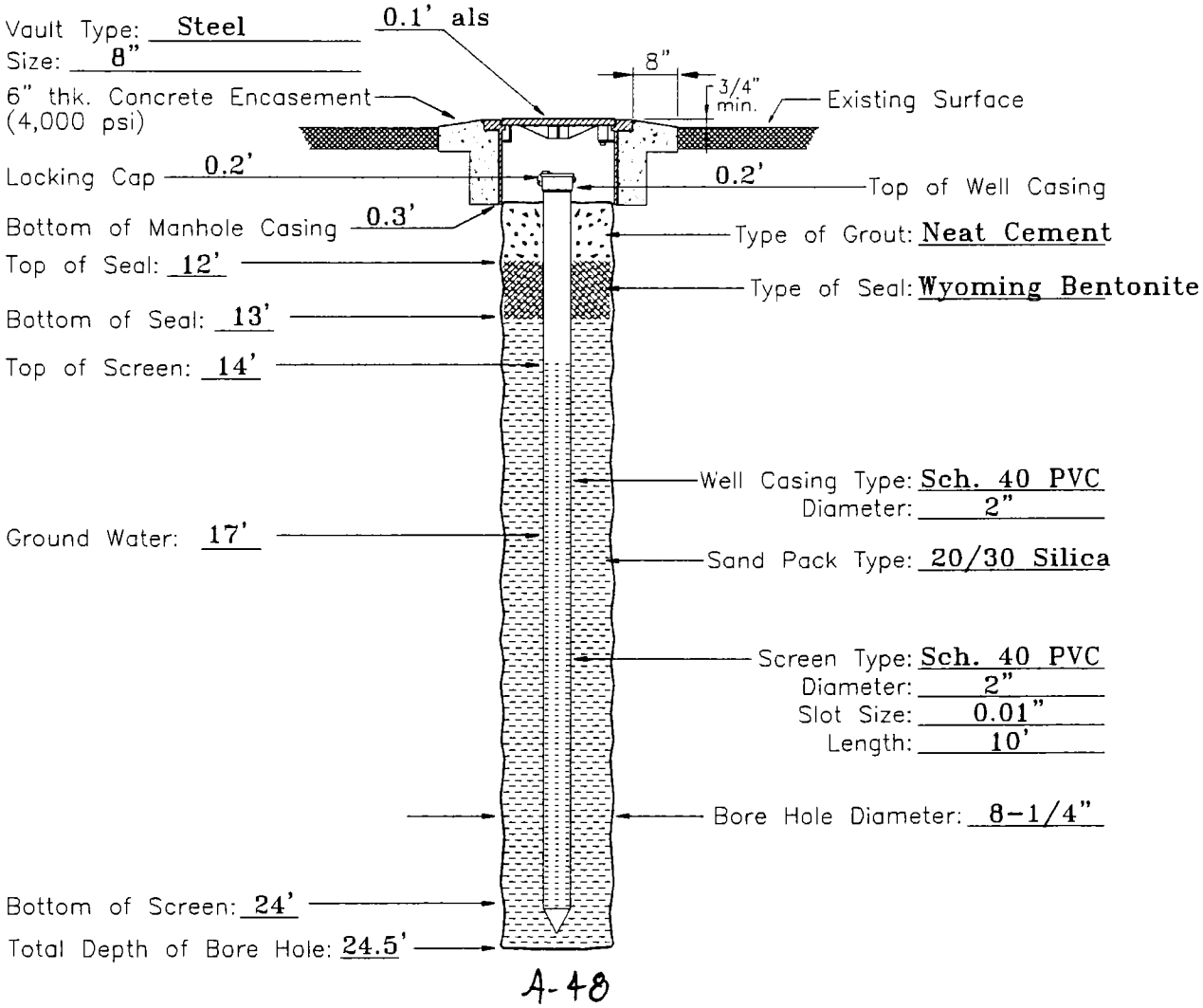
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-48

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 10/03/96 Finish: 10/03/96
TIME Start: 1300 Finish: 1415

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-48

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

CAD FILE @STA3> C:\ACADR13\MW-DETL1.DWG STA3-19951128.1143

W.E.S., Inc.
Environmental Division

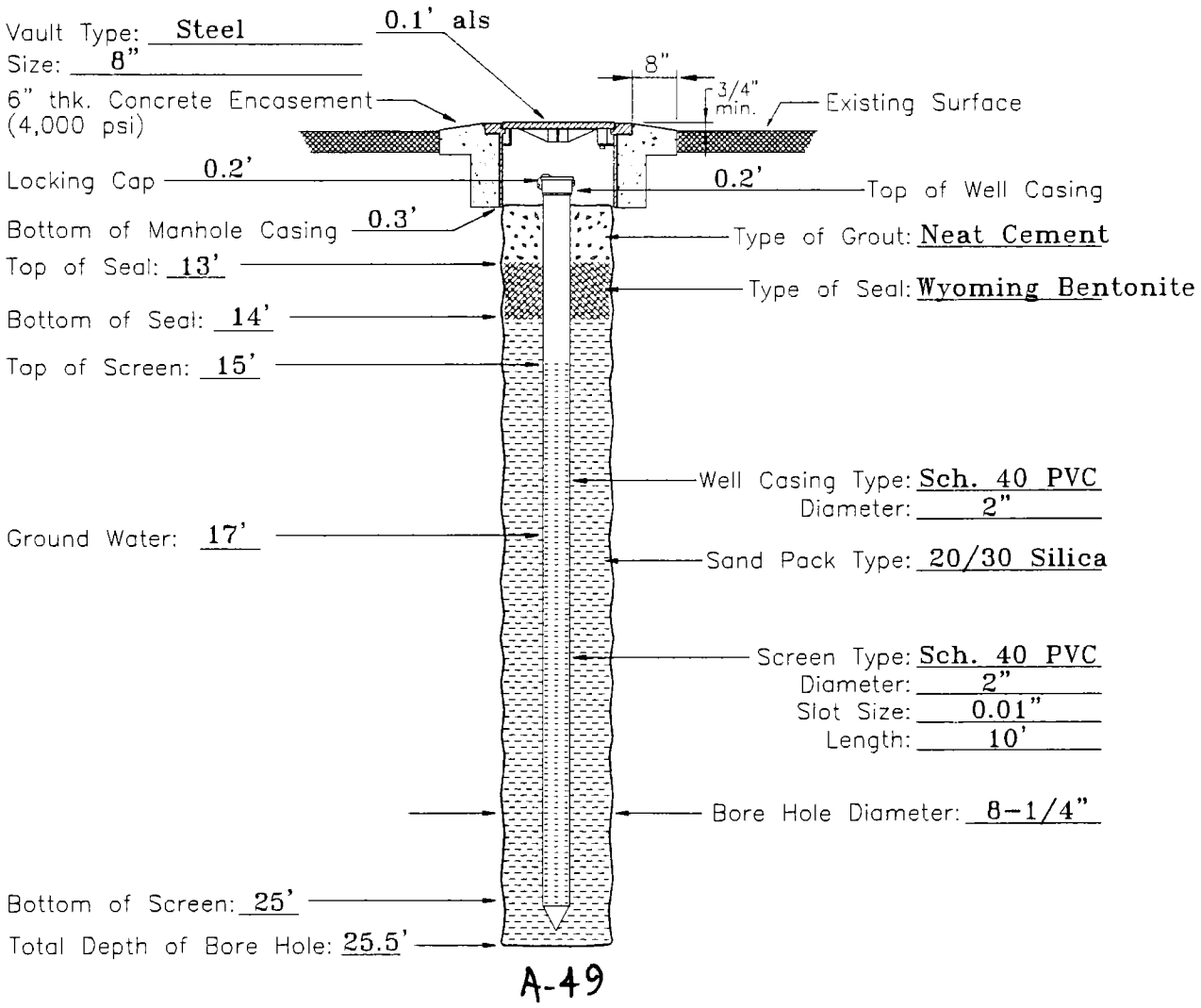
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-49

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 12/10/96 Finish: 12/10/96
TIME Start: 1045 Finish: 1130

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-49

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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W.E.S., Inc.
Environmental Division

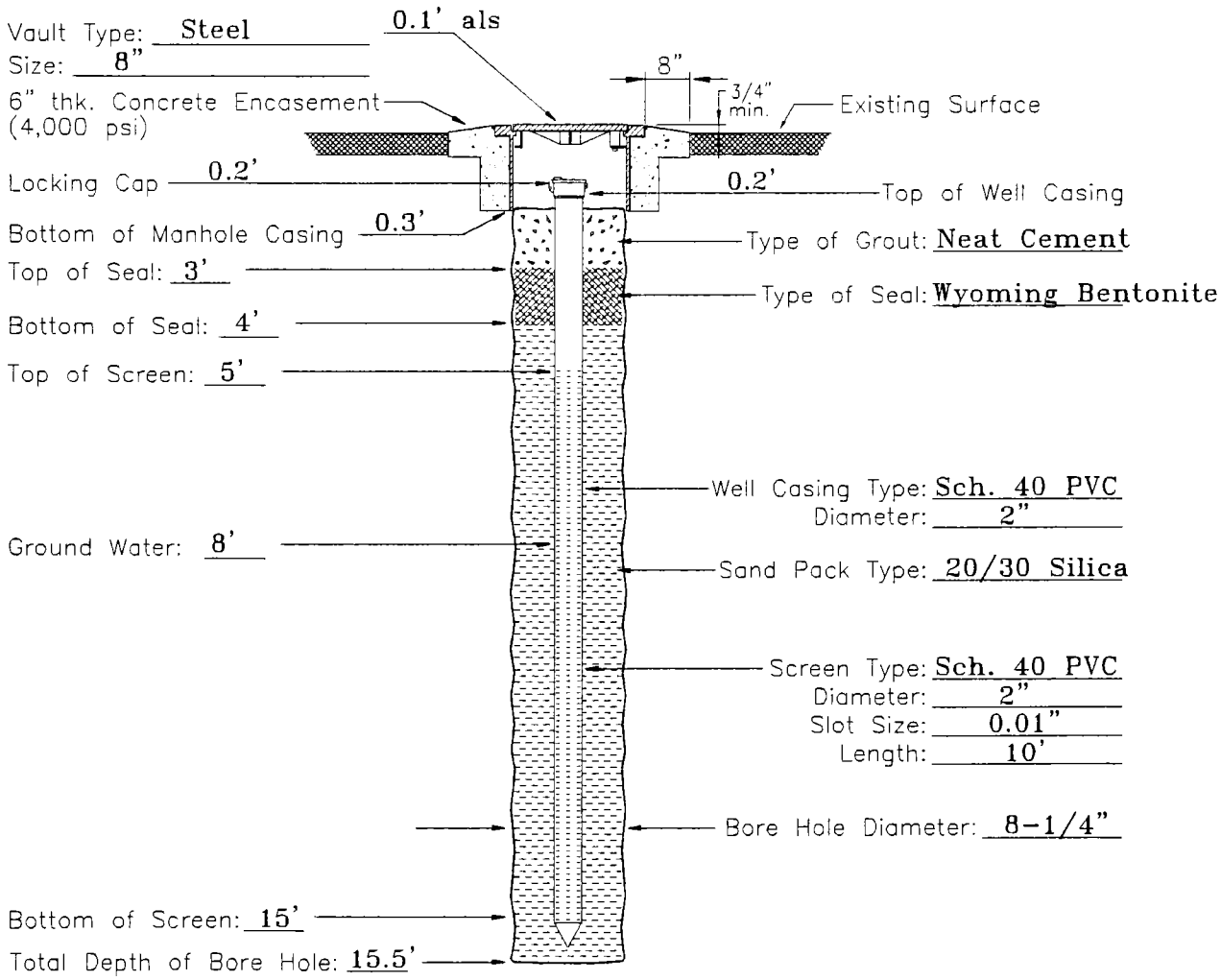
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-50

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 12/10/96 Finish: 12/10/96
TIME Start: 1330 Finish: 1400

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-50

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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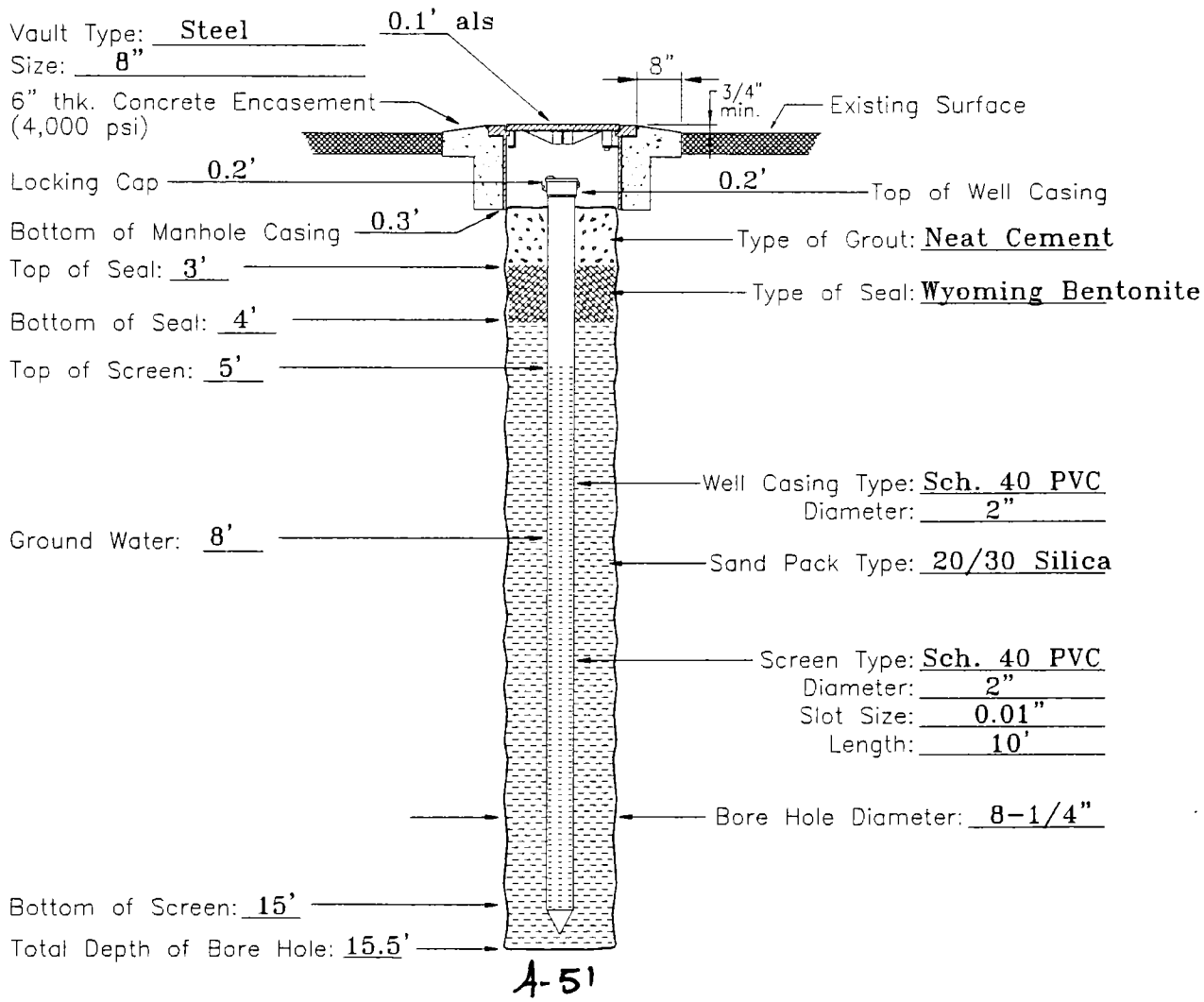
W.E.S., Inc.
Environmental Division
6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

# MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-51

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 12/10/96 Finish: 12/10/96
TIME Start: 1410 Finish: 1445

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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W.E.S., Inc.
Environmental Division

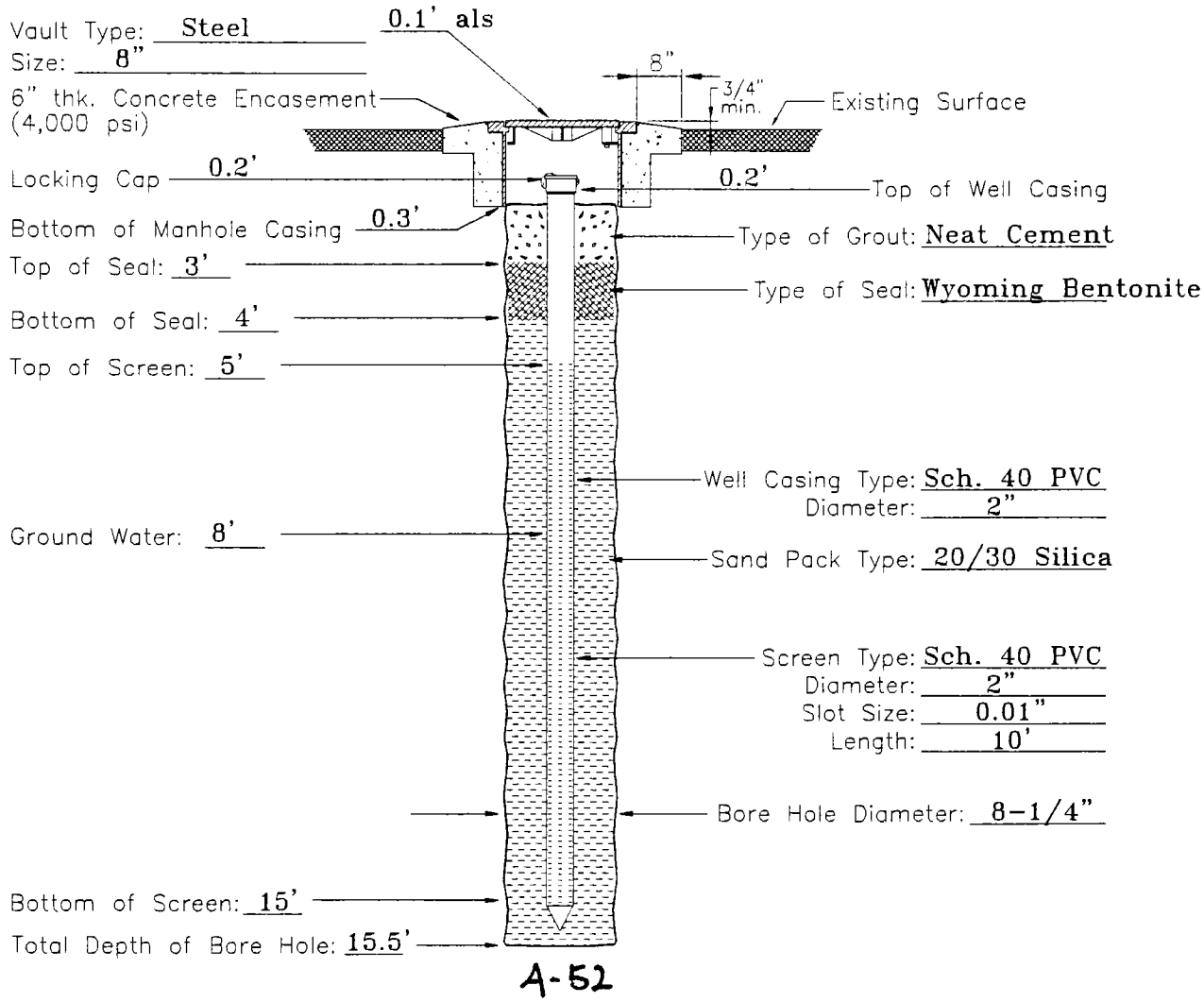
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-52

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 12/10/96 Finish: 12/10/96
TIME Start: 1500 Finish: 1530

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-52

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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W.E.S., Inc.
Environmental Division

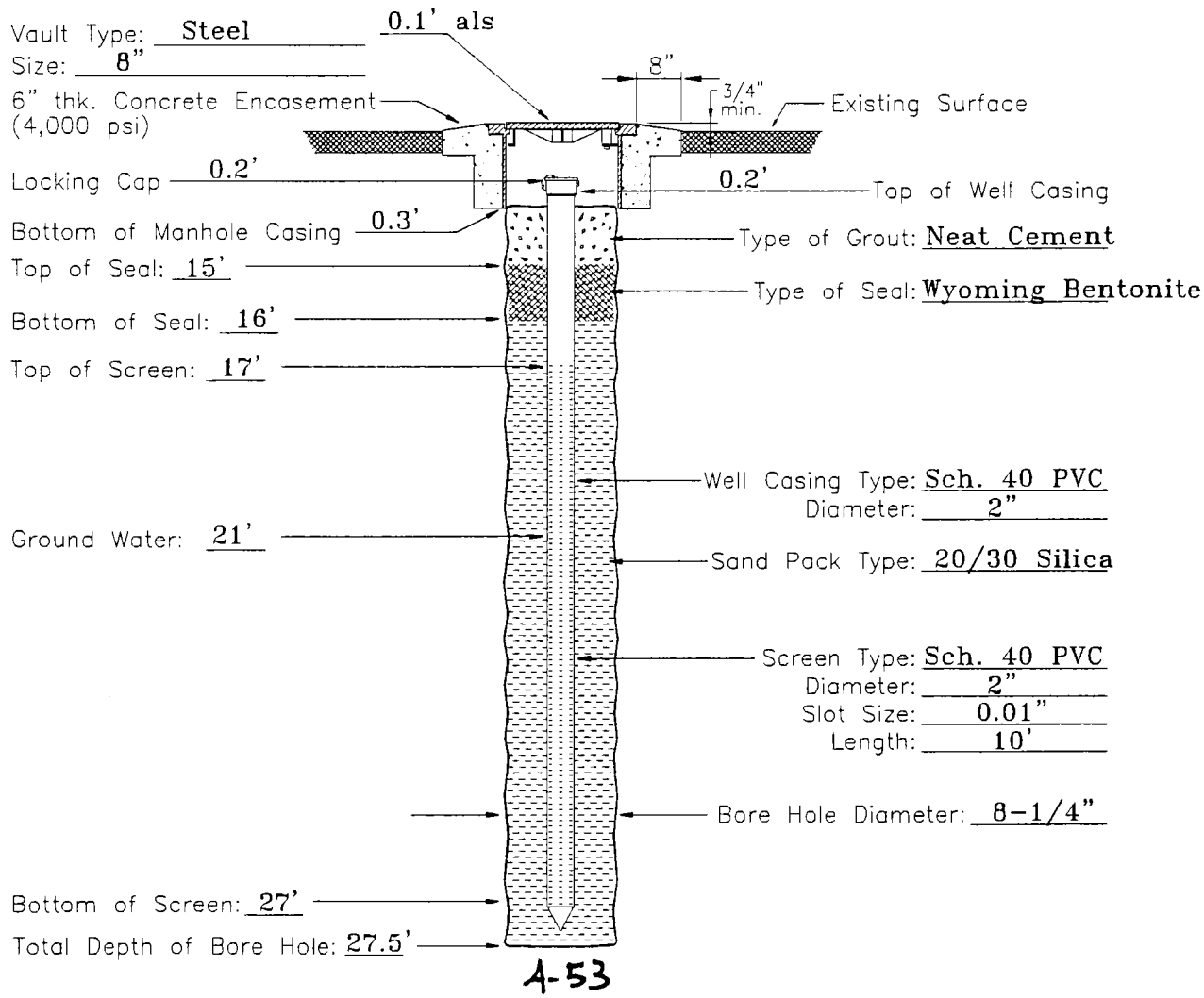
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-53

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 12/11/96 Finish: 12/11/96
TIME Start: 0930 Finish: 1015

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-53

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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W.E.S., Inc.
Environmental Division

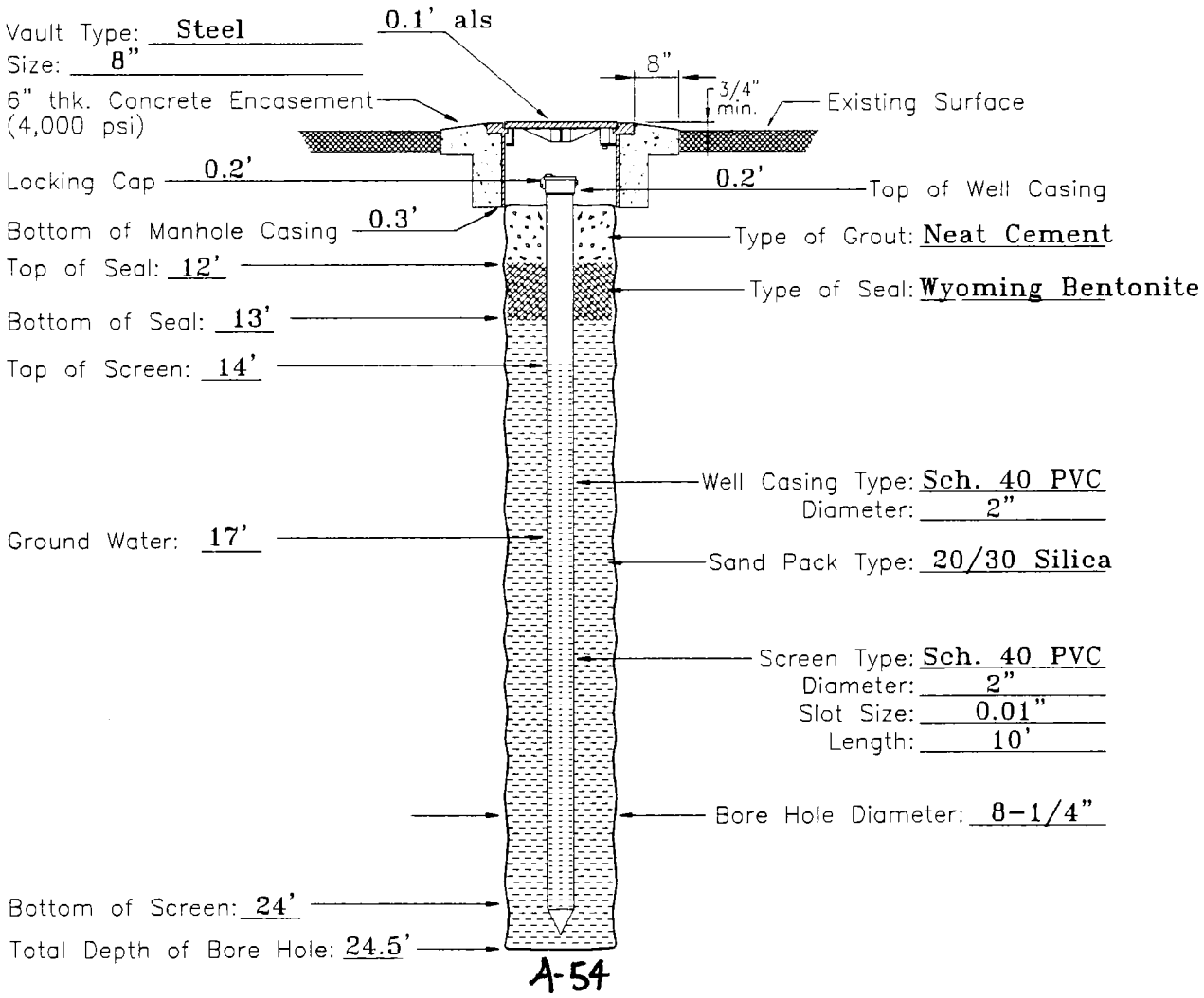
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-54

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 12/11/96 Finish: 12/11/96
TIME Start: 1030 Finish: 1100

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-54

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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W.E.S., Inc.
Environmental Division

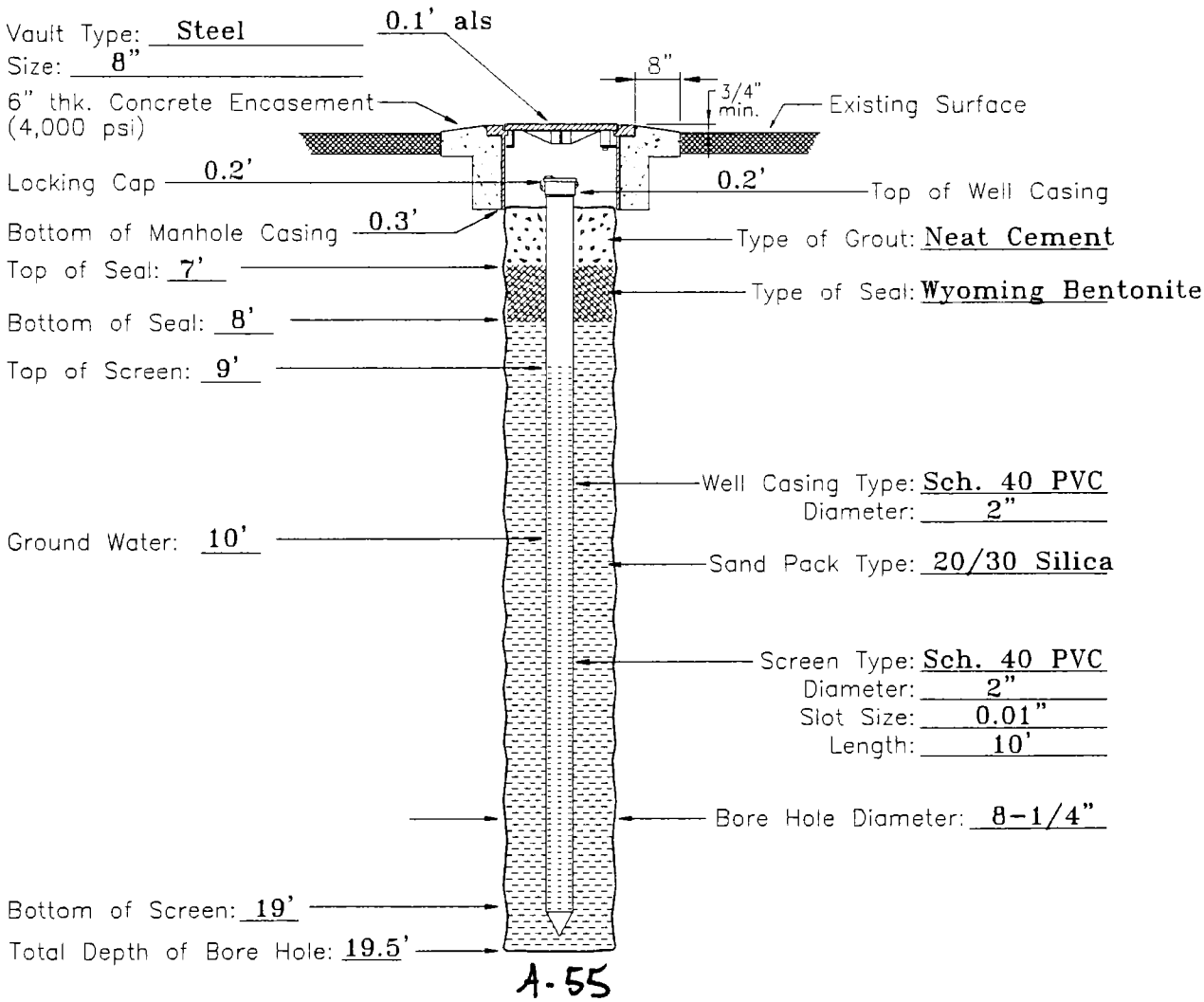
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-55

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 12/11/96 Finish: 12/11/96
TIME Start: 1115 Finish: 1200

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-55

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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W.E.S., Inc.
Environmental Division

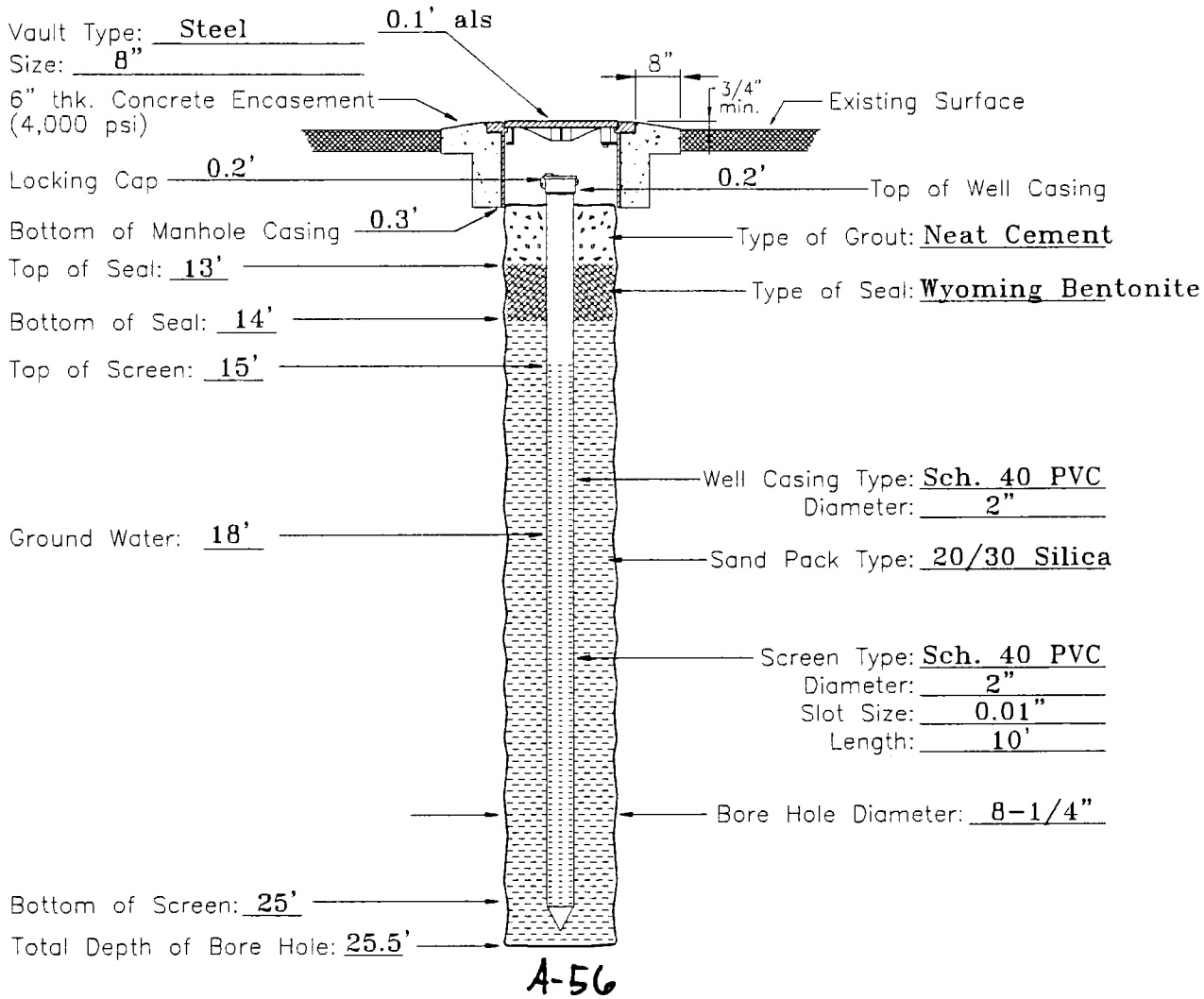
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-56

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 12/11/96 Finish: 12/11/96
TIME Start: 1300 Finish: 1345

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-56

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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W.E.S., Inc.
Environmental Division

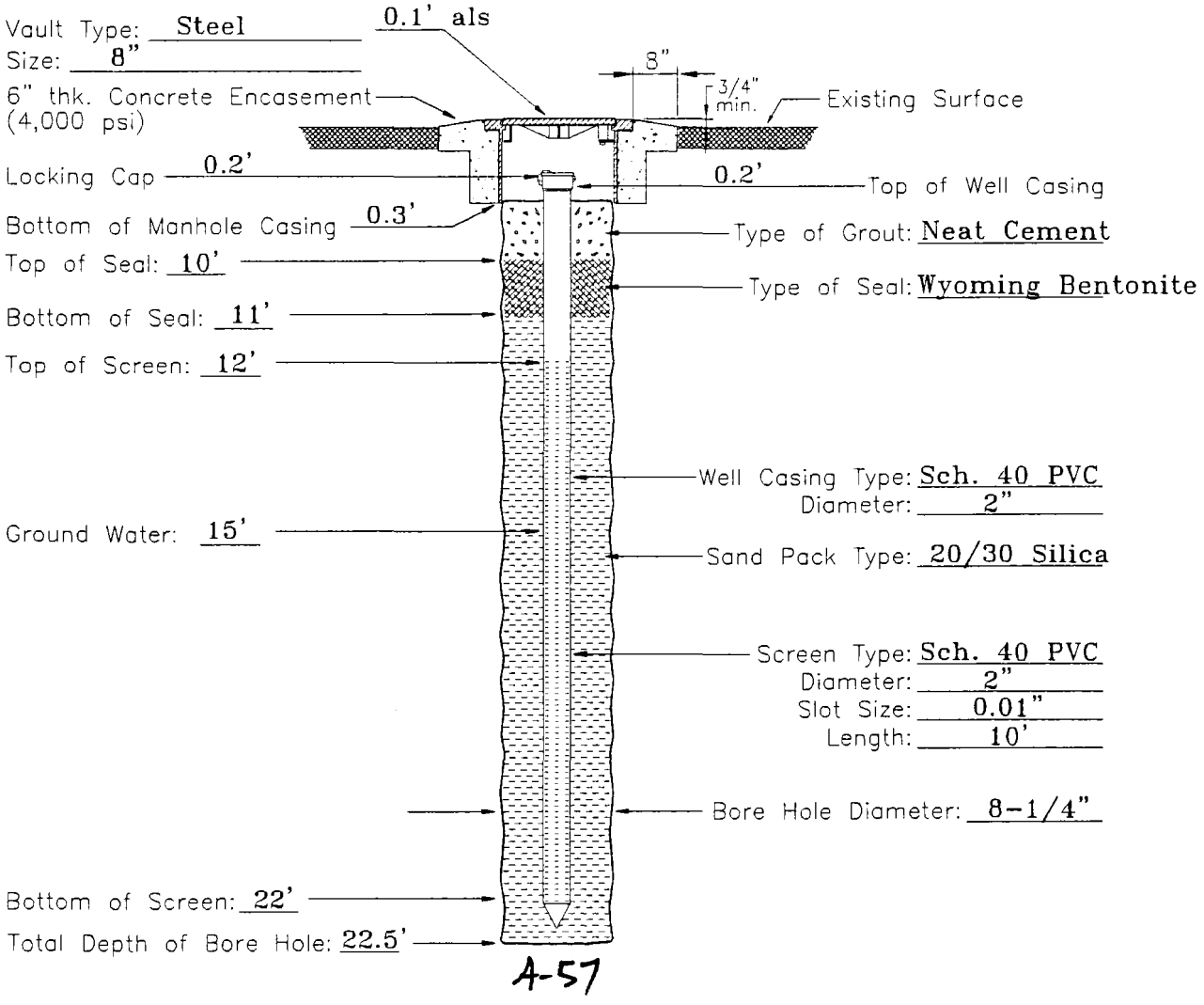
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-57

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 12/11/96 Finish: 12/11/96
TIME Start: 1345 Finish: 1430

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-57

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

CAD FILE @STA3> C:\ACADR13\MW-DETL1.DWG STA3-19951128.1143

W.E.S., Inc.
Environmental Division

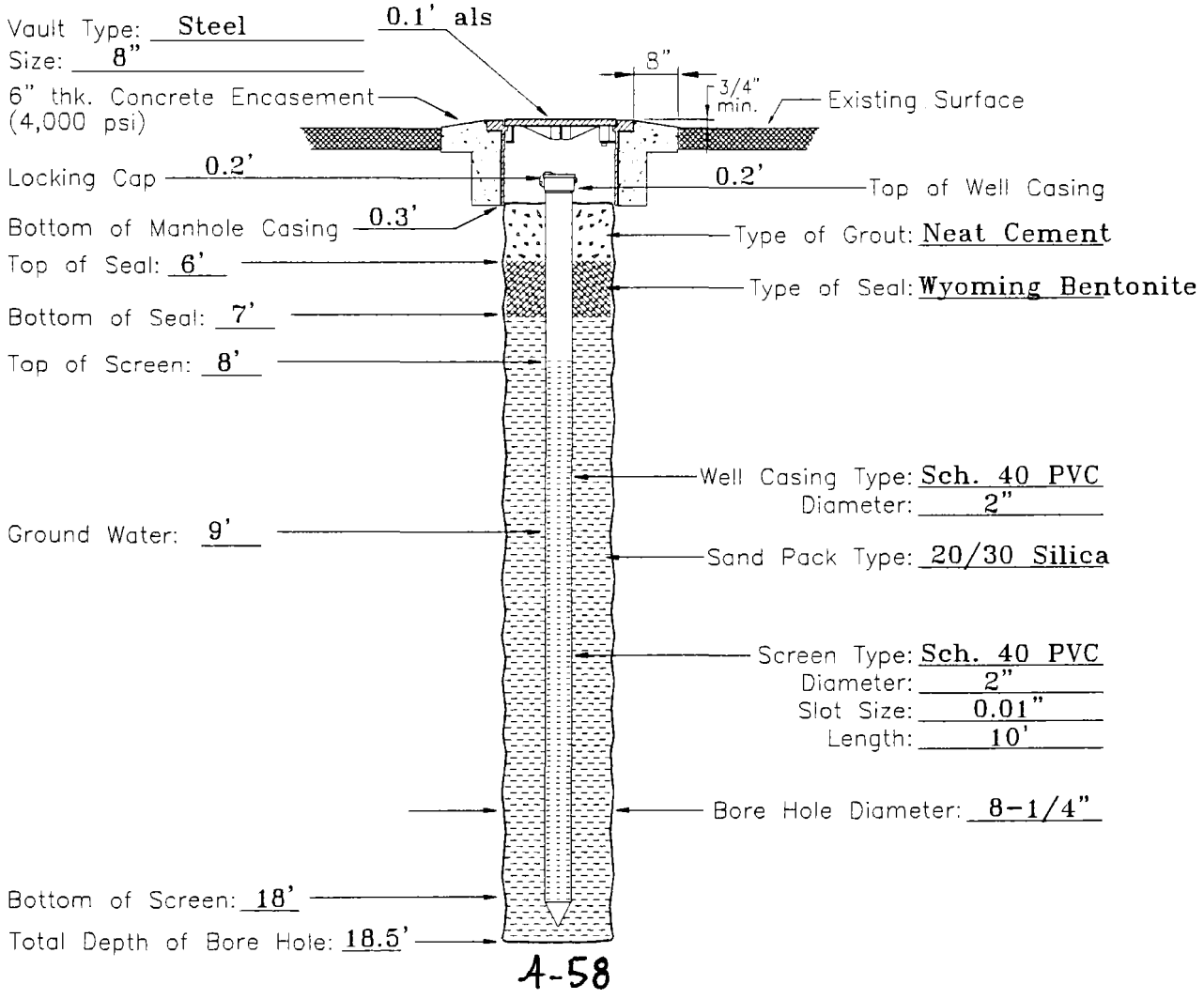
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-58

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 12/11/96 Finish: 12/11/96
TIME Start: 1430 Finish: 1530

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-58

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

CAD FILE @STA3> C:\ACADR13\MW-DETL1.DWG STA3-19951128.1143

W.E.S., Inc.
Environmental Division

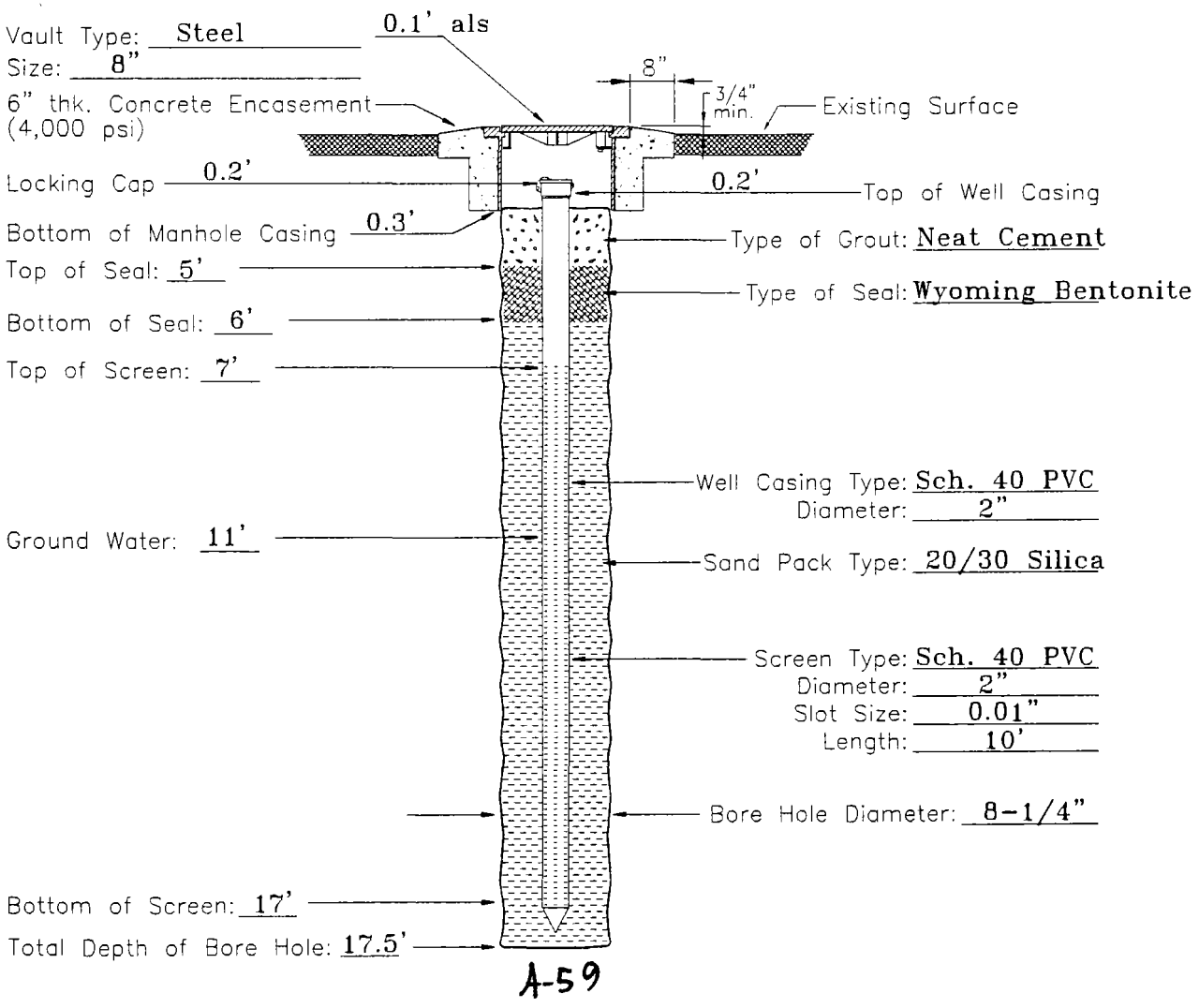
# MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-59

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 12/11/96 Finish: 12/11/96
TIME Start: 1530 Finish: 1630

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-59

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

CAD FILE @STA3> C:\ACADR13\MW-DETL1.DWG STA3-19951128.1143

W.E.S., Inc.
Environmental Division

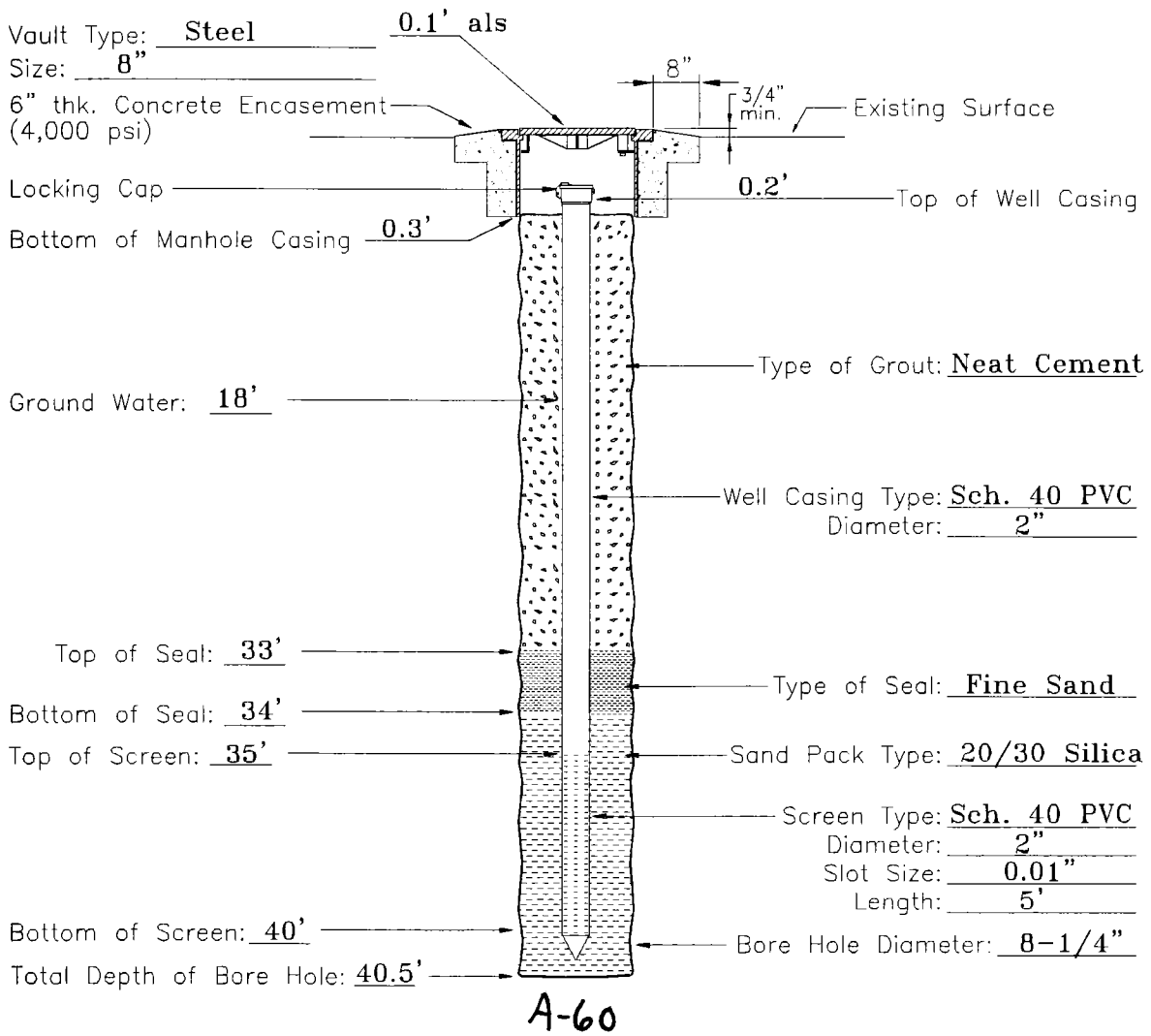
6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

# VERTICAL EXTENT
# MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: DMW-60

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 01/29/97 Finish: 01/29/97
TIME Start: 1300 Finish: 1530

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-60

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

CAD FILE @STA3> C:\ACADR13\MW-DETL1.DWG STA3-19951128.1143

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Environmental Division

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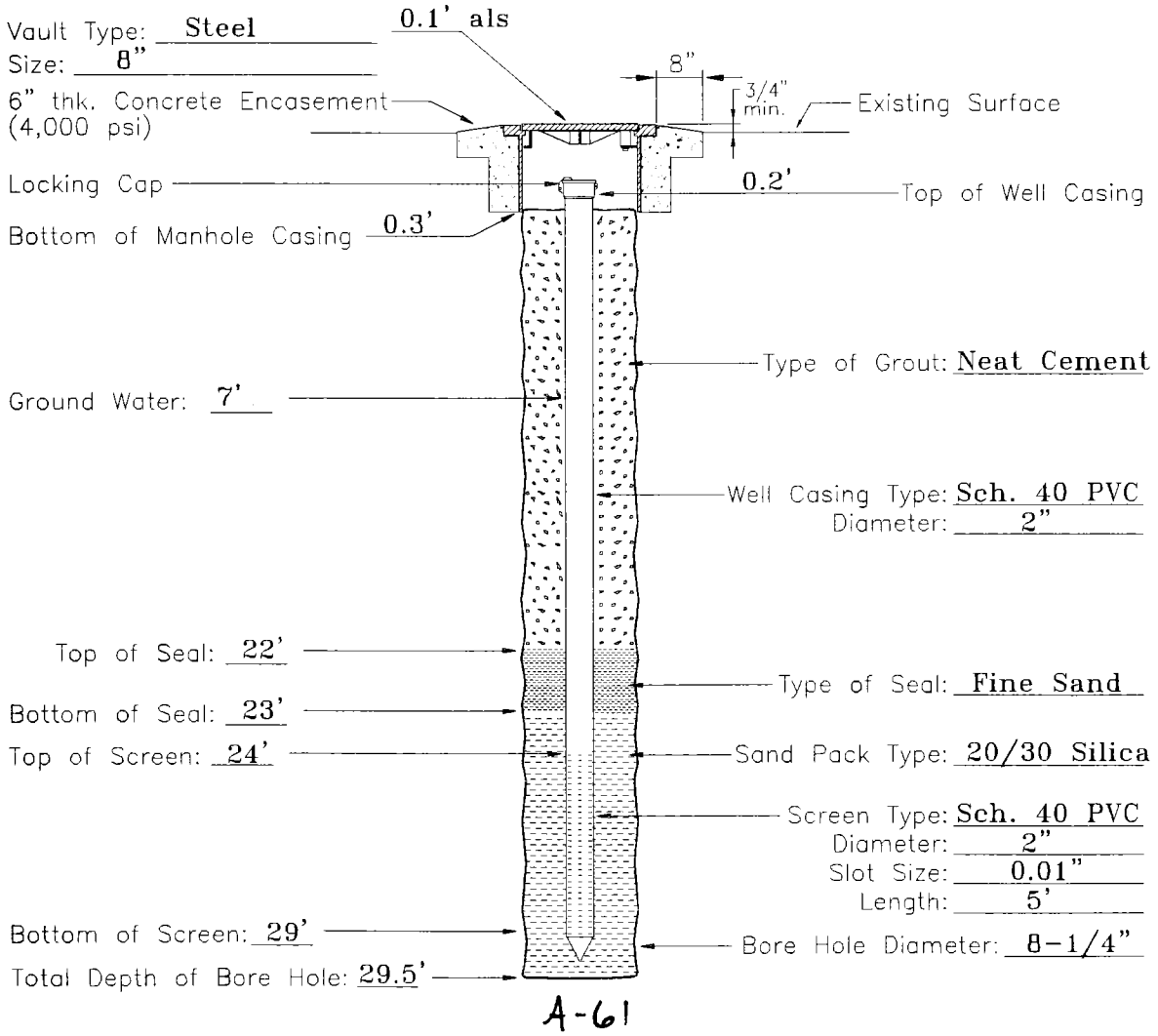
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

# VERTICAL EXTENT
# MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: DMW-61

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1159, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 02/18/97 Finish: 02/18/97
TIME Start: 0830 Finish: 1130

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):




A-61

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

CAD FILE @STA3> C:\ACADR13\MW-DETL1.DWG STA3-19951128.1143

# APPENDIX B

## SLUG TEST DATA, GRAPHS, AND CALCULATIONS

October 31, 1996

Slug Test/Aquifer Parameter Evaluation
Bronson Field, Site 1116
as performed on September 11, 1996.
Contract No. N65114-95-D-2126
Delivery Order No. 0027

A single well recovery test (slug test) was performed on Monitor Well No. 3 of Site 1116, located at Bronson Field, in Pensacola, Florida. Single well recovery tests involve the displacement of a known volume of water in a well and measuring the resulting change in hydraulic head over time until the water stabilized to its initial level. The water level measurements were made with a pressure transducer and recorded on a Thor Environmental Data Logger.

The calculation of hydraulic conductivity was based on the assumptions presented by Bouwer and Rice (1976). The well is assumed to be partially penetrating (That is, the saturated aquifer thickness is greater than the saturated monitor well screen length).

The movement of contaminants in a groundwater system depends, in part, on the flow characteristics of the aquifer beneath the site. In order to evaluate the flow characteristics, the following parameters were calculated: 1) hydraulic conductivity, 2) average linear flow velocity, and 3) transmissivity (effective soil porosity).

The relative ability of a porous medium to transmit fluid is measured by the hydraulic conductivity, a function of both the aquifer material and the fluid (Freeze and Cheery, 1979). Hydraulic Conductivity (K) values for the shallow saturated deposits were estimated from the single well recovery test (slug test) conducted on MW-3. The hydraulic conductivity calculations and field data from the single well slug test are presented following the text portion of this report. The hydraulic conductivity (K) in MW-3 at Bronson Field's Site No. 1116 Well No. 3 is calculated at 0.0004791 ft/min., or 0.6899 ft/day.

The average hydraulic gradient for this site was calculated at 0.0025 ft/ft. This value was derived utilizing existing groundwater elevation data from the site.

Therefore, using a hydraulic gradient of 0.0025, the hydraulic conductivity value obtained from the single well slug test (0.6899 ft/day) and an assumed effective porosity of 0.25, the average linear groundwater flow velocity was estimated to be 0.0069 ft/day (2.5181 ft per year), using the following formula:

$$V = \frac{Ki}{n}$$

where:
V = average linear flow velocity
K = hydraulic conductivity
i = gradient
n = effective soil porosity

These values should be viewed as an approximation only. The slug tests provide hydraulic conductivity values only for the materials immediately adjacent to the tested well screen. Although the calculated

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• Web Site: http://www.wesinc.com/water

rate of contaminant migration in water, the method does not account for hydrodynamic dispersion, chemical sorption, or degradation, which are factors affecting contaminant velocity.

Sincerely,

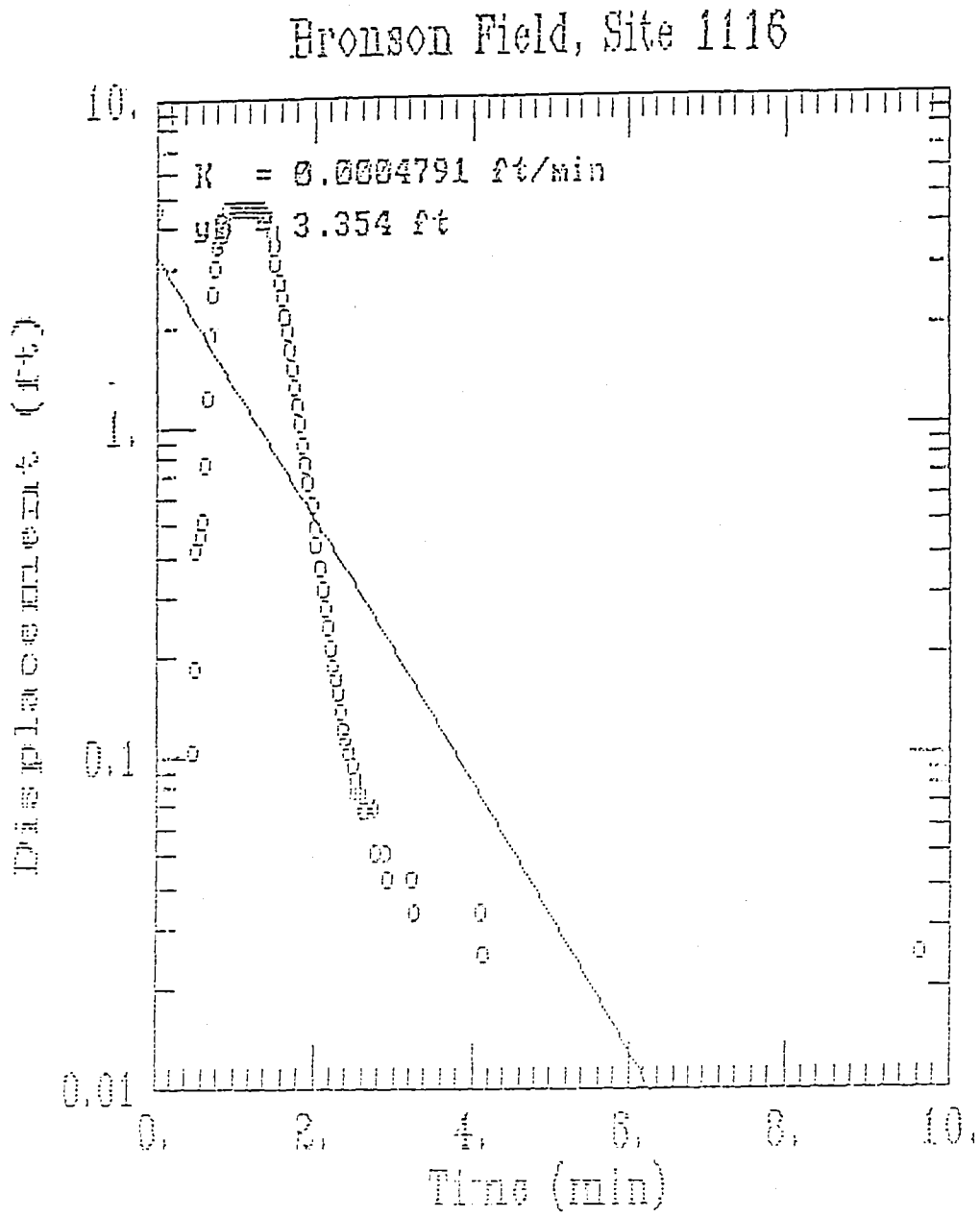
W.E.S., Inc.
Environmental Division

Patrick J. Brown
Staff Geologist

Michael J. Walsh, P.G.
Project Administrator

cc: File

g:\clients\nas-pcn\slgtst\ty150.doc


Bronson Field, Site 1116
K = 0.0004791 ft/min
y0 = 3.354 ft
10.
1.
0.1
0.01
0.
2.
4.
6.
8.
10.
Time (min)
Displacement (ft)

S/N SDLE-03A-SN-3098 Block 1

---

Program: STEP TEST
Readings: 290
Start Time: 13:22:04
Start Date: 09/11
Range: 0015 PSI
Channels: 1
Units: FL-H2O

---

Step 1
Interval 00:00:02
Readings 300

---

| Time | Chnl 1 | | | | | | |
|---|---|---|---|---|---|---|---|
| 0.00 | +6.4552 | 1.13 | +1.8926 | 2.27 | +6.2863 | 3.40 | +6.4214 |
| 0.03 | +6.4552 | 1.17 | +1.8926 | 2.30 | +6.3032 | 3.43 | +6.4214 |
| 0.07 | +6.4552 | 1.20 | +1.8842 | 2.33 | +6.3200 | 3.47 | +6.4214 |
| 0.10 | +6.4552 | 1.23 | +1.8926 | 2.37 | +6.3369 | 3.50 | +6.4214 |
| 0.13 | +6.4552 | 1.27 | +1.9010 | 2.40 | +6.3454 | 3.53 | +6.4214 |
| 0.17 | +6.4552 | 1.30 | +1.8926 | 2.43 | +6.3538 | 3.57 | +6.4214 |
| 0.20 | +6.4552 | 1.33 | +1.9010 | 2.47 | +6.3623 | 3.60 | +6.4214 |
| 0.23 | +6.4552 | 1.37 | +1.9010 | 2.50 | +6.3707 | 3.63 | +6.4214 |
| 0.27 | +6.4552 | 1.40 | +1.9686 | 2.53 | +6.3792 | 3.67 | +6.4214 |
| 0.30 | +6.4552 | 1.43 | +2.1630 | 2.57 | +6.3792 | 3.70 | +6.4214 |
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| 0.37 | +6.4552 | 1.50 | +2.9872 | 2.63 | +6.3876 | 3.77 | +6.4214 |
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| 0.43 | +6.4552 | 1.57 | +3.7008 | 2.70 | +6.3961 | 3.83 | +6.4214 |
| 0.47 | +6.3538 | 1.60 | +3.9965 | 2.73 | +6.3961 | 3.87 | +6.4214 |
| 0.50 | +6.2694 | 1.63 | +4.2838 | 2.77 | +6.4045 | 3.90 | +6.4214 |
| 0.53 | +6.0328 | 1.67 | +4.5288 | 2.80 | +6.4045 | 3.93 | +6.4214 |
| 0.57 | +5.9905 | 1.70 | +4.7316 | 2.83 | +6.4045 | 3.97 | +6.4214 |
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| 0.63 | +5.6948 | 1.77 | +5.1371 | 2.90 | +6.4045 | 4.03 | +6.4214 |
| 0.67 | +5.2385 | 1.80 | +5.2977 | 2.93 | +6.4130 | 4.07 | +6.4214 |
| 0.70 | +4.5795 | 1.83 | +5.4329 | 2.97 | +6.4130 | 4.10 | +6.4214 |
| 0.73 | +3.9373 | 1.87 | +5.5765 | 3.00 | +6.4130 | 4.13 | +6.4299 |
| 0.77 | +3.4557 | 1.90 | +5.6863 | 3.03 | +6.4130 | 4.17 | +6.4299 |
| 0.80 | +2.9657 | 1.93 | +5.7877 | 3.07 | +6.4130 | 4.20 | +6.4299 |
| 0.83 | +2.7544 | 1.97 | +5.8807 | 3.10 | +6.4130 | 4.23 | +6.4299 |
| 0.87 | +2.6023 | 2.00 | +5.9567 | 3.13 | +6.4130 | 4.27 | +6.4299 |
| 0.90 | +2.2644 | 2.03 | +6.0243 | 3.17 | +6.4130 | 4.30 | +6.4299 |
| 0.93 | +1.8842 | 2.07 | +6.0835 | 3.20 | +6.4130 | 4.33 | +6.4299 |
| 0.97 | +1.8842 | 2.10 | +6.1342 | 3.23 | +6.4130 | 4.37 | +6.4299 |
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| 1.03 | +1.8842 | 2.17 | +6.2102 | 3.30 | +6.4214 | 4.43 | +6.4299 |
| 1.07 | +1.8926 | 2.20 | +6.2440 | 3.33 | +6.4214 | 4.47 | +6.4299 |
| 1.10 | +1.9010 | 2.23 | +6.2694 | 3.37 | +6.4214 | 4.50 | +6.4299 |

S/N SDEE-03A-SN-3098 Block 1

Program: STEP TEST
Readings: 290
Start Time: 13:22:04
Start Date: 09/11
Range: 0015 PSI
Channels: 1
Units: Ft-H2O

Step 1
Interval 00:00:02
Readings 300

| Time | Chal 1 | | | | | | |
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| 4.57 | +6.4299 | 5.70 | +6.4299 | 6.83 | +6.4299 | 7.97 | +6.4299 |
| 4.60 | +6.4299 | 5.73 | +6.4299 | 6.87 | +6.4299 | 8.00 | +6.4299 |
| 4.63 | +6.4299 | 5.77 | +6.4299 | 6.90 | +6.4299 | 8.03 | +6.4299 |
| 4.67 | +6.4299 | 5.80 | +6.4299 | 6.93 | +6.4299 | 8.07 | +6.4299 |
| 4.70 | +6.4299 | 5.83 | +6.4299 | 6.97 | +6.4299 | 8.10 | +6.4299 |
| 4.73 | +6.4299 | 5.87 | +6.4299 | 7.00 | +6.4299 | 8.13 | +6.4299 |
| 4.77 | +6.4299 | 5.90 | +6.4299 | 7.03 | +6.4299 | 8.17 | +6.4299 |
| 4.80 | +6.4299 | 5.93 | +6.4299 | 7.07 | +6.4299 | 8.20 | +6.4299 |
| 4.83 | +6.4299 | 5.97 | +6.4299 | 7.10 | +6.4299 | 8.23 | +6.4299 |
| 4.87 | +6.4299 | 6.00 | +6.4299 | 7.13 | +6.4299 | 8.27 | +6.4299 |
| 4.90 | +6.4299 | 6.03 | +6.4299 | 7.17 | +6.4299 | 8.30 | +6.4299 |
| 4.93 | +6.4299 | 6.07 | +6.4299 | 7.20 | +6.4299 | 8.33 | +6.4299 |
| 4.97 | +6.4299 | 6.10 | +6.4299 | 7.23 | +6.4299 | 8.37 | +6.4299 |
| 5.00 | +6.4299 | 6.13 | +6.4299 | 7.27 | +6.4299 | 8.40 | +6.4299 |
| 5.03 | +6.4299 | 6.17 | +6.4299 | 7.30 | +6.4299 | 8.43 | +6.4299 |
| 5.07 | +6.4299 | 6.20 | +6.4299 | 7.33 | +6.4299 | 8.47 | +6.4299 |
| 5.10 | +6.4299 | 6.23 | +6.4299 | 7.37 | +6.4299 | 8.50 | +6.4299 |
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| 5.17 | +6.4299 | 6.30 | +6.4299 | 7.43 | +6.4299 | 8.57 | +6.4299 |
| 5.20 | +6.4299 | 6.33 | +6.4299 | 7.47 | +6.4299 | 8.60 | +6.4299 |
| 5.23 | +6.4299 | 6.37 | +6.4299 | 7.50 | +6.4299 | 8.63 | +6.4299 |
| 5.27 | +6.4299 | 6.40 | +6.4299 | 7.53 | +6.4299 | 8.67 | +6.4299 |
| 5.30 | +6.4299 | 6.43 | +6.4299 | 7.57 | +6.4299 | 8.70 | +6.4299 |
| 5.33 | +6.4299 | 6.47 | +6.4299 | 7.60 | +6.4299 | 8.73 | +6.4299 |
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| 5.40 | +6.4299 | 6.53 | +6.4299 | 7.67 | +6.4299 | 8.80 | +6.4299 |
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| 5.53 | +6.4299 | 6.67 | +6.4299 | 7.80 | +6.4299 | 8.93 | +6.4299 |
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| 5.60 | +6.4299 | 6.73 | +6.4299 | 7.87 | +6.4299 | 9.00 | +6.4299 |
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S/N SDEE-03A-SN-3093 Block 1

Program: STEP TEST
Readings: 290
Start Time: 13:22:04
Start Date: 09/11
Range: 0015 PSI
Channels: 1
Units: FI-H2O

Step 1
Interval 00:00:02
Readings 300

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| 8.00 | +6.4299 | 8.50 | +6.4299 | 9.63 | +6.4299 |
| 8.03 | +6.4299 | 8.53 | +6.4299 | test 1 aborted at Step 1 | |
| 8.07 | +6.4299 | 8.57 | +6.4299 | | |
| 8.10 | +6.4299 | 8.60 | +6.4299 | | |
| 8.13 | +6.4299 | 8.63 | +6.4299 | | |
| 8.17 | +6.4299 | 8.67 | +6.4299 | | |
| 8.20 | +6.4299 | 8.70 | +6.4299 | | |
| 8.23 | +6.4299 | 8.73 | +6.4299 | | |
| 8.27 | +6.4299 | 8.77 | +6.4299 | | |
| 8.30 | +6.4299 | 8.80 | +6.4299 | | |
| 8.33 | +6.4299 | 8.83 | +6.4299 | | |
| 8.37 | +6.4299 | 8.87 | +6.4299 | | |
| 8.40 | +6.4299 | 8.90 | +6.4299 | | |
| 8.43 | +6.4299 | 8.93 | +6.4299 | | |
| 8.47 | +6.4299 | 8.97 | +6.4299 | | |
| 8.50 | +6.4299 | 9.00 | +6.4299 | | |
| 8.53 | +6.4299 | 9.03 | +6.4299 | | |
| 8.57 | +6.4299 | 9.07 | +6.4299 | | |
| 8.60 | +6.4299 | 9.10 | +6.4299 | | |
| 8.63 | +6.4299 | 9.13 | +6.4299 | | |
| 8.67 | +6.4299 | 9.17 | +6.4299 | | |
| 8.70 | +6.4299 | 9.20 | +6.4299 | | |
| 8.73 | +6.4299 | 9.23 | +6.4299 | | |
| 8.77 | +6.4299 | 9.27 | +6.4299 | | |
| 8.80 | +6.4299 | 9.30 | +6.4299 | | |
| 8.83 | +6.4299 | 9.33 | +6.4299 | | |
| 8.87 | +6.4299 | 9.37 | +6.4299 | | |
| 8.90 | +6.4299 | 9.40 | +6.4299 | | |
| 8.93 | +6.4299 | 9.43 | +6.4299 | | |
| 8.97 | +6.4299 | 9.47 | +6.4299 | | |
| 9.00 | +6.4299 | 9.50 | +6.4299 | | |
| 9.03 | +6.4299 | 9.53 | +6.4299 | | |
| 9.07 | +6.4299 | 9.57 | +6.4299 | | |

October 31, 1996

Slug Test/Aquifer Parameter Evaluation
Bronson Field, Site 1122
as performed on September 11, 1996.
Contract No. N65114-95-D-2126
Delivery Order No. 0027

A single well recovery test (slug test) was performed on Monitor Well No. 5 of Site 1122, located at Bronson Field, in Pensacola, Florida. Single well recovery tests involve the displacement of a known volume of water in a well and measuring the resulting change in hydraulic head over time until the water stabilized to its initial level. The water level measurements were made with a pressure transducer and recorded on a Ther Environmental Data Logger.

The calculation of hydraulic conductivity was based on the assumptions presented by Bouwer and Rice (1976). The well is assumed to be partially penetrating (That is, the saturated aquifer thickness is greater than the saturated monitor well screen length).

The movement of contaminants in a groundwater system depends, in part, on the flow characteristics of the aquifer beneath the site. In order to evaluate the flow characteristics, the following parameters were calculated: 1) hydraulic conductivity, 2) average linear flow velocity, and 3) transmissivity (effective soil porosity).

The relative ability of a porous medium to transmit fluid is measured by the hydraulic conductivity, a function of both the aquifer material and the fluid (Freeze and Cheery, 1979). Hydraulic Conductivity (K) values for the shallow saturated deposits were estimated from the single well recovery test (slug test) conducted on MW-5. The hydraulic conductivity calculations and field data from the single well slug test are presented following the text portion of this report. The hydraulic conductivity (K) in MW-5 at Bronson Field's Site No. 1122 Well No. 5 is calculated at 0.000123 ft/min., or 0.1771 ft/day.

The average hydraulic gradient for this site was calculated at 0.0060 ft/ft. This value was derived utilizing existing groundwater elevation data from the site.

Therefore, using a hydraulic gradient of 0.0060, the hydraulic conductivity value obtained from the single well slug test (0.1771 ft/day) and an assumed effective porosity of 0.25, the average linear groundwater flow velocity was estimated to be 0.0043 ft/day (1.5514 ft per year), using the following formula:

$$V = \frac{Ki}{n}$$

where:
V = average linear flow velocity
K = hydraulic conductivity
i = gradient
n = effective soil porosity

These values should be viewed as an approximation only. The slug tests provide hydraulic conductivity values only for the materials immediately adjacent to the tested well screen. Although the calculated

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• Web Site: http://www.wesinc.com/water

[illegible] as an approximation of the rate of contaminant migration in water, the method does not account for hydrodynamic dispersion, chemical sorption, or degradation, which are factors affecting contaminant velocity.

Sincerely,

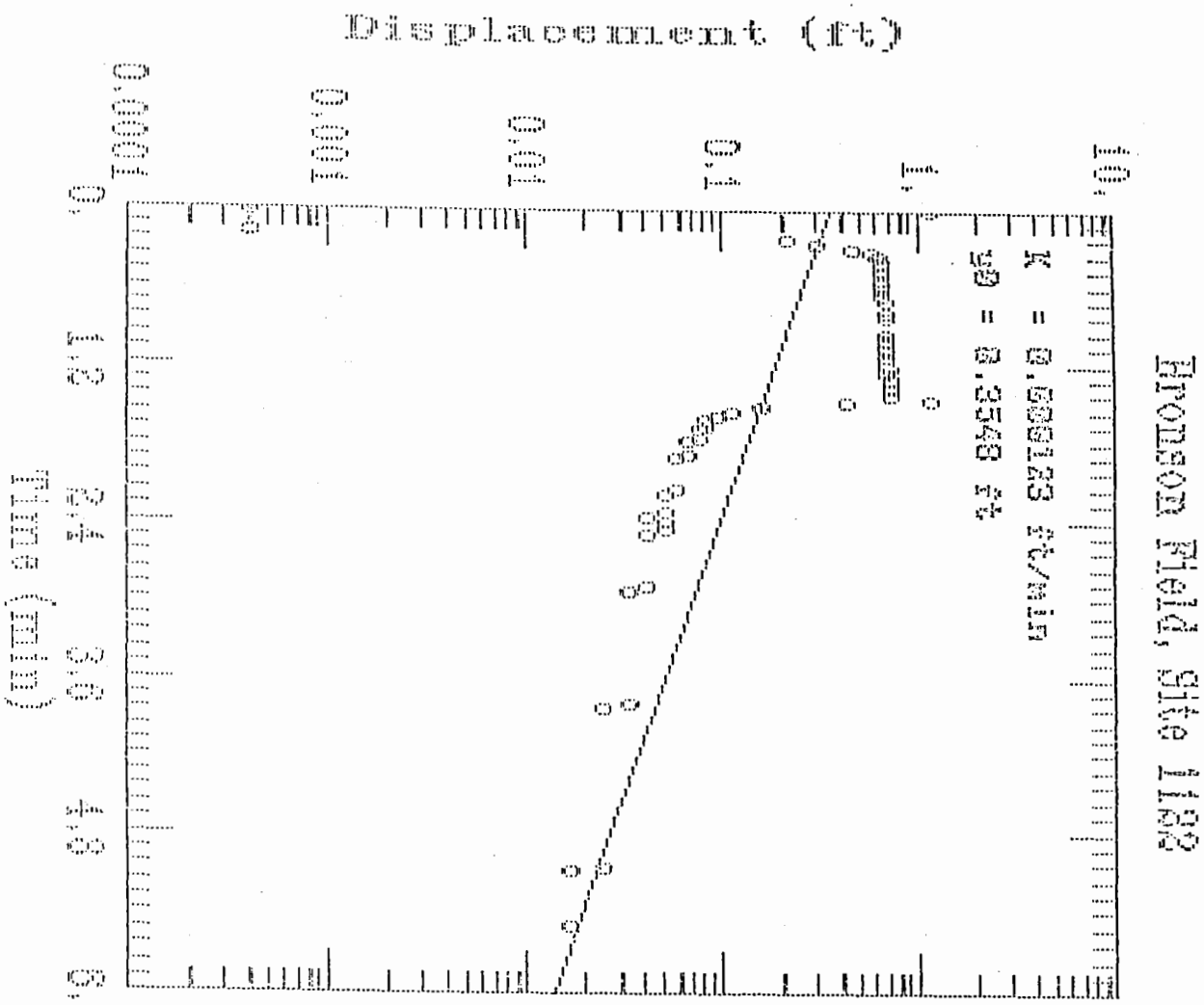
W.E.S., Inc.
Environmental Division

Patrick J. Brown
Staff Geologist

Michael J Walsh, P.G.
Project Administrator

cc: File

g:\clients\nas-pen\slgtst\ty150.doc


Proteon Field Site 1182
K = 0.689123 ft/min
S = 0.2548 ft
10.
1.
0.1000
0.0100
0.0010
0.0001
Displacement (ft)
0.
15.
30.
45.
60.
Time (min)

S/N SDEE-03A-SN-3038 Block 1

Program: STEP TEST
Readings: 166
Start Time: 15:43:04
Start Date: 09/11
Range: 0015 PSI
Channels: 1
Units: Ft-H2O

Step 1
Interval 00:00:02
Readings 300

| Time | Chnl 1 | | | | | | |
|---|---|---|---|---|---|---|---|
| 0.00 | +7.1481 | 1.13 | +6.4637 | 2.27 | +7.0974 | 3.40 | +7.1143 |
| 0.03 | +7.1481 | 1.17 | +6.4552 | 2.30 | +7.0974 | 3.43 | +7.1143 |
| 0.07 | +7.1481 | 1.20 | +6.4552 | 2.33 | +7.0974 | 3.47 | +7.1143 |
| 0.10 | +7.1481 | 1.23 | +6.4468 | 2.37 | +7.1058 | 3.50 | +7.1143 |
| 0.13 | +7.1481 | 1.27 | +6.4552 | 2.40 | +7.0974 | 3.53 | +7.1143 |
| 0.17 | +7.1481 | 1.30 | +6.4468 | 2.43 | +7.0974 | 3.57 | +7.1143 |
| 0.20 | +7.1565 | 1.33 | +6.4468 | 2.47 | +7.0974 | 3.60 | +7.1143 |
| 0.23 | +6.9369 | 1.37 | +6.4383 | 2.50 | +7.1058 | 3.63 | +7.1143 |
| 0.27 | +6.8524 | 1.40 | +6.4383 | 2.53 | +7.1058 | 3.67 | +7.1143 |
| 0.30 | +6.6934 | 1.43 | +6.4383 | 2.57 | +7.1058 | 3.70 | +7.1143 |
| 0.33 | +6.5735 | 1.47 | +6.0074 | 2.60 | +7.1058 | 3.73 | +7.1143 |
| 0.37 | +6.5228 | 1.50 | +6.7256 | 2.63 | +7.1058 | 3.77 | +7.1143 |
| 0.40 | +6.5059 | 1.53 | +6.9675 | 2.67 | +7.1058 | 3.80 | +7.1143 |
| 0.43 | +6.4975 | 1.57 | +7.0382 | 2.70 | +7.1058 | 3.83 | +7.1227 |
| 0.47 | +6.4975 | 1.60 | +7.0551 | 2.73 | +7.1058 | 3.87 | +7.1227 |
| 0.50 | +6.4890 | 1.63 | +7.0636 | 2.77 | +7.1058 | 3.90 | +7.1227 |
| 0.53 | +6.4890 | 1.67 | +7.0636 | 2.80 | +7.1058 | 3.93 | +7.1227 |
| 0.57 | +6.4890 | 1.70 | +7.0720 | 2.83 | +7.1058 | 3.97 | +7.1227 |
| 0.60 | +6.4806 | 1.73 | +7.0720 | 2.87 | +7.1058 | 4.00 | +7.1227 |
| 0.63 | +6.4806 | 1.77 | +7.0720 | 2.90 | +7.1058 | 4.03 | +7.1227 |
| 0.67 | +6.4806 | 1.80 | +7.0805 | 2.93 | +7.1143 | 4.07 | +7.1227 |
| 0.70 | +6.4721 | 1.83 | +7.0805 | 2.97 | +7.1143 | 4.10 | +7.1227 |
| 0.73 | +6.4721 | 1.87 | +7.0805 | 3.00 | +7.1143 | 4.13 | +7.1227 |
| 0.77 | +6.4721 | 1.90 | +7.0805 | 3.03 | +7.1143 | 4.17 | +7.1227 |
| 0.80 | +6.4721 | 1.93 | +7.0889 | 3.07 | +7.1143 | 4.20 | +7.1227 |
| 0.83 | +6.4637 | 1.97 | +7.0889 | 3.10 | +7.1143 | 4.23 | +7.1227 |
| 0.87 | +6.4637 | 2.00 | +7.0889 | 3.13 | +7.1143 | 4.27 | +7.1227 |
| 0.90 | +6.4637 | 2.03 | +7.0889 | 3.17 | +7.1143 | 4.30 | +7.1227 |
| 0.93 | +6.4637 | 2.07 | +7.0889 | 3.20 | +7.1143 | 4.33 | +7.1227 |
| 0.97 | +6.4637 | 2.10 | +7.0889 | 3.23 | +7.1143 | 4.37 | +7.1227 |
| 1.00 | +6.4552 | 2.13 | +7.0889 | 3.27 | +7.1143 | 4.40 | +7.1227 |
| 1.03 | +6.4552 | 2.17 | +7.0889 | 3.30 | +7.1143 | 4.43 | +7.1227 |
| 1.07 | +6.4637 | 2.20 | +7.0974 | 3.33 | +7.1143 | 4.47 | +7.1227 |
| 1.10 | +6.4637 | 2.23 | +7.0974 | 3.37 | +7.1143 | 4.50 | +7.1227 |

S/N SDEE-03A-SN-3098 Block 1

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Program: STEP TEST
Readings: 166
Start Time: 15:43:04
Start Date: 09/11
Range: 0015 PSI
Channels: 1
Units: Ft-H2O

---

Step 1
Interval 00:00:02
Readings 300

---

| Time | Chnl 1 |
|---|---|
| 4.53 | +7.1227 |
| 4.57 | +7.1227 |
| 4.60 | +7.1227 |
| 4.63 | +7.1227 |
| 4.67 | +7.1227 |
| 4.70 | +7.1227 |
| 4.73 | +7.1227 |
| 4.77 | +7.1227 |
| 4.80 | +7.1227 |
| 4.83 | +7.1227 |
| 4.87 | +7.1227 |
| 4.90 | +7.1227 |
| 4.93 | +7.1227 |
| 4.97 | +7.1227 |
| 5.00 | +7.1227 |
| 5.03 | +7.1227 |
| 5.07 | +7.1227 |
| 5.10 | +7.1312 |
| 5.13 | +7.1312 |
| 5.17 | +7.1312 |
| 5.20 | +7.1312 |
| 5.23 | +7.1312 |
| 5.27 | +7.1312 |
| 5.30 | +7.1312 |
| 5.33 | +7.1312 |
| 5.37 | +7.1312 |
| 5.40 | +7.1312 |
| 5.43 | +7.1312 |
| 5.47 | +7.1312 |
| 5.50 | +7.1312 |

Test 1 aborted at Step 1

October 31, 1996

Slug Test/Aquifer Parameter Evaluation
Bronson Field, Site 1140NE
as performed on September 11, 1996.
Contract No. N65114-95-D-2126
Delivery Order No. 0027

A single well recovery test (slug test) was performed on Monitor Well No. 4 of Site 1140NE, located at Bronson Field, in Pensacola, Florida. Single well recovery tests involve the displacement of a known volume of water in a well and measuring the resulting change in hydraulic head over time until the water stabilized to its initial level. The water level measurements were made with a pressure transducer and recorded on a Thor Environmental Data Logger.

The calculation of hydraulic conductivity was based on the assumptions presented by Bouwer and Rice (1976). The well is assumed to be partially penetrating (That is, the saturated aquifer thickness is greater than the saturated monitor well screen length).

The movement of contaminants in a groundwater system depends, in part, on the flow characteristics of the aquifer beneath the site. In order to evaluate the flow characteristics, the following parameters were calculated: 1) hydraulic conductivity, 2) average linear flow velocity, and 3) transmissivity (effective soil porosity).

The relative ability of a porous medium to transmit fluid is measured by the hydraulic conductivity, a function of both the aquifer material and the fluid (Freeze and Cheery, 1979). Hydraulic Conductivity (K) values for the shallow saturated deposits were estimated from the single well recovery test (slug test) conducted on MW-4. The hydraulic conductivity calculations and field data from the single well slug test are presented following the text portion of this report. The hydraulic conductivity (K) in MW-4 at Bronson Field's Site No. 1140NE Well No. 4 is calculated at 0.0006749 ft/min., or 0.9719 ft/day.

The average hydraulic gradient for this site was calculated at 0.0039 ft/ft. This value was derived utilizing existing groundwater elevation data from the site.

Therefore, using a hydraulic gradient of 0.0039, the hydraulic conductivity value obtained from the single well slug test (0.9719 ft/day) and an assumed effective porosity of 0.25, the average linear groundwater flow velocity was estimated to be 0.0152 ft/day (5.5337 ft per year), using the following formula:

$$V = \frac{Ki}{n}$$

where:
V = average linear flow velocity
K = hydraulic conductivity
i = gradient
n = effective soil porosity

These values should be viewed as an approximation only. The slug tests provide hydraulic conductivity values only for the materials immediately adjacent to the tested well screen. Although the calculated

• Corporate Headquarters •
6389 Tower Lane • Sarasota, Florida 34240 • (941) 371-7617 • Fax (941) 378-5218
• Web Site: http://www.wesinc.com/water

groundwater flow velocity may be used as an approximation of the rate of contaminant migration in water, the method does not account for hydrodynamic dispersion, chemical sorption, or degradation, which are factors affecting contaminant velocity.

Sincerely,

W.E.S., Inc.
Environmental Division

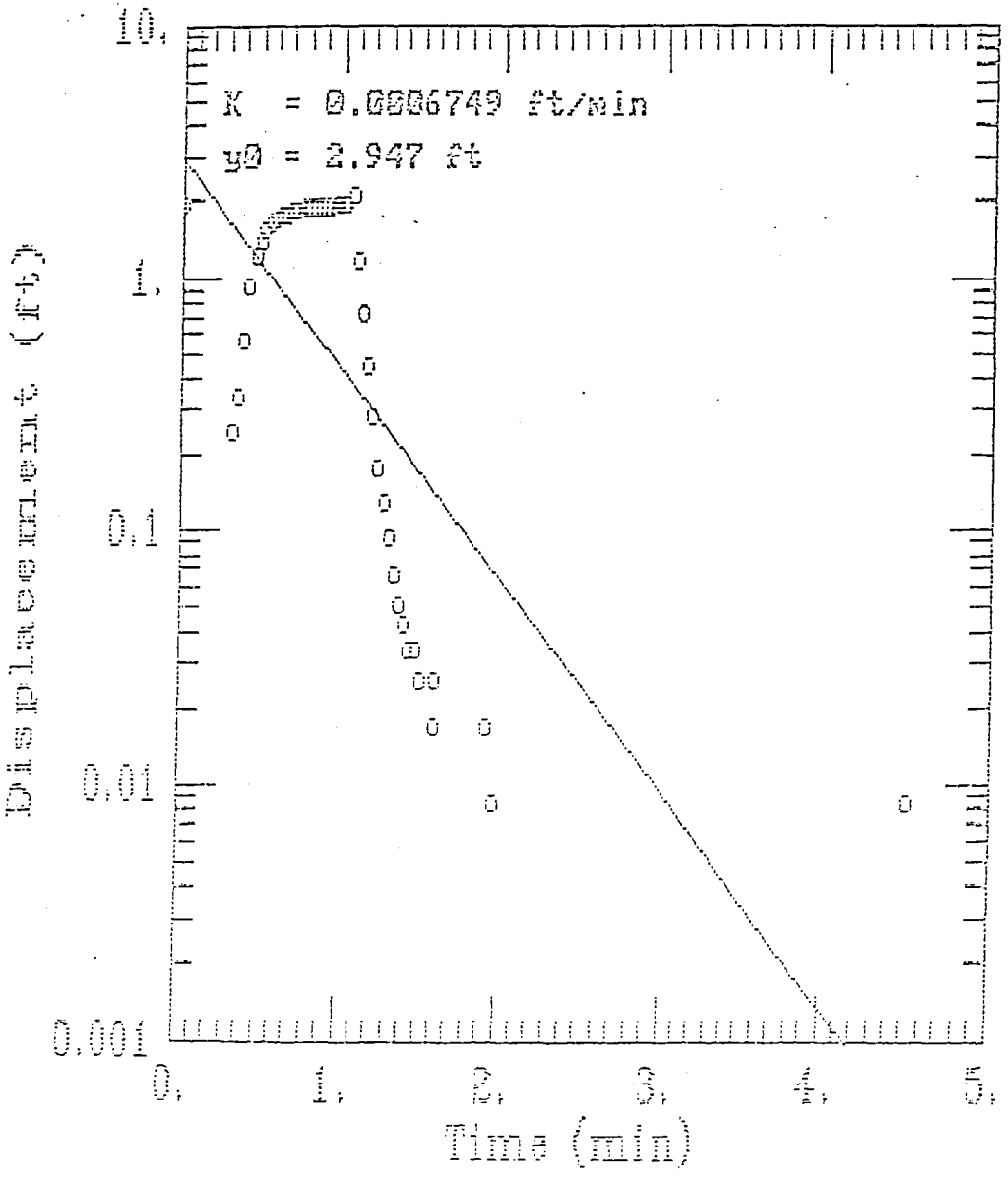
Patrick J. Brown
Staff Geologist

Michael J. Walsh, P.G.
Project Administrator

cc: File

g:\clients\nas-pen\slgtst\bf1140ne.doc

# Bronson Field, Site 1140 NE




AQTESOLV

GERAGHTY & MILLER, INC.
Modeling Group

S/N SDEE-93A-SN-3098 Block 1

Program: STEP TEST
Readings: 139
Start Time: 14:43:37
Start Date: 09/11
Range: 0015 PSI
Channels: 1
Units: Ft-H2O

Step 1
Interval 00:00:02
Readings 300

| Time | Chnl 1 | | | | | | |
|---|---|---|---|---|---|---|---|
| 0.00 | +5.9145 | 1.13 | +5.2047 | 2.27 | +5.9060 | 3.40 | +5.9060 |
| 0.03 | +5.9145 | 1.17 | +5.4751 | 2.30 | +5.9060 | 3.43 | +5.9060 |
| 0.07 | +5.9145 | 1.20 | +5.6357 | 2.33 | +5.9060 | 3.47 | +5.9060 |
| 0.10 | +5.9145 | 1.23 | +5.7370 | 2.37 | +5.9060 | 3.50 | +5.9060 |
| 0.13 | +5.9145 | 1.27 | +5.7877 | 2.40 | +5.9060 | 3.53 | +5.9060 |
| 0.17 | +5.9145 | 1.30 | +5.8215 | 2.43 | +5.9060 | 3.57 | +5.9060 |
| 0.20 | +5.9145 | 1.33 | +5.8469 | 2.47 | +5.9060 | 3.60 | +5.9060 |
| 0.23 | +5.9145 | 1.37 | +5.8638 | 2.50 | +5.9060 | 3.63 | +5.9060 |
| 0.27 | +5.9145 | 1.40 | +5.8722 | 2.53 | +5.9060 | 3.67 | +5.9060 |
| 0.30 | +5.9145 | 1.43 | +5.8807 | 2.57 | +5.9060 | 3.70 | +5.9060 |
| 0.33 | +5.6695 | 1.47 | +5.8807 | 2.60 | +5.9060 | 3.73 | +5.9060 |
| 0.37 | +5.5765 | 1.50 | +5.8891 | 2.63 | +5.9060 | 3.77 | +5.9060 |
| 0.40 | +5.3399 | 1.53 | +5.8891 | 2.67 | +5.9060 | 3.80 | +5.9060 |
| 0.43 | +4.9935 | 1.57 | +5.8891 | 2.70 | +5.9060 | 3.83 | +5.9060 |
| 0.47 | +4.7147 | 1.60 | +5.8976 | 2.73 | +5.9060 | 3.87 | +5.9060 |
| 0.50 | +4.5203 | 1.63 | +5.8976 | 2.77 | +5.9060 | 3.90 | +5.9060 |
| 0.53 | +4.3767 | 1.67 | +5.8976 | 2.80 | +5.9060 | 3.93 | +5.9060 |
| 0.57 | +4.2569 | 1.70 | +5.8976 | 2.83 | +5.9060 | 3.97 | +5.9060 |
| 0.60 | +4.1993 | 1.73 | +5.8976 | 2.87 | +5.9060 | 4.00 | +5.9060 |
| 0.63 | +4.1486 | 1.77 | +5.8976 | 2.90 | +5.9060 | 4.03 | +5.9060 |
| 0.67 | +4.1232 | 1.80 | +5.8976 | 2.93 | +5.9060 | 4.07 | +5.9060 |
| 0.70 | +4.0894 | 1.83 | +5.8976 | 2.97 | +5.9060 | 4.10 | +5.9060 |
| 0.73 | +4.0641 | 1.87 | +5.8976 | 3.00 | +5.9060 | 4.13 | +5.9060 |
| 0.77 | +4.0472 | 1.90 | +5.8976 | 3.03 | +5.9060 | 4.17 | +5.9060 |
| 0.80 | +4.0303 | 1.93 | +5.8976 | 3.07 | +5.9060 | 4.20 | +5.9060 |
| 0.83 | +4.0218 | 1.97 | +5.9060 | 3.10 | +5.9060 | 4.23 | +5.9060 |
| 0.87 | +4.0049 | 2.00 | +5.9060 | 3.13 | +5.9060 | 4.27 | +5.9060 |
| 0.90 | +3.9965 | 2.03 | +5.9060 | 3.17 | +5.9060 | 4.30 | +5.9060 |
| 0.93 | +3.9880 | 2.07 | +5.9060 | 3.20 | +5.9060 | 4.33 | +5.9060 |
| 0.97 | +3.9796 | 2.10 | +5.9060 | 3.23 | +5.9060 | 4.37 | +5.9060 |
| 1.00 | +3.9711 | 2.13 | +5.9060 | 3.27 | +5.9060 | 4.40 | +5.9060 |
| 1.03 | +3.9627 | 2.17 | +5.9060 | 3.30 | +5.9060 | 4.43 | +5.9060 |
| 1.07 | +3.8106 | 2.20 | +5.9060 | 3.33 | +5.9060 | 4.47 | +5.9060 |
| 1.10 | +4.7400 | 2.23 | +5.9060 | 3.37 | +5.9060 | 4.50 | +5.9060 |

S/N SDEE-03A-SN-3098 Block 1

---

Program: STEP TEST
Readings: 139
Start Time: 14:43:37
Start Date: 09/11
Range: 0015 PSI
Channels: 1
Units: Ft-H2O

---

Step 1
Interval 00:00:02
Readings 300

---

| Time | Chnl 1 |
|---|---|
| 4.53 | +5.9060 |
| 4.57 | +5.9060 |
| 4.60 | +5.9060 |

Test 1 aborted at Step 1

# APPENDIX C

## LITHOLOGIC LOG

# LOG OF MONITORING WELL



Project Name: Bronson Field

Job # P95-255-34

Location: 1159

Facility: NAS

Start Date/Time: 5/25/95

MW Number: MW 17

Finish Date/Time: 5/25/95

Logged By: Darryl Gates

Top Of Casing Elevation: N/A

Drilling Contractor: Pensacola Testing Labs

Surface Elevation: N/A

Total Depth: 15'

Driller: Larry Minchu

| Depth Feet | Sampler Type $H_2O$ | Sample ID # | Contamination: Odor | Contamination: OVA/HNu ppm SOIL | Contamination: Visible Y=Yes N=No | Soil Rock Symbol | Soil and Rock Description/Comment | Monitor Well Data: Material Description | Monitor Well Data: Concrete Pad |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Dirt Surface | Grout | |
| | | | | | | | Brown fine to med grained sand | 2" pvc riser | |
| | | | | | | | 5' | Bentonite Seal | |
| 5 | | | N | 0.2 | N | | Tan fine to med grained sand | | |
| | | | | | | | 7' | | |
| | X | | | | | | | 0.010 Slotted Screen | |
| 10 | | | Y | | | | Grayish fine to med grained sand | 10/40 Silica Sand | |
| | | | | | | | 15' End of Boring | | |
| 15 | | | | | | | | | |
| 20 | | | | | | | | | |
| 25 | | | | | | | C-1 | | |

# WELL SAMPL RECORD

PROJECT NO. _____ DATE 5/30/95 CHECKED BY _____

PROJECT Bronson Field SAMPLED BY Joy Jones / Darryl Gates DATE CHECKED _____

| WELL I.D. | DEPTH TO WATER (FT. BMP) | TOTAL WELL DEPTH (FT. BMP) | WELL TYPE AND DIAMETER | WATER VOLUME IN WELL (GAL.) | PURGE RATE (GPM) | DURATION OF PURGING (MIN.) | VOLUME PURGED (GAL.) | PURGE METHOD | METHOD OF SAMPLE COLLECTION | DATE OF SAMPLE COLLECTION | TIME OF SAMPLE COLLECTION | SAMPLE TEMP. (°C) | SAMPLE pH / ODOR | SAMPLE CONDUCTIVITY UMHOS/CM | COMMENTS (ODOR, COLOR, ETC.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW1 | 15.5 | 24.3 | 2" pvc | 1.5 | ~0.5 | 15 | ~8 | C | TB | 5/30/95 | 1220 | | NONE | | *In lieu of temp, |
| MW2 | 14.1 | 25.15 | | 1.9 | | 13 | ~10 | | | | 1230 | | Slight petro | | pH, and Conductivity |
| MW3 | 14.8 | 24.85 | | 1.7 | | 20 | ~10 | | | | 1235 | | NONE | | all 18 wells were |
| MW4 | 13.12 | 24.6 | | 1.95 | | 14 | ~10 | | | | 1237 | | NONE | | purged 5 volumes |
| MW5 | 14.35 | 24.6 | | 1.74 | | 19 | ~9 | | | | 1248 | | NONE | | |
| MW6 | 7.00 | 14.8 | | 1.32 | | 9 | ~7 | | | | 1335 | | NONE | | |
| MW7 | 14.61 | 18.85 | | 0.72 | | 7 | ~4 | | | | 1515 | | SEWAGE | | |
| MW8 | 19.20 | 23.7 | | 0.76 | | 18 | ~4 | | | | 1425 | | NONE | | |
| MW9 | 15.0 | 23.7 | | 1.5 | | 20 | ~7.5 | | | | 1830 | | Slight petro | | |
| MW10 | 3.25 | 11.8 | | 1.45 | | 16 | ~7.5 | | | | 1636 | | Sulfur | | |
| MW11 | 7.95 | 16.64 | | 1.48 | | 7 | ~7.5 | | | | 1727 | | NONE | | |
| MW12 | 6.35 | 14.5 | | 1.39 | | 11 | ~7 | | | | 1650 | | Petro | | |
| MW13 | 13.05 | 24.60 | | 1.96 | | 11 | ~10 | | | | 1452 | | Sewage | | |
| MW14 | 19.8 | 23.4 | | 0.61 | | 6 | ~3 | | | | 1559 | | NONE | | |
| MW15 | 18.0 | 24.8 | | 1.2 | | 9 | ~6 | | | | 1542 | | NONE | | |
| MW16 | 5.42 | 14.65 | | 1.57 | | 17 | ~8 | | | | 1705 | | NONE | | |
| MW17 | 8.20 | 15.9 | | 1.31 | | 18 | ~6.5 | | | | 1758 | | PETRO | | |
| MW18 | 18.50 | 22.50 | | 0.68 | | 8 | ~4 | | | | 1355 | | NONE | | |

PURGE AND COLLECTION METHODS: C = CENTRIFUGAL PUMP; P = PERISTALTIC PUMP; TB = TEFLON BAILER; PB = PVC BAILER; X = OTHER (DESCRIBE)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Site 1159 | | | | | | LOGGED BY: Patrick J. Brown | | SHEET 1 OF 1 | | |
| Bronson Field | | | | | | Contractor: WES, Inc. | | Dr. Method: HSA | | |
| Pensacola, Florida | | | | | | Driller: South Florida Testing & Drilling | | Dr. Rig: Mobile | | |
| | | | | | | Start Date: 04/03/96 | | Completed: 04/03/96 | | |
| MONITOR WELL NO.: MW-2 | | | | | | Start Time: 0830 | | Finish Time: 0915 | | |
| Delivery Order 0014 | | | | | | Contract No. N65114-95-D-2126 | | CONTAMINATION DATA | | |
| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | | OVA RESULTS (PPM) CARBON FILTER | | NOTES |
| | | | | | | | | W/O | WITH | NET |
| POST | | | | 100% | 1 | 0'-1'; Brown, Silty Sand with Humus (Organics). | | 0 | NR | 0 |
| HOLE | | | | 100% | 3 | 1'-3'; Light Brown to Orange, Fine to Medium, Silty, Sand. | | 0 | NR | 0 |
| | | | | 100% | 5 | 3'-6'; White, Fine to Medium Silty, Sand. | | 0 | NR | 0 |
| HSA | | | Water Table @ approx. 6' bls | 100% | 7 | 6'-13.5; Becoming Dark Brown, Fine to Medium to Coarse, Silt Sand. Trace of Clay. | | | | |
| HA | | | | 100% | 9 | Strong Petruleum Odor @ Water Table. | | | | |
| | | | | 100% | 11 | | | | | |
| | | | | 100% | 13 | | | | | |
| | | | | | | End of Boring @ 13.5' bls | | | | |
| | | | | | 15 | | | | | |

I Certify that this lthological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh P.G.
Florida Professional Geologist No. 0001181

Date: 04/15/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Site 1159 | | | | | | LOGGED BY: Patrick J. Brown | SHEET 1 OF 1 | | |
| Bronson Field | | | | | | Contractor: WES, Inc. | Dr. Method: HSA | | |
| Pensacola, Florida | | | | | | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile | | |
| | | | | | | Start Date: 04/03/96 | Completed: 04/03/96 | | |
| MONITOR WELL NO.: MW-3 | | | | | | Start Time: 0915 | Finish Time: 1000 | | |
| Delivery Order 0014 | | | | | | Contract No. N65114-95-D-2126 | CONTAMINATION DATA | | |
| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER | | NOTES |
| | | | | | | | W/O | WITH | NET |
| POST | | | | 100% | 1 | 0'-1'; Light Brown to Orange, Silty, Sandy Clay w/Humus (Organics). | 0 | NR | 0 |
| HOLE | | | | 100% | 3 | 1'-5'; White, Fine to Medium to Coarse, Silty, Sand. | 0 | NR | 0 |
| | | | | 100% | 5 | 5'-6.5'; Very White, Fine to Medium to Coarse, Sand. | 0 | NR | 0 |
| HSA | | | Water Table @ approx. 6' bls | 100% | 7 | 6.5'-13.5; Becoming Dark Brown, Fine to Medium to Coarse, Silt Sand. Trace of Clay | | | |
| HA | | | | 100% | 9 | | | | |
| | | | | 100% | 11 | | | | |
| | | | | 100% | 13 | | | | |
| | | | | | | End of Boring @ 13.5' bls | | | |
| | | | | | 15 | | | | |

I Certify that this lthological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date: 04/15/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

C-4

| | | | |
|---|---|---|---|
| Site 1159 | LOGGED BY: Patrick J. Brown | SHEET 1 OF 1 | |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA | |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile | |
| | Start Date: 04/03/96 | Completed: 04/03/96 | |
| MONITOR WELL NO.: MW-4 | Start Time: 1000 | Finish Time: 1045 | |
| Delivery Order 0014 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA | |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA HA | | | | 100% | 1 | 0'-1'; Light Brown to Orange, Silty, Sandy Clay w/Humus (Organics). | 0 | NR | 0 |
| | | | | 100% | 3 | 1'-5'; Brown, Fine to Medium to Coarse, Silty, Sand. | 0 | NR | 0 |
| | | | | 100% | 5 | 5'-6.5'; Grey, Mottled, Red/Brn, Fine to Medium to Coarse, Silty Sand. | 4 | NR | 4 |
| | | | Water Table @ approx. 6' bls | | | | | | |
| | | | | 100% | 7 | 6.5'-13.5; Becoming Dark Brown, Fine to Medium to Coarse, Silt Sand. Trace of Clay. | | | |
| | | | | 100% | 9 | | | | |
| | | | | 100% | 11 | | | | |
| | | | | 100% | 13 | | | | |
| | | | | | | End of Boring @ 13.5' bls | | | |
| | | | | | 15 | | | | |

I Certify that this lthological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh P.G.
Florida Professional Geologist No. 0001181

Date: 04/15/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

C-5

| | | |
|---|---|---|
| Site 1159 | LOGGED BY: Patrick J. Brown | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 04/03/96 | Completed: 04/03/96 |
| MONITOR WELL NO.: MW-5 | Start Time: 1045 | Finish Time: 1130 |
| Delivery Order 0014 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE | | | | 100% | 1 | 0'-1'; Red/Orange, Silty, Sandy Clay w/Humus (Organics). | 0 | NR | 0 | |
| | | | | 100% | 3 | 1'-5'; Brown, Fine to Medium to Coarse, Silty, Sand. | 0 | NR | 0 | |
| | | | | 100% | 5 | 5'-6.5'; Grey, Mottled, Red/Brn, Fine to Medium to Coarse, Silty Sand. | 0 | NR | 0 | |
| HSA | | | Water Table @ approx. 6' bls | | | | | | | |
| | | | | 100% | 7 | 6.5'-13.5; Becoming Dark Brown, Fine to Medium to Coarse, Silt Sand. Trace of Clay. | | | | |
| HA | | | | 100% | 9 | | | | | |
| | | | | 100% | 11 | | | | | |
| | | | | 100% | 13 | | | | | |
| | | | | | | End of Boring @ 13.5' bls | | | | |
| | | | | | 15 | | | | | |

I Certify that this lthological log, including geological and hydrogeologic interpretations, has been prepared under my direct supervision and meets the minimum technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 04/15/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

C-6

| | | | |
|---|---|---|---|
| Site 1159 | LOGGED BY: Patrick J. Brown | SHEET 1 OF 1 | |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA | |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile | |
| | Start Date: 04/03/96 | Completed: 04/03/96 | |
| MONITOR WELL NO.: MW-6 | Start Time: 1130 | Finish Time: 1215 | |
| Delivery Order 0014 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA | |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA HA | | | | 100% | 1 | 0'-1'; Red/Orange, Silty, Sandy Clay w/Humus (Organics). | 0 | NR | 0 |
| | | | | 100% | 3 | 1'-5'; Brown, Fine to Medium to Coarse, Silty, Sand. | 0 | NR | 0 |
| | | | | 100% | 5 | 5'-6.5'; Grey, Mottled, Red/Brn, Fine to Medium to Coarse, Silty Sand. | 1.5 | NR | 1.5 |
| | | | Water Table @ approx. 6' bls | | | | | | |
| | | | | 100% | 7 | 6.5'-13.5; Becoming Dark Brown to Charcoal Grey, Fine to Medium to Coarse, Silty Sand. Trace of Clay. | | | |
| | | | | 100% | 9 | | | | |
| | | | | 100% | 11 | | | | |
| | | | | 100% | 13 | | | | |
| | | | | | | End of Boring @ 13.5' bls | | | |
| | | | | | 15 | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 04/15/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

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|---|---|---|
| Site 1159 | LOGGED BY: Lisa M. Greer | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 05/22/96 | Completed: 05/22/96 |
| MONITOR WELL NO.: MW-7 | Start Time: 1230 | Finish Time: 1300 |
| Delivery Order 0020 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE | | | | 100% | 1 | | 0 | NR | 0 |
| | | | | | | 0-4'; Reddish Fine to Medium Grained, Sand/Clay Mixture | | | |
| | | | | 100% | 3 | | | | |
| | | | | | | | 0 | NR | 0 |
| | | | | | 5 | | | | |
| HOLLOW STEM AUGER | | | | | | 4'-10'; Light Brown Medium Grained Sand; Trace of Clay; Increasingly Lighter w/ Depth Strong Petroleum odor @ WT. | 0 | NR | 0 |
| | | | Water Table @ Approx. 7' BLS | | | | | | |
| | | | | 100% | 9 | | | | |
| | | | | 100% | 11 | 10'-14'; Light Grey Fine Grained Sand. | | | |
| | | | | 100% | 13 | | | | |
| | | | | | | End of Boring @ 14 BLS | | | |
| | | | | | 15 | | | | |

I Certify that this lthological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date: 05/28/96

MICHAEL J. WALSH PROFESSIONAL LICENSE No. PG0001181 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

| | | |
|---|---|---|
| Site 1159 | LOGGED BY: Lisa M. Greer | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 05/22/96 | Completed: 05/22/96 |
| MONITOR WELL NO.: MW-8 | Start Time: 1300 | Finish Time: 1330 |
| Delivery Order 0020 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE | | | | 100% | 1 | | 0 | NR | 0 |
| | | | | | | 0-4'; Reddish Fine to Medium Grained, Sand/Clay Mixture | | | |
| | | | | 100% | 3 | | | | |
| | | | | | | | 0 | NR | 0 |
| | | | | | 5 | | | | |
| HOLLOW STEM AUGER | | | | | | 4'-10'; Light Brown Medium Grained Sand; Trace of Clay; Increasingly Lighter w/ Depth Trace Petroleum odor @ WT. | 0 | NR | 0 |
| | | | Water Table @ Approx. 7' BLS | | | | | | |
| | | | | 100% | 9 | | | | |
| | | | | 100% | 11 | 10'-14'; Light Grey Fine Grained Sand. | | | |
| | | | | 100% | 13 | | | | |
| | | | | | | End of Boring @ 14' BLS | | | |
| | | | | | 15 | | | | |

I Certify that this lthological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.

Florida Professional Geologist No. 0001181

Date 05/28/96

MICHAEL J. WALSH PROFESSIONAL LICENSE No. PG0001181 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

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|---|---|---|
| Site 1159 | LOGGED BY: Lisa M. Greer | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 05/22/96 | Completed: 05/22/96 |
| MONITOR WELL NO.: MW-9 | Start Time: 1330 | Finish Time: 1400 |
| Delivery Order 0020 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE | | | | 100% | 1 | | 0 | NR | 0 |
| | | | | | | 0-4'; Reddish Fine to Medium Grained, Sand/Clay Mixture | | | |
| | | | | 100% | 3 | | | | |
| | | | | | | | 0 | NR | 0 |
| | | | | | 5 | | | | |
| HOLLOW STEM AUGER | | | | | | 4'-10'; Light Brown Medium Grained Sand; Trace of Clay; Increasingly Lighter w/ Depth. | 0 | NR | 0 |
| | | | Water Table @ Approx. 7' BLS | | | | | | |
| | | | | 100% | 9 | | | | |
| | | | | 100% | 11 | 10'-14'; Light Grey Fine Grained Sand. | | | |
| | | | | 100% | 13 | | | | |
| | | | | | | End of Boring @ 14 ' BLS | | | |
| | | | | | 15 | | | | |

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Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date: 05/28/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

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|---|---|---|
| Site 1159 | LOGGED BY: Lisa M. Greer | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 05/22/96 | Completed: 05/22/96 |
| MONITOR WELL NO.: MW-10 | Start Time: 1400 | Finish Time: 1430 |
| Delivery Order 0020 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HOLLOW STEM AUGER | | | | 100% | 1 | | 0 | NR | 0 |
| | | | | | | 0-4'; Lt. Brown-Red Fine to Medium Grained, Sand/Clay Mixture | | | |
| | | | | 100% | 3 | | | | |
| | | | | | | | 0 | NR | 0 |
| | | | | | | 4'-5'; Dark Grey Medium Grained Sand Lens. | | | |
| | | | | | 5 | | | | |
| | | | | | | 5'-10'; Light Brown Medium Grained Sand; Trace of Clay; Increasingly Lighter w/ Depth. | 0 | NR | 0 |
| | | | Water Table @ Approx. 7' BLS | | | | | | |
| | | | | 100% | 9 | | | | |
| | | | | 100% | 11 | 10'-14'; Light Grey Fine Grained Sand. | | | |
| | | | | 100% | 13 | | | | |
| | | | | | | End of Boring @ 14' BLS | | | |
| | | | | | 15 | | | | |

I Certify that this lthological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 08/28/96

MICHAEL J. WALSH
PROFESSIONAL GEOLOGIST
No. PG0001181
STATE OF FLORIDA

| | | |
|---|---|---|
| Site 1159 | LOGGED BY: Lisa M. Greer | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 05/22/96 | Completed: 05/22/96 |
| MONITOR WELL NO.: MW-11 | Start Time: 1430 | Finish Time: 1500 |
| Delivery Order 0020 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HOLLOW STEM AUGER | | | | 100% | 1 | | 0 | NR | 0 |
| | | | | | | 0-4.5'; Lt. Brown-Brown Fine t Medium Grained, Sand/Clay Mixture | | | |
| | | | | 100% | 3 | | | | |
| | | | | | | | 0 | NR | 0 |
| | | | | | 5 | 4'.5-5.5'; Dark Grey Medium Grained Sand. | | | |
| | | | | | | 5.5'-10'; Light Brown Medium Grained Sand; Trace of Clay; Increasingly Lighter w/ Depth. | 0 | NR | 0 |
| | | | Water Table @ Approx. 7' BLS | | | | | | |
| | | | | 100% | 9 | | | | |
| | | | | 100% | 11 | 10'-14'; Light Grey Fine Grained Sand. | | | |
| | | | | 100% | 13 | | | | |
| | | | | | | End of Boring @ 14' BLS | | | |
| | | | | | 15 | | | | |

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Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 05/28/96

MICHAEL J. WALSH
PROFESSIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

C-12

| | | |
|---|---|---|
| Site 1159 | LOGGED BY: Lisa M. Greer | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 05/22/96 | Completed: 05/22/96 |
| MONITOR WELL NO.: MW-12 | Start Time: 1500 | Finish Time: 1530 |
| Delivery Order 0020 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE | | | | 100% | 1 | | 0 | NR | 0 |
| | | | | | | 0-5'; Reddish Fine to Medium Grained Sand/Clay Mixture | | | |
| | | | | 100% | 3 | | | | |
| | | | | | | | 0 | NR | 0 |
| | | | | | | 5'-6'; Dark Grey Medium Grained Sand. | | | |
| | | | | | 5 | | | | |
| | | | | | | 6'-10'; Light Brown Medium Grained Sand; Trace of Clay; Increasingly Lighter w/ Depth. | 0 | NR | 0 |
| HOLLOW STEM AUGER | | | Water Table @ Approx. 7' BLS | | | | | | |
| | | | | 100% | 9 | | | | |
| | | | | 100% | 11 | 10'-14'; Light Grey Fine Grained Sand. | | | |
| | | | | 100% | 13 | | | | |
| | | | | | | End of Boring @ 14' BLS | | | |
| | | | | | 15 | | | | |

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Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 05/28/96

MICHAEL J. WALSH
PROFESSIONAL GEOLOGIST
No. 0001181
STATE OF FLORIDA

| | | |
|---|---|---|
| Site 1159 | LOGGED BY: Lisa M. Greer | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 05/22/96 | Completed: 05/22/96 |
| MONITOR WELL NO.: MW-13 | Start Time: 1530 | Finish Time: 1600 |
| Delivery Order 0020 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HOLLOW STEM AUGER | | | | 100% | 1 | | 0 | NR | 0 |
| | | | | | | 0-5'; Reddish Fine to Medium Grained Sand/Clay Mixture | | | |
| | | | | 100% | 3 | | | | |
| | | | | | | | 0 | NR | 0 |
| | | | | | 5 | 5'-6'; Dark Grey Medium Grained Sand. | | | |
| | | | | | | 6'-10'; Light Brown/Grey Medium Grained Sand; Trace of Clay; Increasingly Lighter w/ Depth. | 0 | NR | 0 |
| | | | Water Table @ Approx. 7' BLS | | | | | | |
| | | | | 100% | 9 | | | | |
| | | | | 100% | 11 | 10'-14'; Light Grey Fine Grained Sand. | | | |
| | | | | 100% | 13 | | | | |
| | | | | | | End of Boring @ 14' BLS | | | |
| | | | | | 15 | | | | |

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Reviewed by: Michael J. Walsh P.G.
Florida Professional Geologist No. 0001181

Date: 05/28/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

| | | |
|---|---|---|
| Site 1159 | LOGGED BY: Lisa M. Greer | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 05/23/96 | Completed: 05/23/96 |
| MONITOR WELL NO.: MW-14 | Start Time: 915 | Finish Time: 945 |
| Delivery Order 0020 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HOLLOW STEM AUGER | | | | 100% | 1 | | 0 | NR | 0 |
| | | | | | | 0-4'; Reddish Fine to Medium Grained Sand/Clay Mixture | | | |
| | | | | 100% | 3 | | | | |
| | | | | | | | 0 | NR | 0 |
| | | | | | | 4'-6'; Light Brown Medium Grained Sand w/ organics | | | |
| | | | | | 5 | | | | |
| | | | | | | 6'-10'; Light Brown Medium Grained Sand; Trace of Clay; Increasingly Lighter w/ Depth. Strong Petroleum Odor @ WT | 0 | NR | 0 |
| | | | Water Table @ Approx. 7' BLS | | | | | | |
| | | | | 100% | 9 | | | | |
| | | | | 100% | 11 | 10'-14'; Light Grey Fine Grained Sand. | | | |
| | | | | 100% | 13 | | | | |
| | | | | | | End of Boring @ 14' BLS | | | |
| | | | | | 15 | | | | |

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Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 05/28/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

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|---|---|---|
| Site 1159 | LOGGED BY: Lisa M. Greer | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 05/23/96 | Completed: 05/23/96 |
| MONITOR WELL NO.: MW-15 | Start Time: 945 | Finish Time: 1015 |
| Delivery Order 0020 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HOLLOW STEM AUGER | | | | 100% | 1 | | 0 | NR | 0 |
| | | | | | | 0-4'; Reddish Fine to Medium Grained Sand/Clay Mixture | | | |
| | | | | 100% | 3 | | | | |
| | | | | | | | 0 | NR | 0 |
| | | | | | | 4'-6'; Light Brown Medium Grained Sand w/ organics | | | |
| | | | | | 5 | | | | |
| | | | | | | 6'-10'; Light Brown Medium Grained Sand; Trace of Clay; Increasingly Lighter w/ Depth. Strong Petroleum Odor @ WT | 0 | NR | 0 |
| | | | Water Table @ Approx. 7' BLS | | | | | | |
| | | | | 100% | 9 | | | | |
| | | | | 100% | 11 | 10'-14'; Light Grey Fine Grained Sand. | | | |
| | | | | 100% | 13 | | | | |
| | | | | | | End of Boring @ 14' BLS | | | |
| | | | | | 15 | | | | |

I Certify that this lthological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 05/29/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

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|---|---|---|
| Site 1159 | LOGGED BY: Lisa M. Greer | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 05/23/96 | Completed: 05/23/96 |
| MONITOR WELL NO.: MW-16 | Start Time: 1330 | Finish Time: 1400 |
| Delivery Order 0021 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE | | | | 100% | 1 | | 0 | NR | 0 |
| | | | | | | 0-4'; Reddish Fine to Medium Grained Sand/Clay Mixture | | | |
| | | | | 100% | 3 | | | | |
| | | | | | | | 0 | NR | 0 |
| | | | | | 5 | | | | |
| HOLLOW STEM AUGER | | | | | | 4'-10'; Lt. Brown/Grey Medium Grained Sand; Trace of Clay; Increasingly Lighter w/ Depth. Trace Petroleum Odor @ WT | 0 | NR | 0 |
| | | | Water Table @ Approx. 7' BLS | | | | | | |
| | | | | 100% | 9 | | | | |
| | | | | 100% | 11 | 10'-14'; Light Grey Fine Grained Sand. | | | |
| | | | | 100% | 13 | | | | |
| | | | | | | End of Boring @ 14' BLS | | | |
| | | | | | 15 | | | | |

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Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 05/29/96

MICHAEL J. WALSH
PROFESSIONAL LICENSE
NO. PG0001181
STATE OF
FLORIDA
PROFESSIONAL GEOLOGIST

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|---|---|---|---|---|---|---|---|---|---|---|
| Site 1159 | | | | | | LOGGED BY: Lisa M. Greer | | SHEET 1 OF 1 | | |
| Bronson Field | | | | | | Contractor: WES, Inc. | | Dr. Method: HSA | | |
| Pensacola, Florida | | | | | | Driller: South Florida Testing & Drilling | | Dr. Rig: Mobile | | |
| | | | | | | Start Date: 05/23/96 | | Completed: 05/23/96 | | |
| MONITOR WELL NO.: MW-17 | | | | | | Start Time: 1400 | | Finish Time: 1430 | | |
| Delivery Order 0021 | | | | | | Contract No. N65114-95-D-2126 | | CONTAMINATION DATA | | |
| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | | OVA RESULTS (PPM) CARBON FILTER | | NOTES |
| | | | | | | | | W/O | WITH | NET |
| POST | | | | 100% | 1 | | | 0 | NR | 0 |
| | | | | | | 0-4'; Reddish Fine to Medium Grained Sand/Clay Mixture | | | | |
| HOLE | | | | 100% | 3 | | | | | |
| | | | | | | | | 0 | NR | 0 |
| | | | | | 5 | | | | | |
| HOLLOW STEM AUGER | | | Water Table @ Approx. 7' BLS | | | 4'-10'; Light Brown Medium Grained Sand; Trace of Clay; Increasingly Lighter w/ Depth. | | 0 | NR | 0 |
| | | | | 100% | 9 | | | | | |
| | | | | 100% | 11 | 10'-14'; Light Grey Fine Grained Sand. | | | | |
| | | | | 100% | 13 | | | | | |
| | | | | | | End of Boring @ 14' BLS | | | | |
| | | | | | 15 | | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 05/29/96

MICHAEL J. WALSH
PROFESSIONAL GEOLOGIST
No. 0001181
STATE OF FLORIDA

| | | |
|---|---|---|
| Site 1159 | LOGGED BY: Lisa M. Greer | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 05/23/96 | Completed: 05/23/96 |
| MONITOR WELL NO.: MW-18 | Start Time: 1420 | Finish Time: 1445 |
| Delivery Order 0021 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE | | | | 100% | 1 | | 0 | NR | 0 |
| | | | | | | 0-4'; Reddish Fine to Medium Grained Sand/Clay Mixture | | | |
| | | | | 100% | 3 | | | | |
| | | | | | | | 0 | NR | 0 |
| | | | | | 5 | | | | |
| HOLLOW STEM AUGER | | | | | | 4'-10'; Light Brown Medium Grained Sand; Trace of Clay; Increasingly Lighter w/ Depth. Trace Petroleum Odor @ WT. | 0 | NR | 0 |
| | | | Water Table @ Approx. 7' BLS | | | | | | |
| | | | | 100% | 9 | | | | |
| | | | | 100% | 11 | 10'-14'; Light Grey Fine Grained Sand. | | | |
| | | | | 100% | 13 | | | | |
| | | | | | | End of Boring @ 14' BLS | | | |
| | | | | | 15 | | | | |

I Certify that this lthological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh P.G.
Florida Professional Geologist No. 0001181

Date 05/29/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

| | | | |
|---|---|---|---|
| Site 1159 | LOGGED BY: Stoney L. Pope | SHEET 1 OF 1 | |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: | HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: | Mobile |
| | Start Date: 07/30/96 | Completed: | 07/30/96 |
| MONITOR WELL NO.: MW-19 | Start Time: 1157 | Finish Time: | 1215 |
| Delivery Order 0026 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA | |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA | | | | 100% | 1 | 0'-1'; Tan/Red, Silty Sand w/Humus (Organics). | 0 | NR | 0 | |
| | | | | | | 2'-4'; Tan/Red, Silty, Sandy Clay. | | | | |
| | | | | 100% | 3 | | | | | |
| | | | | | | 4'-7'; Tan/Red Medium to Coarse, Silty Sand. | 2 | 0 | 2 | |
| | | | | 100% | 5 | | | | | |
| | | | | 100% | 7 | 7'-14; Dark Brown to Gray Medium to Coarse, Silty Sand. | 5 | 0 | 5 | |
| | | | Water Table @ approx. 8' bls | | | | | | | |
| HA | | | | 100% | 9 | Hydrocarbon Odor present on drill cuttings from below the Water Table. | | | | |
| | | | | 100% | 11 | | | | | |
| | | | | 100% | 13 | | | | | |
| | | | | | | End of Boring @ 14' bls | | | | |
| | | | | | 15 | | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 08/19/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

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|---|---|---|
| Site 1159 | LOGGED BY: Stoney L. Pope | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 07/30/96 | Completed: 07/30/96 |
| MONITOR WELL NO.: MW-20 | Start Time: 1223 | Finish Time: 1240 |
| Delivery Order 0026 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA | | | | 100% | 1 | 0'-2'; Tan/Red, Course Silty Sand w/Humus (Organics). | 0 | NR | 0 | |
| | | | | | | 2'-4'; Tan/Red, Silty, Sandy Clay. | | | | |
| | | | | 100% | 3 | | | | | |
| | | | | | | 4'-5'; Tan Medium to Course Silty Sand. | 0 | NR | 0 | |
| | | | | 100% | 5 | 5'-7'; Lt. Tan/White Course Silty Sand. | | | | |
| | | | | 100% | 7 | 7'-14; Dark Brown to Gray Medium to Coarse, Silty Sand. | 0 | NR | 0 | |
| | | | Water Table @ approx. 8' bls | | | | | | | |
| | | | | 100% | 9 | Hydrocarbon Odor present on drill cuttings from below the Water Table. | | | | |
| | | | | 100% | 11 | | | | | |
| | | | | 100% | 13 | | | | | |
| | | | | | | End of Boring @ 14' bls | | | | |
| | | | | | 15 | | | | | |

I Certify that this lthological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimum technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 08/19/96

MICHAEL J. WALSH PROVISIONAL LICENSE No. PG0001181 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

| | | | |
|---|---|---|---|
| Site 1159 | LOGGED BY: Stoney L. Pope | SHEET 1 OF 1 | |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA | |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile | |
| | Start Date: 07/30/96 | Completed: 07/30/96 | |
| MONITOR WELL NO.: MW-21 | Start Time: 1250 | Finish Time: 1315 | |
| Delivery Order 0026 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA | |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA | | | | 100% | 1 | 0'-2'; Red/Brown, Silty, Sandy Clay w/Humus (Organics). 2'-4'; Tan Medium Silty Sand. | 0 | NR | 0 |
| | | | | 100% | 3 | | | | |
| | | | | | | 4'-5'; Tan/Red Medium to Course Silty Sand. | 0 | NR | 0 |
| | | | | 100% | 5 | 5'-7'; Tan Course Silty Sand. | | | |
| | | | | 100% | 7 | 7'-14; Tan/Gray Medium to Coarse, Silty Sand. | 0 | NR | 0 |
| | | | Water Table @ approx. 8' bls | | | | | | |
| HA | | | | 100% | 9 | Hydrocarbon Odor present on drill cuttings from below the Water Table. | | | |
| | | | | 100% | 11 | | | | |
| | | | | 100% | 13 | | | | |
| | | | | | | End of Boring @ 14' bls | | | |
| | | | | | 15 | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date: 08/19/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

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|---|---|---|---|
| Site 1159 | LOGGED BY: Stoney L. Pope | SHEET 1 OF 1 | |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: | HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: | Mobile |
| | Start Date: 07/30/96 | Completed: | 07/30/96 |
| MONITOR WELL NO.: MW-22 | Start Time: 1430 | Finish Time: | 1455 |
| Delivery Order 0026 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA | |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA | | | | 100% | 1 | 0'-1'; Brown/Red, Silty Sand. | 0 | NR | 0 | |
| | | | | | | 1'-2'; Red/Tan, Medium Silty Sand. | | | | |
| | | | | | | 2'-8'; Tan Medium to Course Silty Sand. | | | | |
| | | | | 100% | 3 | | | | | |
| | | | | | | | 0 | NR | 0 | |
| | | | | 100% | 5 | | | | | |
| | | | | 100% | 7 | | 0 | NR | 0 | |
| | | | Water Table @ approx. 8' bls | | | 8'-14'; Tan/White Medium to Coarse, Silty Sand. | | | | |
| HA | | | | 100% | 9 | Hydrocarbon Odor present on drill cuttings from below the Water Table. | | | | |
| | | | | 100% | 11 | | | | | |
| | | | | 100% | 13 | | | | | |
| | | | | | | End of Boring @ 14' bls | | | | |
| | | | | | 15 | | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date: 08/19/96

STATE OF FLORIDA PROFESSIONAL GEOLOGIST

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|---|---|---|---|---|---|---|---|---|---|---|
| Site 1159 | | | | | | LOGGED BY: Stoney L. Pope | | SHEET 1 OF 1 | | |
| Bronson Field | | | | | | Contractor: WES, Inc. | | Dr. Method: HSA | | |
| Pensacola, Florida | | | | | | Driller: South Florida Testing & Drilling | | Dr. Rig: Mobile | | |
| | | | | | | Start Date: 07/30/96 | | Completed: 07/30/96 | | |
| MONITOR WELL NO.: MW-23 | | | | | | Start Time: 1505 | | Finish Time: 1525 | | |
| Delivery Order 0026 | | | | | | Contract No. N65114-95-D-2126 | | CONTAMINATION DATA | | |
| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | | OVA RESULTS (PPM) CARBON FILTER | | NOTES |
| | | | | | | | | W/O | WITH | NET |
| POST | | | | 100% | 1 | 0'-1'; Red Fine Silty Sand. | | 0 | NR | 0 |
| | | | | | | 1'-2'; Brown/Gray, Fine Silty Sand. | | | | |
| | | | | | | 2'-8'; Lt. Tan/Yellow Medium Silty Sand. | | | | |
| HOLE | | | | 100% | 3 | | | | | |
| | | | | | | | | 0 | NR | 0 |
| | | | | 100% | 5 | | | | | |
| HSA | | | | | | | | | | |
| | | | | 100% | 7 | | | 0 | NR | 0 |
| | | | Water Table @ approx. 8' bls | | | 8'-14'; Tan/White Medium to Coarse, Silty Sand. | | | | |
| HA | | | | 100% | 9 | Hydrocarbon Odor present on drill cuttings from below the Water Table. | | | | |
| | | | | 100% | 11 | | | | | |
| | | | | 100% | 13 | | | | | |
| | | | | | | End of Boring @ 14' bls | | | | |
| | | | | | 15 | | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimum technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh P.G.
Florida Professional Geologist No. 0001181

Date 08/19/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

| | | |
|---|---|---|
| Site 1159 | LOGGED BY: Stoney L. Pope | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 07/30/96 | Completed: 07/30/96 |
| MONITOR WELL NO.: MW-24 | Start Time: 1540 | Finish Time: 1600 |
| Delivery Order 0026 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA | | | | 100% | 1 | 0'-1'; Brown/Red Silty Sand. | 0 | NR | 0 | |
| | | | | | | 1'-2'; Red/Lt.Tan Silty Sand. | | | | |
| | | | | | | 2'-4'; Tan Medium Silty Sand. | | | | |
| | | | | 100% | 3 | | | | | |
| | | | | | | 4'-5'; Medium Brown Silty San | 0 | NR | 0 | |
| | | | | 100% | 5 | 5'-7'; Lt. Brown Medium Silty Sand. | | | | |
| | | | | 100% | 7 | 7'-8'; Tan/Yellow Medium Silty Sand. | 0 | NR | 0 | |
| | | | Water Table @ approx. 8' bls | | | 8'-10'; Lt. Tan/White Medium t Coarse, Silty Sand. | | | | |
| | | | | 100% | 9 | | | | | |
| | | | | | | 10'-14'; Tan/Gray Medium to Coarse, Silty Sand. | | | | |
| | | | | 100% | 11 | Hydrocarbon Odor present on drill cuttings from below the Water Table. | | | | |
| | | | | 100% | 13 | | | | | |
| | | | | | | End of Boring @ 14' bls | | | | |
| | | | | | 15 | | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date: 08/19/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

| | | |
|---|---|---|
| Site 1159 | LOGGED BY: Stoney L. Pope | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 07/31/96 | Completed: 07/31/96 |
| MONITOR WELL NO.: MW-25 | Start Time: 945 | Finish Time: 1010 |
| Delivery Order 0026 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA | | | | 100% | 1 | 0'-2'; Red/Brown, Fine Silty Sand. | 0 | NR | 0 | |
| | | | | | | 2'-5'; Tan/Golden Brown Medium Silty Sand. | | | | |
| | | | | 100% | 3 | | | | | |
| | | | | | | | 0 | NR | 0 | |
| | | | | 100% | 5 | 5'-8'; Tan Medium Silty Sand. | | | | |
| | | | | 100% | 7 | | 0 | NR | 0 | |
| | | | Water Table @ approx. 8' bls | | | 8'-10'; Tan/Gray Medium to Coarse, Silty Sand. | | | | |
| | | | | 100% | 9 | | | | | |
| | | | | | | 10'-14'; Gray/White Medium to Coarse, Silty Sand. | | | | |
| | | | | 100% | 11 | Hydrocarbon Odor present on drill cuttings from below the Water Table. | | | | |
| | | | | 100% | 13 | | | | | |
| | | | | | | End of Boring @ 14' bls | | | | |
| | | | | | 15 | | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date: 08/19/96

| | | |
|---|---|---|
| Site 1159 | LOGGED BY: Stoney L. Pope | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 07/31/96 | Completed: 07/31/96 |
| MONITOR WELL NO.: MW-26 | Start Time: 1100 | Finish Time: 1125 |
| Delivery Order 0026 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA | | | | 100% | 1 | 0'-1'; Red/Brown, Silty Sand. 1'-2'; Brown/Tan Silty Sand. 2'-8'; Tan Medium to Course Silty Sand. | 0 | NR | 0 | |
| | | | | 100% | 3 | | 0 | NR | 0 | |
| | | | | 100% | 5 | | | | | |
| | | | | 100% | 7 | | 0 | NR | 0 | |
| | | | Water Table @ approx. 8' bls | | | 8'-14'; Tan/White Medium to Coarse, Silty Sand. | | | | |
| HA | | | | 100% | 9 | | | | | |
| | | | | 100% | 11 | Hydrocarbon Odor present on drill cuttings from below the Water Table. | | | | |
| | | | | 100% | 13 | | | | | |
| | | | | | | End of Boring @ 14' bls | | | | |
| | | | | | 15 | | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh P.G.
Florida Professional Geologist No. 0001181

Date: 08/19/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

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|---|---|---|
| Site 1159 | LOGGED BY: Stoney L. Pope | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 07/31/96 | Completed: 07/31/96 |
| MONITOR WELL NO.: MW-27 | Start Time: 1215 | Finish Time: 1230 |
| Delivery Order 0026 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA | | | | 100% | 1 | 0'-2'; Brown/Tan, Fine Silty Sand. | 0 | NR | 0 |
| | | | | | | 2'-12'; Tan/Golden Brown Medium to Course Silty Sand. | | | |
| | | | | 100% | 3 | | | | |
| | | | | | | | 0 | NR | 0 |
| | | | | 100% | 5 | | | | |
| | | | | | | | | | |
| | | | | 100% | 7 | | 0 | NR | 0 |
| | | | Water Table @ approx. 8' bls | | | | | | |
| HA | | | | 100% | 9 | Hydrocarbon Odor present on drill cuttings from below the Water Table. | | | |
| | | | | 100% | 11 | | | | |
| | | | | | | 12'-14'; Tan/Lt. Gray Medium to Course Silty Sand. | | | |
| | | | | 100% | 13 | | | | |
| | | | | | | End of Boring @ 14' bls | | | |
| | | | | | 15 | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date: 08/19/96

PROFESSIONAL GEOLOGIST No. PG0001181 STATE OF FLORIDA

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|---|---|---|---|---|---|---|---|---|---|---|
| Site 1159 | | | | | | LOGGED BY: Stoney L. Pope | | SHEET 1 OF 1 | | |
| Bronson Field | | | | | | Contractor: WES, Inc. | | Dr. Method: HSA | | |
| Pensacola, Florida | | | | | | Driller: South Florida Testing & Drilling | | Dr. Rig: Mobile | | |
| | | | | | | Start Date: 07/31/96 | | Completed: 07/31/96 | | |
| MONITOR WELL NO.: MW-28 | | | | | | Start Time: 1240 | | Finish Time: 1300 | | |
| Delivery Order 0026 | | | | | | Contract No. N65114-95-D-2126 | | CONTAMINATION DATA | | |
| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | | OVA RESULTS (PPM) CARBON FILTER | | NOTES |
| | | | | | | | | W/O | WITH | NET |
| POST | | | | 100% | 1 | 0'-2'; Lt. Brown, Fine Silty San | | 0 | NR | 0 |
| | | | | | | 2'-4'; Lt. Brown/Tan Medium Silty Sand. | | | | |
| HOLE | | | | 100% | 3 | | | | | |
| | | | | | | 4'-12'; Tan Medium to Course Silty Sand. | | 0 | NR | 0 |
| | | | | 100% | 5 | | | | | |
| HSA | | | | | | | | | | |
| | | | | 100% | 7 | | | 0 | NR | 0 |
| | | | Water Table @ approx. 8' bls | | | | | | | |
| HA | | | | 100% | 9 | Hydrocarbon Odor present on drill cuttings from below the Water Table. | | | | |
| | | | | 100% | 11 | | | | | |
| | | | | | | 12'-14'; Tan/Lt. Gray Medium to Course Silty Sand. | | | | |
| | | | | 100% | 13 | | | | | |
| | | | | | | End of Boring @ 14' bls | | | | |
| | | | | | 15 | | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, PG
Florida Professional Geologist No. 0001181

Date: 08/19/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

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|---|---|---|---|---|---|---|---|---|---|---|
| Site 1159 | | | | | | LOGGED BY: Patrick J. Brown | | SHEET 1 OF 1 | | |
| Bronson Field | | | | | | Contractor: WES, Inc. | | Dr. Method: HSA | | |
| Pensacola, Florida | | | | | | Driller: South Florida Testing & Drilling | | Dr. Rig: Mobile | | |
| | | | | | | Start Date: 08/14/96 | | Completed: 08/14/96 | | |
| MONITOR WELL NO.: MW-29 | | | | | | Start Time: 1000 | | Finish Time: 1045 | | |
| Delivery Order 0026 | | | | | | Contract No. N65114-95-D-2126 | | CONTAMINATION DATA | | |
| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | | OVA RESULTS (PPM) CARBON FILTER | | NOTES |
| | | | | | | | | W/O | WITH | NET |
| POST | | | | 100% | 1 | 0'-1'; Red/Brown, Fine Silty Sand w/Humus (Organics). | | 0 | NR | 0 |
| | | | | | | 1'-3'; Brown Fine to Medium Silty Sand. | | | | |
| HOLE | | | | 100% | 3 | 3'-12'; Becoming Lt. Brown/ Gray Fine to Medium Silty Sand w/ Trace of Clay. | | 0 | NR | 0 |
| | | | | 100% | 5 | | | | | |
| HSA | | | | 100% | 7 | | | | | |
| | | | Water Table @ approx. 8' bls | | | | | | | |
| HA | | | | 100% | 9 | Hydrocarbon Odor present on drill cuttings from below the Water Table. | | | | |
| | | | | 100% | 11 | | | | | |
| | | | | 100% | 13 | | | | | |
| | | | | | | End of Boring @ 12' bls | | | | |
| | | | | | 15 | | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimum technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 08/19/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

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|---|---|---|---|---|---|---|---|---|---|---|
| Site 1159 | | | | | | LOGGED BY: Patrick J. Brown | | SHEET 1 OF 1 | | |
| Bronson Field | | | | | | Contractor: WES, Inc. | | Dr. Method: HSA | | |
| Pensacola, Florida | | | | | | Driller: South Florida Testing & Drilling | | Dr. Rig: Mobile | | |
| | | | | | | Start Date: 08/14/96 | | Completed: 08/14/96 | | |
| MONITOR WELL NO.: MW-30 | | | | | | Start Time: 1100 | | Finish Time: 1145 | | |
| Delivery Order 0026 | | | | | | Contract No. N65114-95-D-2126 | | CONTAMINATION DATA | | |
| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | | OVA RESULTS (PPM) CARBON FILTER | | NOTES |
| | | | | | | | | W/O | WITH | NET |
| POST | | | | 100% | 1 | 0'-1'; Red/Brown, Fine Silty Sand w/Humus (Organics). | | 0 | NR | 0 |
| | | | | | | 1'-3'; Brown Fine to Medium Silty Sand. | | | | |
| HOLE | | | | 100% | 3 | 3'-12'; Becoming Lt. Brown/ Gray Fine to Medium Silty Sand w/ Trace of Clay. | | 0 | NR | 0 |
| | | | | 100% | 5 | | | | | |
| HSA | | | | 100% | 7 | | | | | |
| | | | Water Table @ approx. 8' bls | | | | | | | |
| HA | | | | 100% | 9 | Hydrocarbon Odor present on drill cuttings from below the Water Table. | | | | |
| | | | | 100% | 11 | | | | | |
| | | | | 100% | 13 | | | | | |
| | | | | | | End of Boring @ 12' bls | | | | |
| | | | | | 15 | | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Welsh, P.G.
Florida Professional Geologist No. 0001181

Date: 08/19/96

MICHAEL J. WELSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

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|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 09/26/96 | Completed: 09/26/96 |
| MONITOR WELL NO.: MW-31 | Start Time: 900 | Finish Time: 945 |
| Delivery Order 0030 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST | | | | | | 0'-2' Red/Brown, Silty, Sand | | | |
| | | | | 100% | 2 | Organic, Humus | 0 | NR | 0 |
| | | | | | | 2'-7'; Light Brown to Tan, Medium to Coarse, Silty | | | |
| HOLE | | | | 100% | 6 | Sand. | | | |
| | | | | | | | 0 | NR | 0 |
| | | | Water Table @ Approx 8' BLS | | | | | | |
| | | | | 100% | 10 | 7'-15.5' Increasingly Lighter Tan to White, Coarse, Silty | | | |
| HSA | | | | | | Sand | | | |
| | | | | 100% | 14 | | 0 | NR | 0 |
| | | | | | | End of Boring @ 15.5' bls | | | |
| HA | | | | | 18 | | | | |
| | | | | | 22 | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

MICHAEL J. WALSH PROVISIONAL LICENSE No. PG0001181 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 10/08/96

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|---|---|---|---|---|---|---|---|---|---|---|
| Site 1159 | | | | | | LOGGED BY: Pat Brown | | SHEET 1 OF 1 | | |
| Bronson Field | | | | | | Contractor: WES, Inc. | | Dr. Method: HSA | | |
| Pensacola, Florida | | | | | | Driller: South Florida Testing & Drilling | | Dr. Rig: Mobile | | |
| | | | | | | Start Date: 09/26/96 | | Completed: 09/26/96 | | |
| MONITOR WELL NO.: MW-32 | | | | | | Start Time: 1000 | | Finish Time: 1045 | | |
| Delivery Order 0030 | | | | | | Contract No. N65114-95-D-2126 | | CONTAMINATION DATA | | |
| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | | OVA RESULTS (PPM) CARBON FILTER | | NOTES |
| P | | | | | | 0'-2' Red/Brown, Silty, Sand | | W/O | WITH | NET |
| O | | | | 100% | 2 | Organic, Humus | | 0 | NR | 0 |
| S | | | | | | | | | | |
| T | | | | | | 2'-4'; Light Brown to Tan, Medium to Coarse, Silty | | | | |
| H | | | | 100% | 6 | Sand. | | | | |
| O | | | | | | | | | | |
| L | | | | | | 4'-10'; Tan, Medium to | | 0 | NR | 0 |
| E | | | Water Table @ Approx 11' BLS | | | Coarse, Silty Sand | | | | |
| | | | | 100% | 10 | | | | | |
| | | | | | | 10'-18.5' Increasingly Lighter | | | | |
| H | | | | | | Tan to White, Coarse, Silty | | | | |
| S | | | | | | Sand | | | | |
| A | | | | 100% | 14 | | | 0 | NR | 0 |
| | | | | | | | | | | |
| H | | | | | | | | | | |
| A | | | | 100% | 18 | | | | | |
| | | | | | | End of Boring @ 18.5' bls | | | | |
| | | | | | | | | | | |
| | | | | 100% | 22 | | | | | |
| | | | | | | | | | | |
| | | | | 100% | | | | | | |
| | | | | | | | | | | |
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I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

MICHAEL J. WALSH PROFESSIONAL LICENSE No. PG0001181 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 10/08/96

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|---|---|---|---|---|---|---|---|---|---|---|
| Site 1159 | | | | | | LOGGED BY: Pat Brown | | SHEET 1 OF 1 | | |
| Bronson Field | | | | | | Contractor: WES, Inc. | | Dr. Method: HSA | | |
| Pensacola, Florida | | | | | | Driller: South Florida Testing & Drilling | | Dr. Rig: Mobile | | |
| | | | | | | Start Date: 09/26/96 | | Completed: 09/26/96 | | |
| MONITOR WELL NO.: MW-33 | | | | | | Start Time: 1100 | | Finish Time: 1145 | | |
| Delivery Order 0030 | | | | | | Contract No. N65114-95-D-2126 | | CONTAMINATION DATA | | |
| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | | OVA RESULTS (PPM) CARBON FILTER | | NOTES |
| | | | | | | | | W/O | WITH | NET |
| POST | | | | 100% | 0 | 0'-2'; Red/Brown, Silty Sand. Organics, Humus. | | 0 | NR | 0 |
| HOLE | | | | 100% | 5 | 2'-6'; Brown, Silty Sand. | | 0 | NR | 0 |
| | | | | 100% | 10 | 6'-12'; Light Brown, Medium to Coarse, Silty Sand. | | | | |
| HSA | | | | 100% | 15 | | | 0 | NR | 0 |
| | | | Water Table @ approx. 22' bls | | | 12'-21'; Tan, Coarse, Silty Sand. | | | | |
| HA | | | | 100% | 20 | | | | | |
| | | | | 100% | 25 | 21'-29.5'; increasingly Lighter Tan to White, Coarse, Silty Sand | | | | |
| | | | | | | End of Boring @ 29.5' bls | | | | |
| | | | | 100% | 30 | | | | | |

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Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 10/08/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

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|---|---|---|---|---|---|---|---|---|---|---|
| Site 1159 | | | | | | LOGGED BY: Pat Brown | | SHEET 1 OF 1 | | |
| Bronson Field | | | | | | Contractor: WES, Inc. | | Dr. Method: HSA | | |
| Pensacola, Florida | | | | | | Driller: South Florida Testing & Drilling | | Dr. Rig: Mobile | | |
| | | | | | | Start Date: 09/26/96 | | Completed: 09/26/96 | | |
| MONITOR WELL NO.: MW-34 | | | | | | Start Time: 1300 | | Finish Time: 1345 | | |
| Delivery Order 0030 | | | | | | Contract No. N65114-95-D-2126 | | CONTAMINATION DATA | | |
| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | | OVA RESULTS (PPM) CARBON FILTER | | NOTES |
| | | | | | | | | W/O | WITH | NET |
| POST | | | | 100% | 0 | 0'-2'; Red/Brown, Silty Sand. Organics, Humus. | | 0 | NR | 0 |
| HOLE | | | | 100% | 5 | 2'-6'; Brown, Fine to Medium, Silty Sand | | 0 | NR | 0 |
| | | | | 100% | 10 | 6'-12'; Light Brown to Tan, Medium to Coarse, Silty Sand | | | | |
| HSA | | | | 100% | 15 | | | 0 | NR | 0 |
| | | | | | | 12'-22'; Tan, Coarse, Silty Sand. | | | | |
| HA | | | | 100% | 20 | | | | | |
| | | | Water Table @ approx. 23' bls | | | 22'-30.5'; increasingly Lighter Tan to White, Coarse, Silty Sand | | | | |
| | | | | 100% | 25 | | | | | |
| | | | | 100% | 30 | | | | | |
| | | | | | | End of Boring @ 30.5' bls | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

MICHAEL J. WALSH PROFESSIONAL LICENSE No. PG0001181 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 10/08/96

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|---|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 | |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: | HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: | Mobile |
| | Start Date: 09/26/96 | Completed: | 09/26/96 |
| MONITOR WELL NO.: MW-35 | Start Time: 1400 | Finish Time: | 1445 |
| Delivery Order 0030 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA | |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA HA | | | | 100% | 0 | 0'-2'; Red/Brown, Silty Sand. Organics, Humus. | 0 | NR | 0 |
| | | | | 100% | 5 | 2'-6'; Brown, Fine to Medium, Silty Sand | 0 | NR | 0 |
| | | | | 100% | 10 | 6'-12'; Light Brown to Tan, Medium to Coarse, Silty Sand | | | |
| | | | | 100% | 15 | | 0 | NR | 0 |
| | | | | 100% | 20 | 12'-22'; Tan, Coarse, Silty Sand. | | | |
| | | | Water Table @ approx. 23' bls | 100% | 25 | 22'-30.5'; increasingly Lighter Tan to White, Coarse, Silty Sand | | | |
| | | | | | 30 | End of Boring @ 30.5' bls | | | |

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MICHAEL J. WALSH PROVISIONAL LICENSE No. PG0001181 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 10/08/96

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|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 09/26/96 | Completed: 09/26/96 |
| MONITOR WELL NO.: MW-36 | Start Time: 1500 | Finish Time: 1545 |
| Delivery Order 0030 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA | | | | 100% | 0 | 0'-2'; Red/Brown, Silty Sand. Organics, Humus. | 0 | NR | 0 |
| | | | | 100% | 5 | 2'-6'; Brown, Fine to Medium, Silty Sand | 0 | NR | 0 |
| | | | | 100% | 10 | 6'-12'; Light Brown to Tan, Medium to Coarse, Silty Sand | | | |
| | | | | 100% | 15 | | 0 | NR | 0 |
| HA | | | | 100% | 20 | 12'-22'; Tan, Coarse, Silty Sand. | | | |
| | | | Water Table @ approx. 23' bls | 100% | 25 | 22'-30.5'; increasingly Lighter Tan to White, Coarse, Silty Sand | | | |
| | | | | 100% | 30 | End of Boring @ 30.5' bls | | | |

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MICHAEL J. WALSH PROFESSIONAL LICENSE No. PG0001181 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date: 10/08/96

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|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 10/01/96 | Completed: 10/01/96 |
| MONITOR WELL NO.: MW-37 | Start Time: 900 | Finish Time: 1000 |
| Delivery Order 0030 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA HA | | | | 100% | 0 | 0'-1'; Red/Brown, Silty Sand. Humus. | 0 | NR | 0 | |
| | | | | 100% | 6 | 1'-4'; Brown, Medium, Silty Sand | | | | |
| | | | | 100% | 12 | 4'-8'; Light Brown to Tan, Medium to Coarse, Silty Sand. | 0 | NR | 0 | |
| | | | | 100% | 18 | 8'-23'; Tan, Medium to Coarse, Silty Sand. | 0 | NR | 0 | |
| | | | | 100% | 24 | 23'-31.5'; Increasingly Lighter Tan to White, Coarse, Silty Sand. | | | | |
| | | | Water Table @ approx. 24' bls | | | | | | | |
| | | | | 100% | 30 | End of Boring @ 31.5' bls | | | | |
| | | | | 100% | | | | | | |

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MICHAEL J. WALSH PROFESSIONAL LICENSE No. PG0001181 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 10/08/96

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|---|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 | |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: | HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: | Mobile |
| | Start Date: 10/01/96 | Completed: | 10/01/96 |
| MONITOR WELL NO.: MW-38 | Start Time: 1015 | Finish Time: | 1115 |
| Delivery Order 0030 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA | |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA HA | | | | 100% | 2 | 0'-1'; Red/Brown, Silty Sand. Organics, Humus. | 0 | NR | 0 |
| | | | | 100% | 6 | 1'-2'; Brown/Tan Silty Sand. | 0 | NR | 0 |
| | | | | 100% | 10 | 2'-8'; Tan, Medium to Coarse Silty Sand. | | | |
| | | | | 100% | 14 | | 0 | NR | 0 |
| | | | | 100% | 16 | 8'-16'; Tan, Medium to Coarse, Silty Sand. | | | |
| | | | Water Table @ approx. 17' bls | | | | | | |
| | | | | 100% | 20 | 16'-24.5'; increasingly Lighter Tan to White, Coarse, Silty Sand | | | |
| | | | | 100% | 24 | | | | |
| | | | | | | End of Boring @ 24.5' bls | | | |

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MICHAEL J. WALSH
PROFESSIONAL GEOLOGIST
No. PG0001181
STATE OF FLORIDA

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 08/19/96

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|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 10/01/96 | Completed: 10/01/96 |
| MONITOR WELL NO.: MW-39 | Start Time: 1300 | Finish Time: 1400 |
| Delivery Order 0030 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA | | | | 100% | 0 | 0'-1'; Red/Brown, Silty Sand. Organics, Humus. | 0 | NR | 0 | |
| | | | | 100% | 4 | 1'-2'; Brown/Tan Silty Sand. 2'-6'; Tan, Medium to Coarse Silty Sand. | 0 | NR | 0 | |
| | | | | 100% | 8 | 6'-11'; Tan, Medium to Coarse, Silty Sand. | | | | |
| | | | | 100% | 12 | 11'-19.5'; increasingly Lighter Tan to White, Coarse, Silty Sand | 0 | NR | 0 | |
| | | | Water Table @ approx. 12' bls | | | | | | | |
| HA | | | | 100% | 16 | | | | | |
| | | | | | | End of Boring @ 19.5' bls | | | | |
| | | | | 100% | 20 | | | | | |
| | | | | 100% | 24 | | | | | |

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MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 10/08/96

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|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 10/01/96 | Completed: 10/01/96 |
| MONITOR WELL NO.: MW-40 | Start Time: 1430 | Finish Time: 1530 |
| Delivery Order 0030 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA | | | | 100% | 0 | 0'-2'; Red/Brown, Silty Sand. Organics, Humus. | 0 | NR | 0 | |
| | | | | 100% | 4 | 2'-6'; Brown, Medium, Silty Sand | | | | |
| | | | | 100% | 8 | 6'-12'; Light Brown to Tan, Medium to Coarse, Silty Sand. | 0 | NR | 0 | |
| | | | | 100% | 12 | 12'-20.5' Increasingly Lighter Tan to White, Coarse, Silty Sand | 0 | NR | 0 | |
| | | | Water Table @ approx. 13' bls | | | | | | | |
| HA | | | | 100% | 16 | | | | | |
| | | | | 100% | 20 | End of Boring @ 20.5' bls | | | | |
| | | | | 100% | | | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

MICHAEL J. WALSH PROFESSIONAL LICENSE No. PG001181 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 10/08/96

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|---|---|---|---|---|---|---|---|---|---|---|
| Site 1159 | | | | | | LOGGED BY: Pat Brown | | SHEET 1 OF 1 | | |
| Bronson Field | | | | | | Contractor: WES, Inc. | | Dr. Method: HSA | | |
| Pensacola, Florida | | | | | | Driller: South Florida Testing & Drilling | | Dr. Rig: Mobile | | |
| | | | | | | Start Date: 10/02/96 | | Completed: 10/02/96 | | |
| MONITOR WELL NO.: MW-41 | | | | | | Start Time: 900 | | Finish Time: 1000 | | |
| Delivery Order 0030 | | | | | | Contract No. N65114-95-D-2126 | | CONTAMINATION DATA | | |
| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | | OVA RESULTS (PPM) CARBON FILTER | | NOTES |
| | | | | | | | | W/O | WITH | NET |
| POST | | | | 100% | 0 | 0'-1'; Red/Brown, Silty Sand. Organics, Humus. | | 0 | NR | 0 |
| HOLE | | | | 100% | 4 | 1'-2'; Brown/Tan, Fine to Medium, Silty Sand | | | | |
| | | | | | | 2'-6'; Tan, Medium to Coarse Silty Sand. | | 0 | NR | 0 |
| | | | | 100% | 8 | | | | | |
| HSA | | | | | | 6'-12'; Tan, Coarse Silty Sand. | | | | |
| | | | | 100% | 12 | | | 0 | NR | 0 |
| | | | Water Table @ approx. 13' bls | | | | | | | |
| HA | | | | 100% | 16 | 12'-20.5'; increasingly Lighter Tan to White, Coarse, Silty Sand | | | | |
| | | | | 100% | 20 | | | | | |
| | | | | | | End of Boring @ 20.5' bls | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimum technical requirements as set forth in Chapter 492 of the Florida Statues.

MICHAEL J. WALSH
PROFESSIONAL GEOLOGIST
No. 0001181
STATE OF FLORIDA

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date: 10/08/96

C-42

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Site 1159 | | | | | | LOGGED BY: Pat Brown | | SHEET 1 OF 1 | | |
| Bronson Field | | | | | | Contractor: WES, Inc. | | Dr. Method: HSA | | |
| Pensacola, Florida | | | | | | Driller: South Florida Testing & Drilling | | Dr. Rig: Mobile | | |
| | | | | | | Start Date: 10/02/96 | | Completed: 10/02/96 | | |
| MONITOR WELL NO.: MW-42 | | | | | | Start Time: 1000 | | Finish Time: 1100 | | |
| Delivery Order 0030 | | | | | | Contract No. N65114-95-D-2126 | | CONTAMINATION DATA | | |
| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | | OVA RESULTS (PPM) CARBON FILTER | | NOTES |
| P | | | | | | 0'-2' Red/Brown, Silty, Sand | | W/O | WITH | NET |
| O | | | | 100% | 2 | Organic, Humus | | 0 | NR | 0 |
| S | | | | | | | | | | |
| T | | | | | | 2'-4'; Light Brown to Tan, Medium to Coarse, Silty | | | | |
| H | | | | 100% | 6 | Sand. | | | | |
| O | | | | | | | | | | |
| L | | | | | | 4'-9'; Tan, Medium to | | 0 | NR | 0 |
| E | | | Water Table @ Approx 10' BLS | | | Coarse, Silty Sand | | | | |
| | | | | 100% | 10 | | | | | |
| | | | | | | 9'-17.5' Increasingly Lighter | | | | |
| H | | | | | | Tan to White, Coarse, Silty | | | | |
| S | | | | | | Sand | | | | |
| A | | | | 100% | 14 | | | 0 | NR | 0 |
| H | | | | | | End of Boring @ 17.5' bls | | | | |
| A | | | | 100% | 18 | | | | | |
| | | | | 100% | 22 | | | | | |
| | | | | 100% | | | | | | |

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MICHAEL J. WALSH PROFESSIONAL LICENSE No. PG0001181 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 10/08/96

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|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 10/02/96 | Completed: 10/02/96 |
| MONITOR WELL NO.: MW-43 | Start Time: 1100 | Finish Time: 1200 |
| Delivery Order 0030 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST | | | | | | 0'-2' Red/Brown, Silty, Sand | | | | |
| | | | | 100% | 2 | Organic, Humus | 0 | NR | 0 | |
| | | | | | | 2'-4'; Light Brown to Tan, Medium to Coarse, Silty | | | | |
| HOLE | | | | 100% | 6 | Sand. | | | | |
| | | | | | | 4'-8'; Tan, Medium to | 0 | NR | 0 | |
| | | | Water Table @ Approx 9' BLS | | | Coarse, Silty Sand | | | | |
| | | | | 100% | 10 | | | | | |
| | | | | | | 8'-16.5' Increasingly Lighter | | | | |
| HSA | | | | | | Tan to White, Coarse, Silty Sand | | | | |
| | | | | 100% | 14 | | 0 | NR | 0 | |
| HA | | | | | | End of Boring @ 16.5' bls | | | | |
| | | | | 100% | 18 | | | | | |
| | | | | 100% | 22 | | | | | |
| | | | | 100% | | | | | | |

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MICHAEL J. WALSH
PROFESSIONAL LICENSE
No. 0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date: 10/08/96

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|---|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 | |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA | |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile | |
| | Start Date: 10/02/96 | Completed: 10/02/96 | |
| MONITOR WELL NO.: MW-44 | Start Time: 1300 | Finish Time: 1400 | |
| Delivery Order 0033 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA | |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA | | | | 100% | 0 | 0'-2'; Red/Brown, Silty Sand. Organics, Humus. | 0 | NR | 0 | |
| | | | | 100% | 5 | 2'-6'; Brown, Fine to Medium, Silty Sand | 0 | NR | 0 | |
| | | | | 100% | 10 | 6'-12'; Light Brown, Medium to Coarse, Silty Sand. | | | | |
| | | | | 100% | 15 | | 0 | NR | 0 | |
| | | | Water Table @ approx. 23' bls | | | 12'-22'; Tan, Coarse, Silty Sand. | | | | |
| | | | | 100% | 20 | | | | | |
| | | | | 100% | 25 | 22'-29.5'; increasingly Lighter Tan to White, Coarse, Silty Sand | | | | |
| | | | | 100% | 30 | End of Boring @ 30.5' bls | | | | |

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MICHAEL J. WALSH PROFESSIONAL LICENSE No. PG0001181 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date: 10/08/96

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|---|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 | |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: | HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: | Mobile |
| | Start Date: 10/02/96 | Completed: | 10/02/96 |
| MONITOR WELL NO.: MW-45 | Start Time: 1400 | Finish Time: | 1500 |
| Delivery Order 0030 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA | |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA HA | | | | 100% | 0 | 0'-2'; Red/Brown, Silty Sand. Organics, Humus. | 0 | NR | 0 |
| | | | | 100% | 5 | 2'-6'; Brown, Silty Sand. | 0 | NR | 0 |
| | | | | 100% | 10 | 6'-12'; Light Brown, Medium to Coarse, Silty Sand. | | | |
| | | | | 100% | 15 | | 0 | NR | 0 |
| | | | | 100% | 20 | 12'-19'; Tan, Coarse, Silty Sand. | | | |
| | | | Water Table @ approx. 20' bls | 100% | 25 | 19'-27.5'; increasingly Lighter Tan to White, Coarse, Silty Sand | | | |
| | | | | 100% | 30 | End of Boring @ 27.5' bls | | | |

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MICHAEL J. WALSH
PROFESSIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 10/08/96

| | | |
|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 10/03/96 | Completed: 10/03/96 |
| MONITOR WELL NO.: MW-46 | Start Time: 900 | Finish Time: 1000 |
| Delivery Order 0033 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA | | | | 100% | 0 | 0'-2'; Red/Brown, Silty Sand. Organics, Humus. | 0 | NR | 0 | |
| | | | | 100% | 4 | 2'-6'; Light Brown to Tan, Medium to Coarse, Silty Sand | 0 | NR | 0 | |
| | | | | 100% | 8 | 6'-12'; Tan, Coarse Silty Sand. | | | | |
| | | | | 100% | 12 | | 0 | NR | 0 | |
| | | | Water Table @ approx. 13' bls | | | | | | | |
| HA | | | | 100% | 16 | 12'-20.5'; increasingly Lighter Tan to White, Coarse, Silty Sand | | | | |
| | | | | 100% | 20 | End of Boring @ 20.5' bls | | | | |

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MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 10/08/96

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|---|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 | |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA | |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile | |
| | Start Date: 10/03/96 | Completed: 10/03/96 | |
| MONITOR WELL NO.: MW-47 | Start Time: 1015 | Finish Time: 1130 | |
| Delivery Order 0033 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA | |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA | | | | 100% | 0 | 0'-2'; Red/Brown, Silty Sand. Organics, Humus. | 0 | NR | 0 | |
| | | | | 100% | 4 | 2'-6'; Light Brown, Fine to Medium, Silty Sand | 0 | NR | 0 | |
| | | | | 100% | 8 | | | | | |
| | | | | 100% | 12 | 6'-14'; Tan, Medium to Coarse, Silty Sand. | 0 | NR | 0 | |
| | | | Water Table @ approx. 15' bls | | | | | | | |
| HA | | | | 100% | 16 | 14'-22.5'; increasingly Lighter Tan to White, Coarse, Silty Sand | | | | |
| | | | | 100% | 20 | End of Boring @ 22.5' bls | | | | |

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MICHAEL J. WALSH PROVISIONAL LICENSE No. PG0001181 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date: 10/08/96

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|---|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 | |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: | HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: | Mobile |
| | Start Date: 10/03/96 | Completed: | 10/03/96 |
| MONITOR WELL NO.: MW-48 | Start Time: 1300 | Finish Time: | 1415 |
| Delivery Order 0033 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA | |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA | | | | 100% | 1 | 0'-1'; Red/Brown, Silty Sand. Organics, Humus. | 0 | NR | 0 | |
| | | | | 100% | 3 | 1'-2'; Brown/Tan Silty Sand. | 0 | NR | 0 | |
| | | | | 100% | 5 | 2'-8'; Tan, Medium to Coarse Silty Sand. | | | | |
| | | | | 100% | 7 | | 0 | NR | 0 | |
| | | | Water Table @ approx. 17' bls | | | | | | | |
| HA | | | | 100% | 9 | 8'-14'; Tan, Medium to Coarse, Silty Sand. | | | | |
| | | | | 100% | 11 | 16'-24.5'; Increasingly Lighter Tan to White, Coarse, Silty Sand | | | | |
| | | | | 100% | 13 | | | | | |
| | | | | | | End of Boring @ 24.5' bls | | | | |
| | | | | | 15 | | | | | |

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MICHAEL J. WALSH PROFESSIONAL LICENSE No. PG0001181 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date: 08/19/96

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|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 12/10/96 | Completed: 12/10/96 |
| **MONITOR WELL NO.: MW-49** | Start Time: 1045 | Finish Time: 1130 |
| Delivery Order 0041 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA HA | | | | | | | | | | |
| | | | | 100% | 1 | 0'-1';Gray, med., Silty Sand. Humus (organics) | 0 | NR | 0 | |
| | | | | | 3 | | | | | |
| | | | | 100% | | 1'-10';Light brown, med. sand | 0 | NR | 0 | |
| | | | | | 5 | | | | | |
| | | | | 100% | 7 | | 0 | NR | 0 | |
| | | | | | 9 | | | | | |
| | | | | 100% | | 10-14'; Light beige, med. sand | 0 | NR | 0 | |
| | | | | | 11 | | | | | |
| | | | | 100% | 13 | | 0 | NR | 0 | |
| | | | | 100% | | 14-18';Brown, medium sand | 0 | NR | 0 | |
| | | | Water Table @ approx. 15' bls | | | | | | | |
| | | | | | | 18-22';Light beige to white, coarse sand | | | | |
| | | | | | 19 | | | | | |
| | | | | | 21 | | | | | |
| | | | | | | 22-25'; White, coarse sand | | | | |
| | | | | | 23 | | | | | |
| | | | | | 25 | End of Boring @ 25.0' bls | | | | |
| | | | | | 27 | | | | | |
| | | | | | 29 | | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 12/16/96

MICHAEL J. WALSH
PROFESSIONAL GEOLOGIST
STATE OF FLORIDA
No. PG0001181

C-50

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|---|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 | |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA | |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile | |
| | Start Date: 12/10/96 | Completed: 12/10/96 | |
| **MONITOR WELL NO.: MW-50** | Start Time: 1330 | Finish Time: 1400 | |
| Delivery Order 0041 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA | |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA HA | | | | 100% | 1 | 0'-1'; Red/Brown, medium san | 0 | NR | 0 |
| | | | | | | 1'-4';Brown/black, med., silty sand | | | |
| | | | | | 3 | | | | |
| | | | | 100% | | 4'-8'; Brown,medium sand | 0 | NR | 0 |
| | | | | | 5 | | | | |
| | | | | 100% | 7 | | 0 | NR | 0 |
| | | | Water Table @ approx. 8' bls | | | | | | |
| | | | | | | 8-10'; Gray medium sand | | | |
| | | | | | 9 | | | | |
| | | | | | | 10-15'; Tan medium sand | | | |
| | | | | | 11 | | | | |
| | | | | | 13 | | | | |
| | | | | | 15 | End of Boring @ 15' bls | | | |

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Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date: 12/16/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

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|---|---|---|---|---|---|---|---|---|---|---|
| Site 1159 | | | | | | LOGGED BY: Pat Brown | | SHEET 1 OF 1 | | |
| Bronson Field | | | | | | Contractor: WES, Inc. | | Dr. Method: HSA | | |
| Pensacola, Florida | | | | | | Driller: South Florida Testing & Drilling | | Dr. Rig: Mobile | | |
| | | | | | | Start Date: 12/10/96 | | Completed: 12/10/96 | | |
| MONITOR WELL NO.: MW-51 | | | | | | Start Time: 1410 | | Finish Time: 1445 | | |
| Delivery Order 0041 | | | | | | Contract No. N65114-95-D-2126 | | CONTAMINATION DATA | | |
| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | | OVA RESULTS (PPM) CARBON FILTER | | NOTES |
| | | | | | | | | W/O | WITH | NET |
| POST | | | | 100% | 0 | 0'-1'; Medium beige sand. | | 0 | NR | 0 |
| | | | | | | 1'-4'; Dark brown, silty sand | | | | |
| HOLE | | | | 100% | 4 | | | 0 | NR | 0 |
| | | | | 100% | | 4-7'; Dark brown, medium silty sand w/ humus (organics) | | 0 | NR | 0 |
| | | | Water Table @ approx. 8' bls | | | 7-15'; Light beige, medium sand | | | | |
| HSA | | | | | 12 | | | | | |
| HA | | | | | 16 | End of Boring @ 15' bls | | | | |
| | | | | | 20 | | | | | |

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Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 12/16/96

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|---|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 | |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: | HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: | Mobile |
| | Start Date: 12/10/96 | Completed: | 12/10/96 |
| MONITOR WELL NO.: MW-52 | Start Time: 1500 | Finish Time: | 1530 |
| Delivery Order 0041 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA | |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA HA | | | | | 0 | 0'-1'; Brown, Silty Sand. | | | | |
| | | | | 100% | | Organics,-Humus. | 0 | NR | 0 | |
| | | | | | | 1-2'; Beige medium sand | | | | |
| | | | | 100% | 4 | | 0 | NR | 0 | |
| | | | | | | 2'-6'; Brown medium sand | | | | |
| | | | | 100% | | 6-10'; Gray, med., silty sand | 0 | NR | 0 | |
| | | | | | 8 | | | | | |
| | | | Water Table @ approx. 8' bls | | | | | | | |
| | | | | | | 10-15'; Tan,medium sand | | | | |
| | | | | | 12 | | | | | |
| | | | | | | End of boring @ 15.0' | | | | |
| | | | | | 16 | | | | | |
| | | | | | 20 | | | | | |

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Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. PG0001181

Date 12/16/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

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|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 12/11/96 | Completed: 12/11/96 |
| MONITOR WELL NO.: MW-53 | Start Time: 930 | Finish Time: 1015 |
| Delivery Order 0041 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA HA | | | | 100% | 0 | 0'-1'; Brown med., Silty Sand. | 0 | NR | 0 | |
| | | | | | | 1-10'; Brown medium sand | | | | |
| | | | | 100% | 5 | | 0 | NR | 0 | |
| | | | | 100% | 10 | 10-13'; Beige, medium sand | 0 | NR | 0 | |
| | | | | | | 13-16; Whitish beige, medium sand | | | | |
| | | | | 100% | 15 | | 0 | NR | 0 | |
| | | | | | | 16-18'; Brown, medium sand | | | | |
| | | | | | | 18-25'; Light beige to white coarse sand | | | | |
| | | | | 100% | 20 | | 0 | NR | 0 | |
| | | | Water Table @ approx. 21' bls | | | | | | | |
| | | | | | 25 | 25-27'; Tan, coarse sand | | | | |
| | | | | | | End of Boring @ 27.0' bls | | | | |
| | | | | | 30 | | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, PG
Florida Professional Geologist No. 0001181

Date 12/16/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

| | | |
|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 12/11/96 | Completed: 12/11/96 |
| **MONITOR WELL NO.: MW-54** | Start Time: 1030 | Finish Time: 1100 |
| Delivery Order 0041 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA HA | | | | 100% | 0 | 0'-1'; Brown med., Silty Sand. | 0 | NR | 0 |
| | | | | 100% | | 1-4'; Brown medium sand | 0 | NR | 0 |
| | | | | | 5 | 4-7'; Tan medium sand | | | |
| | | | | 100% | | 7-13'; Red/Brown medium san | 0 | NR | 0 |
| | | | | 100% | 10 | 10-13'; Beige, medium sand | 0 | NR | 0 |
| | | | | 100% | | | 0 | NR | 0 |
| | | | | | 15 | 13-16'; Brown, medium sand | | | |
| | | | | 100% | | 16-24'; Tan, medium to coarse sand | 0 | NR | 0 |
| | | | Water Table @ approx. 17' bls | | | | | | |
| | | | | | 20 | | | | |
| | | | | | | End of Boring @ 24.0' bls | | | |
| | | | | | 25 | | | | |
| | | | | | 30 | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001184

Date 12/16/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001184
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

| | | | |
|---|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 | |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA | |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile | |
| | Start Date: 12/11/96 | Completed: 12/11/96 | |
| MONITOR WELL NO.: MW-55 | Start Time: 1115 | Finish Time: 1200 | |
| Delivery Order 0041 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA | |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA HA | | | | 100% | 2 | 0'-1'; Gray, med., Silty Sand. | 0 | NR | 0 |
| | | | | 100% | 4 | 1-9'; Brown medium sand | 0 | NR | 0 |
| | | | | | 6 | | | | |
| | | | | 100% | | | 0 | NR | 0 |
| | | | | | 8 | | | | |
| | | | | 100% | | | 0 | NR | 0 |
| | | | Water Table @ approx. 10' bls | | | 9-17'; Medium brown to beige sand, increasingly more coarse | | | |
| | | | | | 12 | | | | |
| | | | | | 14 | | | | |
| | | | | | 16 | | | | |
| | | | | | | End of Boring @ 17.0' bls | | | |
| | | | | | 18 | | | | |
| | | | | | 20 | | | | |
| | | | | | 22 | | | | |
| | | | | | 24 | | | | |
| | | | | | 26 | | | | |
| | | | | | 28 | | | | |
| | | | | | 30 | | | | |

I Certify that this lithological log, including geological and hydrogeological interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 12/16/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

| | | |
|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 12/11/96 | Completed: 12/11/96 |
| MONITOR WELL NO.: MW-56 | Start Time: 1300 | Finish Time: 1345 |
| Delivery Order 0041 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA | | | | 100% | 0 | 0'-1'; Brown med., Silty Sand. | 0 | NR | 0 |
| | | | | 100% | 5 | 1-7'; Brown medium sand | 0 | NR | 0 |
| | | | | 100% | | 7-10'; Tan, medium sand | 0 | NR | 0 |
| | | | | 100% | 10 | 10-13'; Beige, medium sand | 0 | NR | 0 |
| | | | | 100% | 15 | 13-16;Beige to tan, medium sand | 0 | NR | 0 |
| | | | | 100% | | 16-18'; Tan, medium sand | 0 | NR | 0 |
| | | | | 100% | | | 0 | NR | 0 |
| HA | | | Water Table @ approx. 18' bls | | 20 | 18-25'; Tan to light tan med. sand | | | |
| | | | | | 25 | 25-27'; Tan, coarse sand | | | |
| | | | | | | End of Boring @ 25.0' bls | | | |
| | | | | | 30 | | | | |

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Reviewed by: Michael J. Walsh P.G.
Florida Professional Geologist No. PG001181

Date 10/08/96

MICHAEL J. WALSH
PROFESSIONAL LICENSE
No. PG001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

| | | |
|---|---|---|
| Site 1159 | LOGGED BY: Pat Brown | SHEET 1 OF 1 |
| Bronson Field | Contractor: WES, Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile |
| | Start Date: 12/11/96 | Completed: 12/11/96 |
| MONITOR WELL NO.: MW-57 | Start Time: 1345 | Finish Time: 1430 |
| Delivery Order 0041 | Contract No. N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NOTES NET |
|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA | | | | 100% | 0 | 0'-1'; Gray med., Silty Sand. | 0 | NR | 0 |
| | | | | 100% | | 1-4'; Brown medium sand | 0 | NR | 0 |
| | | | | | 5 | 4-13'; Red/brown medium san | | | |
| | | | | 100% | | | 0 | NR | 0 |
| | | | | 100% | 10 | | 0 | NR | 0 |
| | | | | 100% | | | 0 | NR | 0 |
| | | | Water Table @ approx. 15' bls | | | 13-20'; Beige, medium to coarse sand | | | |
| HA | | | | | 20 | 20-22'; White coarse sand mixed w/ white clay | | | |
| | | | | | | End of Boring @ 22.0' bls | | | |
| | | | | | 25 | | | | |
| | | | | | 30 | | | | |

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Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 12/16/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Site 1159 | | | | | | LOGGED BY: Pat Brown | | SHEET 1 OF 1 | | |
| Bronson Field | | | | | | Contractor: WES, Inc. | | Dr. Method: HSA | | |
| Pensacola, Florida | | | | | | Driller: South Florida Testing & Drilling | | Dr. Rig: Mobile | | |
| | | | | | | Start Date: 12/11/96 | | Completed: 12/11/96 | | |
| MONITOR WELL NO.: MW-58 | | | | | | Start Time: 1430 | | Finish Time: 1530 | | |
| Delivery Order 0041 | | | | | | Contract No. N65114-95-D-2126 | | CONTAMINATION DATA | | |
| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | | OVA RESULTS (PPM) CARBON FILTER | | NOTES |
| | | | | | | | | W/O | WITH | NET |
| POST | | | | 100% | 2 | 0'-1'; Gray, med., Silty Sand. | | 0 | NR | 0 |
| | | | | 100% | 4 | 1-4'; dark brown medium silty sand | | 0 | NR | 0 |
| | | | | | 6 | | | | | |
| HOLE | | | | 100% | | 4-10'; Brown, medium sand | | 0 | NR | 0 |
| | | | | | 8 | | | | | |
| | | | Water Table @ approx. 9.0' bls | | | | | | | |
| | | | | | | 10-18'; Tan to light beige, medium sand | | | | |
| HSA | | | | | 12 | | | | | |
| | | | | | 14 | | | | | |
| | | | | | 16 | | | | | |
| HA | | | | | 18 | End of Boring @ 18.0' bls | | | | |
| | | | | | 20 | | | | | |
| | | | | | 22 | | | | | |
| | | | | | 24 | | | | | |
| | | | | | 26 | | | | | |
| | | | | | 28 | | | | | |
| | | | | | 30 | | | | | |

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Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 12/16/96

MICHAEL J. WALSH
PROFESSIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

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|---|---|---|---|---|---|---|---|---|---|---|
| Site 1159 | | | | | | LOGGED BY: Pat Brown | | SHEET 1 OF 1 | | |
| Bronson Field | | | | | | Contractor: WES, Inc. | | Dr. Method: HSA | | |
| Pensacola, Florida | | | | | | Driller: South Florida Testing & Drilling | | Dr. Rig: Mobile | | |
| | | | | | | Start Date: 12/11/96 | | Completed: 12/11/96 | | |
| **MONITOR WELL NO.: MW-59** | | | | | | Start Time: 1530 | | Finish Time: 1630 | | |
| Delivery Order 0041 | | | | | | Contract No. N65114-95-D-2126 | | CONTAMINATION DATA | | |
| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | | OVA RESULTS (PPM) CARBON FILTER | | NOTES |
| POST HOLE HSA HA | | | | | | 0'-1'; Gray, med., Silty Sand. | | W/O | WITH | NET |
| | | | | 100% | 2 | w/ humus (organics) | | 0 | NR | 0 |
| | | | | 100% | 4 | 1-4'; dark brown medium sand | | 0 | NR | 0 |
| | | | | | 6 | | | | | |
| | | | | 100% | | 4-9'; Brown, medium sand | | 0 | NR | 0 |
| | | | | | 8 | | | | | |
| | | | | 100% | | 9-17'; Medium brown to beige, medium to coarse sand | | 0 | NR | 0 |
| | | | Water Table @ approx. 11.0' bls | | | | | | | |
| | | | | | 12 | | | | | |
| | | | | | 14 | | | | | |
| | | | | | 16 | | | | | |
| | | | | | | End of Boring @ 17.0' bls | | | | |
| | | | | | 18 | | | | | |
| | | | | | 20 | | | | | |
| | | | | | 22 | | | | | |
| | | | | | 24 | | | | | |
| | | | | | 26 | | | | | |
| | | | | | 28 | | | | | |
| | | | | | 30 | | | | | |

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Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date 12/16/96

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

| | | |
|---|---|---|
| Site 1159 | LOGGED BY: Patrick J. Brown | SHEET 1 OF 1 |
| Bronson Field | Contractor: W.E.S., Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile B61HDX |
| **MONITORING WELL NO.: DMW- 60** | Start Date: 01/29/97 | Completed: 01/29/97 |
| | Start Time: 1300 | Finish Time: 1530 |
| Delivery Order 0046 | Contract No N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER | | NOTES |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | W/O | WITH | NET |
| P | | | | | | 0' - 1'; Reddish brown, Silty , Fine sand | | | |
| O | | | | 100% | 3 | mixed w/ humus organics | 45 | NR | 45 |
| S | | | | 100% | | | 40 | NR | 40 |
| T | | | | | 6 | 1-4':Light Brown,Fine to | | | |
| | | | | 100% | | Medium, silty sand | 22 | 1.5 | 20.5 |
| H | | | | | 9 | | | | |
| O | | | | 100% | | 4-10' ; Tan,Fine to Medium sand, | 23 | NR | 23 |
| L | | | | 100% | 12 | with clay traces | >1000 | >1000 | >1000 |
| E | | | Water Table @ 14' BLS | | | | | | |
| | | | | | 15 | 10-13'; Lighter tan, Fine to Medium sand | | | |
| H | | | | | 18 | 13-40'; Increasingly lighter tan to white | | | |
| S | | | | | | Fine to Medium sand, w/ dark | | | |
| A | | | | | 21 | accessory minerals | | | |
| | | | | | 24 | | | | |
| H | | | | | | | | | |
| A | | | | | 27 | | | | |
| | | | | | 30 | | | | |
| | | | | | 33 | | | | |
| | | | | | 36 | | | | |
| | | | | | 39 | | | | |
| | | | | | | End of Boring @ 40' BLS | | | |
| | | | | | 42 | | | | |
| | | | | | 45 | | | | |

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Prepared by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date

MICHAEL J. WALSH PROFESSIONAL LICENSE No. P0001181 STATE OF FLORIDA PROFESSIONAL GEOLOGIST

| | | |
|---|---|---|
| Site 1159 | LOGGED BY: Patrick J. Brown | SHEET 1 OF 1 |
| Bronson Field | Contractor: W.E.S., Inc. | Dr. Method: HSA |
| Pensacola, Florida | Driller: South Florida Testing & Drilling | Dr. Rig: Mobile B61HDX |
| **MONITORING WELL NO.: DMW-61** | Start Date: 02/18/97 | Completed: 02/18/97 |
| | Start Time: 0830 | Finish Time: 1130 |
| Delivery Order 0048 | Contract No N65114-95-D-2126 | CONTAMINATION DATA |

| TYPE | NUMB | BLOW | SAMP. INTV. (FT.) | SAMP. RECV. (IN) | DEPTH | DESCRIPTION OF MATERIALS AND CONDITIONS | OVA RESULTS (PPM) CARBON FILTER W/O | WITH | NET | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| POST HOLE HSA HA | | | | | | 0' - 1'; Dark Brown, Medium sand | | | | |
| | | | | 100% | 2 | | 0 | NR | 0 | |
| | | | | 100% | 4 | 1' - 4'; Dark Brown, Medium sand | 0 | NR | 0 | |
| | | | | | 6 | 4' - 6'; Dark Brown, Medium sand | 0 | NR | 0 | |
| | | | Water Table @ 7' BLS | | | | | | | |
| | | | | | 8 | 6'-16'; Dark Brown to Gray, Medium to Coarse,Silty sand | | | | |
| | | | | | 10 | | | | | |
| | | | | | 12 | | | | | |
| | | | | | 14 | | | | | |
| | | | | | 16 | | | | | |
| | | | | | 18 | 16-29.5'; Increasingly lighter Beige to White, medium to Coarse sand | | | | |
| | | | | | 20 | | | | | |
| | | | | | 22 | | | | | |
| | | | | | 24 | | | | | |
| | | | | | 26 | | | | | |
| | | | | | 28 | | | | | |
| | | | | | | End of Boring @ 29.5' BLS | | | | |
| | | | | | 30 | | | | | |

I certify that this lithologic log, including geologic and hydrogeologic interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statutes.

Prepared by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181

03/03/97
Date

MICHAEL J. WALSH
PROVISIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

# APPENDIX D

# SOIL AND GROUNDWATER ANALYTICAL RESULTS

# Navy Public Works Center
## Environmental Laboratory

Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500
Phone 904-452-3642/4758
Autovon 922-3642

Requester: NPWC Environmental
Address: Bldg. 3691
NAS Pensacola, FL 32508
Phone #: 452-3094
Contact: Paul Semmes

# Laboratory Report
## Volatiles by Method 8260

Lab ID Number: 9408260 A
Sample Date: 15 Aug 94
Received Date: 15 Aug 94
Sample Site: Bronson Field B-1159
Job Order #: 170 6647

| Sample ID# | Lab | 1- 5616 | | | 2- 5617 | | | 3- 5618 | | | 4- 5619 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Name | Requester | B-1159 Center | | | B-1159 South | | | B-1159 East | | | B-1159 North | | |
| Collector Name | | J. Moore | | | J. Moore | | | J. Moore | | | J. Moore | | |
| Date/Time | Comp start | | | | | | | | | | | | |
| Collected | Comp stop | | | | | | | | | | | | |
| (Military) | Grab | 15 Aug 94 @ 0930 | | | 15 Aug 94 @ 0935 | | | 15 Aug 94 @ 0940 | | | 15 Aug 94 @ 0945 | | |
| Sample Type | Comp/Grab | Grab | | | Grab | | | Grab | | | Grab | | |
| Analyst | | J. W. Moore | | | J. W. Moore | | | J. W. Moore | | | J. W. Moore | | |
| Date of Analysis | | 18 Aug 94 | | | 18 Aug 94 | | | 18 Aug 94 | | | 18 Aug 94 | | |
| Sample Matrix | | Soil | | | Soil | | | Soil | | | Soil | | |
| Dilution | | Dilution X 1 | | | Dilution X 1 | | | Dilution X 1 | | | Dilution X 1 | | |
| PARAMETER | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. |
| Volatiles by GCMS (Capillary) | METHOD # | 1- 5616 | units | Limit | 2- 5617 | units | Limit | 3- 5618 | units | Limit | 4- 5619 | units | Limit |
| Benzene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Bromobenzene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Bromochloromethane | EPA 8260 | BDL | ug/kg | 2 | BDL | ug/kg | 2 | BDL | ug/kg | 2 | BDL | ug/kg | 2 |
| Bromodichloromethane | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Bromoform | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Bromomethane | EPA 8260 | BDL | ug/kg | 2 | BDL | ug/kg | 2 | BDL | ug/kg | 2 | BDL | ug/kg | 2 |
| n-Butylbenzene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| sec-Butylbenzene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| tert-Butylbenzene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Carbon Tetrachloride | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Chlorobenzene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Chloroethane | EPA 8260 | BDL | ug/kg | 2 | BDL | ug/kg | 2 | BDL | ug/kg | 2 | BDL | ug/kg | 2 |
| Chloroform | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Chloromethane | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 2-Chlorotoluene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 4-Chlorotoluene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Dibromochloromethane | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 1,2-Dibromo-3-chloropropane | EPA 8260 | BDL | ug/kg | 5 | BDL | ug/kg | 5 | BDL | ug/kg | 5 | BDL | ug/kg | 5 |
| 1,2-Dibromoethane | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Dibromomethane | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 1,2-Dichlorobenzene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 1,3-Dichlorobenzene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 1,4-Dichlorobenzene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Dichlorodifluoromethane | EPA 8260 | BDL | ug/kg | 2 | BDL | ug/kg | 2 | BDL | ug/kg | 2 | BDL | ug/kg | 2 |
| 1,1-Dichloroethane | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 1,2-Dichloroethane | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 1,1-Dichloroethene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| cis-1,2-Dichloroethene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| trans-1,2-Dichloroethene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 1,2-Dichloropropane | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 1,3-Dichloropropane | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 2,2-Dichloropropane | EPA 8260 | BDL | ug/kg | 4 | BDL | ug/kg | 4 | BDL | ug/kg | 4 | BDL | ug/kg | 4 |
| 1,1-Dichloropropene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Ethylbenzene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Hexachlorobutadiene | EPA 8260 | BDL | ug/kg | 2 | BDL | ug/kg | 2 | BDL | ug/kg | 2 | BDL | ug/kg | 2 |
| Isopropylbenzene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| p-Isopropyltoluene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Methylene chloride | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |

# Navy Public Works Center
## Environmental Laboratory

# Laboratory Report
**Volatiles by Method 8260**

Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500
Phone 904-452-3642/4758
Autovon 922-3642

**Requester:** NPWC Environmental
**Address:** Bldg. 3691
NAS Pensacola, FL 32508
**Phone #:** 452-3094
**Contact:** Paul Semmes

**Lab ID Number:** 9408260 A
**Sample Date:** 15 Aug 94
**Received Date:** 15 Aug 94
**Sample Site:** Bronson Field B-1159
**Job Order #:** 170 6647

| PARAMETER | | ID# | | | ID# | | | ID# | | | ID# | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatiles by GCMS (Capillary) | METHOD # | 1- 5616 | units | Det. Limit | 2- 5617 | units | Det. Limit | 3- 5618 | units | Det. Limit | 4- 5619 | units | Det. Limit |
| Naphthalene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| n-Propylbenzene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Styrene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 1,1,1,2-Tetrachloroethane | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 1,1,2,2-Tetrachloroethane | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Tetrachloroethene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Toluene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 1,2,3-Trichlorobenzene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 1,2,4-Trichlorobenzene | EPA 8260 | BDL | ug/kg | 2 | BDL | ug/kg | 2 | BDL | ug/kg | 2 | BDL | ug/kg | 2 |
| 1,1,1-Trichloroethane | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 1,1,2-Trichloroethane | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Trichloroethene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Trichlorofluoromethane | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 1,2,3-Trichloropropane | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 1,2,4-Trimethylbenzene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| 1,3,5-Trimethylbenzene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| Vinyl Chloride | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| o-Xylene | EPA 8260 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 | BDL | ug/kg | 1 |
| m,p-Xylene | EPA 8260 | BDL | ug/kg | 2 | BDL | ug/kg | 2 | BDL | ug/kg | 2 | BDL | ug/kg | 2 |

| Surrogate Recoveries Compound | Acceptance Limits | | | | |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 70-121 | 101 | 98 | 98 | 102 |
| Toluene-d8 | 84-138 | 102 | 102 | 102 | 101 |
| Bromofluorobenzene | 59-113 | 100 | 99 | 99 | 100 |

**Comments:** ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.

**Approved by:** Jerry Dees, Laboratory Director **Date:** 19-Aug-94 @ 14:40

PWC5090/14



End of Report

D-2

# Navy Public Works Center
## Environmental Laboratory

Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500
Phone 904-452-3642/4758
Autovon 922-3642

# Laboratory Report
## Volatiles by Method 8260

| | | | |
|---|---|---|---|
| Requester: | NPWC Environmental | Lab ID Number: | 9408260 B |
| Address: | Bldg. 3691 | Sample Date: | 15 Aug 94 |
| | NAS Pensacola, FL 32508 | Received Date: | 15 Aug 94 |
| Phone #: | 452-3094 | Sample Site: | Bronson Field B-1159 |
| Contact: | Paul Semmes | Job Order #: | 170 6647 |

| Sample ID# | Lab | 1- 5620 | 2- | 3- | 4- |
|---|---|---|---|---|---|
| Sample Name | Requester | B-1159 West | | | |
| Collector Name | | J. Moore | | | |
| Date/Time | Comp start | | | | |
| Collected | Comp stop | | | | |
| (Military) | Grab | 15 Aug 94 @ 0950 | | | |
| Sample Type | Comp/Grab | Grab | | | |
| Analyst | | J. W. Moore | | | |
| Date of Analysis | | 18 Aug 94 | | | |
| Sample Matrix | | Soil | | | |
| Dilution | | Dilution X 1 | Dilution X 1 | Dilution X 1 | Dilution X 1 |

| PARAMETER | | ID# | | | ID# | | | ID# | | | ID# | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatiles by GCMS (Capillary) | METHOD # | 1- 5620 | units | Det. Limit | 2- | units | Det. Limit | 3- | units | Det. Limit | 4- | units | Det. Limit |
| Benzene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Bromobenzene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Bromochloromethane | EPA 8260 | BDL | ug/kg | 2 | | ug/kg | 2 | | ug/kg | 2 | | ug/kg | 2 |
| Bromodichloromethane | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Bromoform | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Bromomethane | EPA 8260 | BDL | ug/kg | 2 | | ug/kg | 2 | | ug/kg | 2 | | ug/kg | 2 |
| n-Butylbenzene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| sec-Butylbenzene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| tert-Butylbenzene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Carbon Tetrachloride | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Chlorobenzene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Chloroethane | EPA 8260 | BDL | ug/kg | 2 | | ug/kg | 2 | | ug/kg | 2 | | ug/kg | 2 |
| Chloroform | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Chloromethane | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 2-Chlorotoluene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 4-Chlorotoluene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Dibromochloromethane | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 1,2-Dibromo-3-chloropropane | EPA 8260 | BDL | ug/kg | 5 | | ug/kg | 5 | | ug/kg | 5 | | ug/kg | 5 |
| 1,2-Dibromoethane | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Dibromomethane | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 1,2-Dichlorobenzene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 1,3-Dichlorobenzene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 1,4-Dichlorobenzene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Dichlorodifluoromethane | EPA 8260 | BDL | ug/kg | 2 | | ug/kg | 2 | | ug/kg | 2 | | ug/kg | 2 |
| 1,1-Dichloroethane | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 1,2-Dichloroethane | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 1,1-Dichloroethene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| cis-1,2-Dichloroethene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| trans-1,2-Dichloroethene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 1,2-Dichloropropane | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 1,3-Dichloropropane | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 2,2-Dichloropropane | EPA 8260 | BDL | ug/kg | 4 | | ug/kg | 4 | | ug/kg | 4 | | ug/kg | 4 |
| 1,1-Dichloropropene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Ethylbenzene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Hexachlorobutadiene | EPA 8260 | BDL | ug/kg | 2 | | ug/kg | 2 | | ug/kg | 2 | | ug/kg | 2 |
| Isopropylbenzene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| p-Isopropyltoluene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Methylene chloride | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |

# Navy Public Works Center
## Environmental Laboratory

# Laboratory Report
**Volatiles by Method 8260**

Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500
Phone 904-452-3642/4758
Autovon 922-3642

**Requester:** NPWC Environmental
**Address:** Bldg. 3691
NAS Pensacola, FL 32508
**Phone #:** 452-3094
**Contact:** Paul Semmes

**Lab ID Number:** 9408260 B
**Sample Date:** 15 Aug 94
**Received Date:** 15 Aug 94
**Sample Site:** Bronson Field B-1159
**Job Order #:** 170 6647

| PARAMETER | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatiles by GCMS (Capillary) | METHOD # | 1- 5620 | units | Limit | 2- | units | Limit | 3- | units | Limit | 4- | units | Limit |
| Naphthalene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| n-Propylbenzene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Styrene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 1,1,1,2-Tetrachloroethane | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 1,1,2,2-Tetrachloroethane | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Tetrachloroethene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Toluene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 1,2,3-Trichlorobenzene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 1,2,4-Trichlorobenzene | EPA 8260 | BDL | ug/kg | 2 | | ug/kg | 2 | | ug/kg | 2 | | ug/kg | 2 |
| 1,1,1-Trichloroethane | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 1,1,2-Trichloroethane | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Trichloroethene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Trichlorofluoromethane | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 1,2,3-Trichloropropane | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 1,2,4-Trimethylbenzene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| 1,3,5-Trimethylbenzene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| Vinyl Chloride | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| o-Xylene | EPA 8260 | BDL | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 | | ug/kg | 1 |
| m,p-Xylene | EPA 8260 | BDL | ug/kg | 2 | | ug/kg | 2 | | ug/kg | 2 | | ug/kg | 2 |

| Surrogate Recoveries Compound | Acceptance Limits | | | | |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 70-121 | 100 | | | |
| Toluene-d8 | 84-138 | 102 | | | |
| Bromofluorobenzene | 59-113 | 96 | | | |

**Comments:** ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.

**Approved by:** Jerry Deds, Laboratory Director **Date:** 19-Aug-94 @ 14:46

PWC5090/14



End of Report

D-4

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3691, Code 920
NAS Pensacola, Fl. 32508
Phone (904) 452-4728/3642
Autovon 922-4728/3642

Requester: NPWC Environmental
Address: Bldg. 3691
NAS Pensacola, Fl 32508
Phone #: 452-3094
Contact: Paul Semmes

# Laboratory Report

**Volatile Aromatics by Method 8260**

Lab ID Number: 9506022 A
Sample Date: 30 May 95
Received Date: 31 May 95
Sample Site: Bronson Field
Job Order #: 168 4195

| Sample ID# | Lab | 1- 53108 | 2- 53109 | 3- 53110 | 4- 53111 |
|---|---|---|---|---|---|
| Sample Name | Requester | MW17/1159 | MW9/1144 | Trip Blank | Eqp Blk |
| Collector Name | | JJ/DG | JJ/DG | JJ/DG | JJ/DG |
| Date/Time | Comp start | | | | |
| Collected | Comp stop | | | | |
| (Military) | Grab | 30 May 95 @ 1758 | 30 May 95 @ 1830 | 30 May 95 @ | 30 May 95 @ 1215 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | Grab |
| Analyst | | J. Moore | J. Moore | J. Moore | J. Moore |
| Date of Analysis | | 5 Jun 95 | 4 Jun 95 | 31 May 95 | 31 May 95 |
| Sample Matrix | | Groundwater | Groundwater | Water | Water |
| Dilution | | Dilution X 1 | Dilution X 1 | Dilution X 1 | Dilution X 1 |

| PARAMETER | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatiles by GCMS (Capillary) | METHOD # | 1- 53108 | units | Limit | 2- 53109 | units | Limit | 3- | units | Limit | 4- | units | Limit |
| Benzene | EPA 8260 | 1.3 | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Ethylbenzene | EPA 8260 | 20 | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Toluene | EPA 8260 | 1.1 | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Xylenes (Total) | EPA 8260 | 104 | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 |
| Methyl-tert-butyl ether (MTBE) | EPA 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Total VOA | EPA 8260 | 126.4 | ug/l | 1 | | ug/l | 1 | | ug/l | 1 | | ug/l | 1 |

| Surrogate Recoveries Compound | Acceptance Limits | | | | |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 76-114 | 107 | 112 | 91 | 99 |
| Toluene-d8 | 88-110 | 100 | 91 | 104 | 105 |
| Bromofluorobenzene | 86-115 | 94 | 97 | 104 | 104 |

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 09-Jun-95 @ 11:13
Report Generated

PWC5090/14



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3691, Code 920
NAS Pensacola, Fl. 32508
Phone (904) 452-4720/3642
Autovon 922-4720/3642

# Laboratory Report
**PAH's by Method 8270A**

Requester: NPWC Environmental
Address: Bldg. 3691
NAS Pensacola, Fl 32508
Phone #: 452-3094
Contact: Paul Semmes

Lab ID Number: 9506022 B
Sample Date: 30 May 95
Received Date: 31 May 95
Sample Site: Bronson Field
Job Order #: 168 4195

| Sample ID# | Lab | 1- 53108 | | | 2- 53109 | | | 3- 53110 | | | 4- 53111 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Name | Requester | MW17/1159 | | | MW9/1144 | | | Trip blank | | | Eqp Blk | | |
| Collector Name | | JJ/DG | | | JJ/DG | | | JJ/DG | | | JJ/DG | | |
| Date/Time | Comp start | | | | | | | | | | | | |
| Collected | Comp stop | | | | | | | | | | | | |
| (Military) | Grab | 30 May 95 | @ | 1758 | 30 May 95 | @ | 1830 | 30 May 95 | @ | | 30 May 95 | @ | 1215 |
| Sample Type | Comp/Grab | Grab | | | Grab | | | Grab | | | Grab | | |
| Analyst | | J. Moore | | | J. Moore | | | J. Moore | | | J. Moore | | |
| Date of Analysis | | 5 Jun 95 | | | 3 Jun 95 | | | Not Analyzed (VOA) | | | 6 Jun 95 | | |
| Sample Matrix | | Groundwater | | | Groundwater | | | Water | | | Water | | |
| Dilution | | Dilution | X | 1 | Dilution | X | 1 | Dilution | X | 1 | Dilution | X | 1 |
| PARAMETER | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. |
| Polynuclear Aromatics (PAH's) | METHOD # | 1- 53108 | units | Limit | 2- 53109 | units | Limit | 3- 53110 | units | Limit | 4- 53111 | units | Limit |
| Acenaphthene | SW 8270A | BDL | ug/l | 5 | BDL | ug/l | 5 | | ug/l | 5 | BDL | ug/l | 5 |
| Acenaphthylene | SW 8270A | BDL | ug/l | 5 | BDL | ug/l | 5 | | ug/l | 5 | BDL | ug/l | 5 |
| Anthracene | SW 8270A | BDL | ug/l | 2 | BDL | ug/l | 2 | | ug/l | 2 | BDL | ug/l | 2 |
| Benzo(a)anthracene | SW 8270A | BDL | ug/l | 3 | BDL | ug/l | 3 | | ug/l | 3 | BDL | ug/l | 3 |
| Benzo(a)pyrene | SW 8270A | BDL | ug/l | 2 | BDL | ug/l | 2 | | ug/l | 2 | BDL | ug/l | 2 |
| Benzo(b)fluoranthene | SW 8270A | BDL | ug/l | 4 | BDL | ug/l | 4 | | ug/l | 4 | BDL | ug/l | 4 |
| Benzo(g,h,i)perylene | SW 8270A | BDL | ug/l | 3 | BDL | ug/l | 3 | | ug/l | 3 | BDL | ug/l | 3 |
| Benzo(k)fluoranthene | SW 8270A | BDL | ug/l | 4 | BDL | ug/l | 4 | | ug/l | 4 | BDL | ug/l | 4 |
| Chrysene | SW 8270A | BDL | ug/l | 3 | BDL | ug/l | 3 | | ug/l | 3 | BDL | ug/l | 3 |
| Dibenzo(a,h)anthracene | SW 8270A | BDL | ug/l | 3 | BDL | ug/l | 3 | | ug/l | 3 | BDL | ug/l | 3 |
| Fluoranthene | SW 8270A | BDL | ug/l | 2 | BDL | ug/l | 2 | | ug/l | 2 | BDL | ug/l | 2 |
| Fluorene | SW 8270A | BDL | ug/l | 4 | BDL | ug/l | 4 | | ug/l | 4 | BDL | ug/l | 4 |
| Indeno(1,2,3-cd)pyrene | SW 8270A | BDL | ug/l | 2 | BDL | ug/l | 2 | | ug/l | 2 | BDL | ug/l | 2 |
| Naphthalene | SW 8270A | BDL | ug/l | 7 | BDL | ug/l | 7 | | ug/l | 7 | BDL | ug/l | 7 |
| Phenanthrene | SW 8270A | BDL | ug/l | 3 | BDL | ug/l | 3 | | ug/l | 3 | BDL | ug/l | 3 |
| Pyrene | SW 8270A | BDL | ug/l | 3 | BDL | ug/l | 3 | | ug/l | 3 | BDL | ug/l | 3 |
| 1-Methylnaphthalene* | SW 8270A | BDL | ug/l | 5 | BDL | ug/l | 5 | | ug/l | 5 | BDL | ug/l | 5 |
| 2-Methylnaphthalene | SW 8270A | BDL | ug/l | 7 | BDL | ug/l | 7 | | ug/l | 7 | BDL | ug/l | 7 |

| SURROGATE RECOVERIES Compound | Acceptance Limits | | | | |
|---|---|---|---|---|---|
| Nitrobenzene-d5 | 35-114 | 51 | 56 | | 65 |
| 2-Fluorobiphenyl | 43-116 | 50 | 66 | | 67 |
| Terphenyl-d14 | 33-141 | 53 | 72 | | 74 |

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.
* - HRS certification pending.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 12-Jun-95 @ 10:51
Report Generated
End of Report

PWC 5090/14

# Navy Public Works Center
## Environmental Laboratory

Bldg 3887, Code 920
NAS Pensacola, FL 32508-5303
Phone (904) 452-4728
DSN 922-4728
FAX (904) 452-2387/2799

# Laboratory Report
**601/602 Volatiles by Method 8260**

**Requester:** NPWC Environmental
**Address:** Bldg. 3887, NAS Pensacola, FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Report Number:** 9604053 A
**Sample Date:** 24 Apr 96
**Received Date:** 24 Apr 96
**Sample Site:** Bronson Field, Bldg. 1159
**Job Order #:** 130 5001

| Sample ID# | | 1- 61660 | 2- 61661 | 3- 61662 | 4- 61663 |
|---|---|---|---|---|---|
| Sample Name | | MW-2 | MW-3 | MW-4 | MW-5 |
| Collector Name | | P. J. B. | P. J. B. | P. J. B. | P. J. B. |
| Date/Time Collected (Military) | Comp start | | | | |
| | Comp stop | | | | |
| | Grab | 24 Apr 96 @ 1100 | 24 Apr 96 @ 1030 | 24 Apr 96 @ 1130 | 24 Apr 96 @ 0930 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | Grab |
| Analyst | | J. Moore | J. Moore | J. Moore | J. Moore |
| Date of Analysis | | 29 Apr 96 | 30 Apr 96 | 30 Apr 96 | 1 May 96 |
| Sample Matrix | | Groundwater | Groundwater | Groundwater | Groundwater |
| Dilution | | Dilution X 1 | Dilution X 1 | Dilution X 1 | Dilution X 1 |

| PARAMETER Volatiles by GCMS (Capillary) | METHOD # | 1- ID# 61660 | units | Det. Limit | 2- ID# 61661 | units | Det. Limit | 3- ID# 61662 | units | Det. Limit | 4- ID# 61663 | units | Det. Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | SW 8260 | BDL | ug/l | 1 | 2 | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Bromodichloromethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Bromoform | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Bromomethane | SW 6260 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 |
| Carbon Tetrachloride | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Chlorobenzene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Chloroethane | SW 8260 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 |
| 2-Chloroethylvinyl ether | SW 8260 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 |
| Chloroform | SW 6260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Chloromethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Dibromochloromethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| 1,2-Dichlorobenzene | SW 6260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| 1,3-Dichlorobenzene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| 1,4-Dichlorobenzene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Dichlorodifluoromethane | SW 8260 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 |
| 1,1-Dichloroethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| 1,2-Dichloroethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| 1,1-Dichloroethene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| trans-1,2-Dichloroethene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| 1,2-Dichloropropane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| cis-1,3-Dichloropropene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| trans-1,3-Dichloropropene | SW 8260 | BDL | ug/l | 4 | BDL | ug/l | 4 | BDL | ug/l | 4 | BDL | ug/l | 4 |
| Ethylbenzene | SW 8260 | 11 | ug/l | 1 | 110 | ug/l | 1 | 27 | ug/l | 1 | 11 | ug/l | 1 |
| Methylene chloride | SW 8260 | BDL | ug/l | 5 | BDL | ug/l | 5 | BDL | ug/l | 5 | BDL | ug/l | 5 |
| Methyl-tert-butyl Ether (MTBE) | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| 1,1,2,2-Tetrachloroethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Tetrachloroethene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Toluene | SW 8260 | BDL | ug/l | 1 | 2 | ug/l | 1 | 4 | ug/l | 1 | 4 | ug/l | 1 |
| 1,1,1-Trichloroethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| 1,1,2-Trichloroethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Trichloroethene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Trichlorofluoromethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Vinyl Chloride | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Xylenes (Total) | SW 8260 | 38 | ug/l | 2 | 350 | ug/l | 2 | 150 | ug/l | 2 | 79 | ug/l | 2 |

| Surrogate Recoveries Compound | Acceptance Limits | | | | |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 76-114 | 107 | 107 | 99 | 104 |
| Toluene-d8 | 88-110 | 109 | 110 | 107 | 107 |
| Bromofluorobenzene | 86-115 | 104 | 98 | 99 | 100 |

**Comments:** ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.

**Approved by:** J W Moore for Jerry Dees, Laboratory Director

**Date/Time:** 14-May-96 @ 13:35
Report Generated

PWC 5090/14



**End of Report**

# Navy Public Works Center
## Environmental Laboratory

Bldg 3887, Code 920
NAS Pensacola, FL 32508-5303
Phone (904) 452-4728
DSN 922-4728
FAX (904) 452-2387/2799

# Laboratory Report
**601/602 Volatiles by Method 8260**

**Requester:** NPWC Environmental
**Address:** Bldg. 3887, NAS Pensacola, FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Report Number:** 9604053 B
**Sample Date:** 24 Apr 96
**Received Date:** 24 Apr 96
**Sample Site:** Bronson Field, Bldg. 1159
**Job Order #:** 130 5001

| Sample ID# | | 1- 61664 | | | 2- 61665 | | | 3- 61666 | | | 4- 61667 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Name | | MW-6 | | | Duplicate | | | Eq. Blank | | | Trip Blank | | |
| Collector Name | | P. J. B. | | | P. J. B. | | | P. J. B. | | | P. J. B. | | |
| Date/Time | Comp start | | | | | | | | | | | | |
| Collected | Comp stop | | | | | | | | | | | | |
| (Military) | Grab | 24 Apr 96 | @ | 1000 | N/S | @ | N/S | 24 Apr 96 | @ | 0900 | 24 Apr 96 | @ | 0800 |
| Sample Type | Comp/Grab | Grab | | | Grab | | | Grab | | | Grab | | |
| Analyst | | J. Moore | | | J. Moore | | | J. Moore | | | J. Moore | | |
| Date of Analysis | | 29 Apr 96 | | | 30 Apr 96 | | | 29 Apr 96 | | | 29 Apr 96 | | |
| Sample Matrix | | Groundwater | | | Groundwater | | | Deionized water | | | Deionized water | | |
| Dilution | | Dilution | X | 1 | Dilution | X | 1 | Dilution | X | 1 | Dilution | X | 1 |
| PARAMETER | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. |
| Volatiles by GCMS (Capillary) | METHOD # | 1- 61664 | units | Limit | 2- 61665 | units | Limit | 3- 61666 | units | Limit | 4- 61667 | units | Limit |
| Benzene | SW 8260 | BDL | ug/l | 1 | 1 | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Bromodichloromethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Bromoform | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Bromomethane | SW 8260 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 |
| Carbon Tetrachloride | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Chlorobenzene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Chloroethane | SW 8260 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 |
| 2-Chloroethylvinyl ether | SW 8260 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 |
| Chloroform | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Chloromethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Dibromochloromethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| 1,2-Dichlorobenzene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| 1,3-Dichlorobenzene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| 1,4-Dichlorobenzene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Dichlorodifluoromethane | SW 8260 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 |
| 1,1-Dichloroethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| 1,2-Dichloroethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| 1,1-Dichloroethene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| trans-1,2-Dichloroethene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| 1,2-Dichloropropane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| cis-1,3-Dichloropropene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| trans-1,3-Dichloropropene | SW 8260 | BDL | ug/l | 4 | BDL | ug/l | 4 | BDL | ug/l | 4 | BDL | ug/l | 4 |
| Ethylbenzene | SW 8260 | 15 | ug/l | 1 | 10 | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Methylene chloride | SW 8260 | BDL | ug/l | 5 | BDL | ug/l | 5 | BDL | ug/l | 5 | BDL | ug/l | 5 |
| Methyl-tert-butyl Ether (MTBE) | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| 1,1,2,2-Tetrachloroethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Tetrachloroethene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Toluene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| 1,1,1-Trichloroethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| 1,1,2-Trichloroethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Trichloroethene | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Trichlorofluoromethane | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Vinyl Chloride | SW 8260 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 | BDL | ug/l | 1 |
| Xylenes (Total) | SW 8260 | 63 | ug/l | 2 | 28 | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 |

| Surrogate Recoveries Compound | Acceptance Limits | | | | |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 76-114 | 105 | 104 | 102 | 101 |
| Toluene-d8 | 88-110 | 107 | 109 | 103 | 105 |
| Bromoflourobenzene | 86-115 | 101 | 108 | 97 | 95 |

**Comments:** ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.
N/S = Not Submitted.

**Approved by:** J W Moore for Jerry Dees, Laboratory Director

**Date/Time:** 14-May-96 @ 13:37
Report Generated

PWC 5090/14



**End of Report**

# Navy Public Works Center
## Environmental Laboratory

# Laboratory Report
**Total PAH's by Method 8270A**


Bldg. 3887, Code 920
NAS Pensacola, FL 32508-5303
Phone (904) 452-4728
DSN 922-4728


**Requester:** NPWC Environmental
**Address:** Bldg. 3887, NAS Pensacola, FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Report Number:** 9604053 C
**Sample Date:** 24 Apr 96
**Received Date:** 24 Apr 96
**Sample Site:** Bronson Field, Bldg. 1159
**Job Order #:** 130 5001

| Sample ID# | Lab | 1- 61660 | 2- 61661 | 3- 61662 | 4- 61663 |
|---|---|---|---|---|---|
| Sample Name | Requester | MW-2 | MW-3 | MW-4 | MW-5 |
| Collector Name | | P. J. B. | P. J. B. | P. J. B. | P. J. B. |
| Date/Time | Comp start | | | | |
| Collected | Comp stop | | | | |
| (Military) | Grab | 24 Apr 96 @ 1100 | 24 Apr 96 @ 1030 | 24 Apr 96 @ 1130 | 24 Apr 96 @ 0930 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | Grab |
| Analyst | | M. Chambers | M. Chambers | M. Chambers | M. Chambers |
| Date of Analysis | | 14 May 96 | 14 May 96 | 14 May 96 | 14 May 96 |
| Sample Matrix | | Groundwater | Groundwater | Groundwater | Groundwater |
| Dilution | | Dilution X 1.2 | Dilution X 1.22 | Dilution X 1.33 | Dilution X 1.2 |

| PARAMETER | ANALYSIS | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Polynuclear Aromatics (PAH's) | METHOD # | 1- 61660 | units | Limit | 2- 61661 | units | Limit | 3- 61662 | units | Limit | 4- 61663 | units | Limit |
| Acenaphthene | SW846 8270 | BDL | ug/l | 6 | BDL | ug/l | 6 | BDL | ug/l | 7 | BDL | ug/l | 6 |
| Acenaphthylene | SW846 8270 | BDL | ug/l | 6 | BDL | ug/l | 6 | BDL | ug/l | 7 | BDL | ug/l | 6 |
| Anthracene | SW846 8270 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 |
| Benzo(a)anthracene | SW846 8270 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 |
| Benzo(a)pyrene | SW846 8270 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 |
| Benzo(b)fluoranthene | SW846 8270 | BDL | ug/l | 4 | BDL | ug/l | 4 | BDL | ug/l | 4 | BDL | ug/l | 4 |
| Benzo(g,h,i)perylene | SW846 8270 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 |
| Benzo(k)fluoranthene | SW846 8270 | BDL | ug/l | 4 | BDL | ug/l | 4 | BDL | ug/l | 4 | BDL | ug/l | 4 |
| Chrysene | SW846 8270 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 |
| Dibenzo(a,h)anthracene | SW846 8270 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 |
| Fluoranthene | SW846 8270 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 |
| Fluorene | SW846 8270 | BDL | ug/l | 4 | BDL | ug/l | 4 | BDL | ug/l | 4 | BDL | ug/l | 4 |
| Indeno(1,2,3-cd)pyrene | SW846 8270 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 |
| Naphthalene | SW846 8270 | BDL | ug/l | 7 | BDL | ug/l | 7 | BDL | ug/l | 7 | BDL | ug/l | 7 |
| Phenanthrene | SW846 8270 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 |
| Pyrene | SW846 8270 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 |
| 1-Methylnaphthalene | SW846 8270 | BDL | ug/l | 5 | BDL | ug/l | 5 | BDL | ug/l | 5 | BDL | ug/l | 5 |
| 2-Methylnaphthalene | SW846 8270 | BDL | ug/l | 7 | BDL | ug/l | 7 | BDL | ug/l | 7 | BDL | ug/l | 7 |

| SURROGATE RECOVERIES Compound | Acceptance Limits | | | | |
|---|---|---|---|---|---|
| Nitrobenzene-d5 | 35-114 | 74 | 93 | 75 | 64 |
| 2-Fluorobiphenyl | 43-116 | 67 | 90 | 79 | 65 |
| Terphenyl-d14 | 33-141 | 70 | 93 | 77 | 70 |

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.

Approved by: J C Moore for Jerry Dees, Laboratory Director

Date/Time: 22-May-96 @ 07:43
Report Generated

PWC 5090/14

End of Report

# Navy Public Works Center
## Environmental Laboratory

# Laboratory Report
**Total PAH's by Method 8270A**

Bldg. 3887, Code 920
NAS Pensacola, FL 32508-5303
Phone (904) 452-4728
DSN 922-4728

**Requester:** NPWC Environmental
**Address:** Bldg. 3887, NAS Pensacola, FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Report Number:** 9604053 D
**Sample Date:** 24 Apr 96
**Received Date:** 24 Apr 96
**Sample Site:** Bronson Field, Bldg. 1159
**Job Order #:** 130 5001

| Sample ID# | Lab | 1- 61664 | 2- 61665 | 3- 61666 | 4- |
|---|---|---|---|---|---|
| Sample Name | Requester | MW-6 | Duplicate | Eq. Blank | |
| Collector Name | | P. J. B. | P. J. B. | P. J. B. | |
| Date/Time | Comp start | | | | |
| Collected | Comp stop | | | | |
| (Military) | Grab | 24 Apr 96 @ 1000 | 24 Apr 96 @ N/S | 24 Apr 96 @ 0900 | |
| Sample Type | Comp/Grab | Grab | Grab | Grab | |
| Analyst | | M. Chambers | M. Chambers | M. Chambers | |
| Date of Analysis | | 15 May 96 | 15 May 96 | 15 May 96 | |
| Sample Matrix | | Groundwater | Groundwater | Deionized water | |
| Dilution | | Dilution X 1.19 | Dilution X 1.22 | Dilution X 1 | Dilution X 1 |

| PARAMETER | ANALYSIS | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Polynuclear Aromatics (PAH's) | METHOD # | 1- 61664 | units | Limit | 2- 61665 | units | Limit | 3- 61666 | units | Limit | 4- | units | Limit |
| Acenaphthene | SW846 8270 | BDL | ug/l | 6 | BDL | ug/l | 6 | BDL | ug/l | 5 | | ug/l | 5 |
| Acenaphthylene | SW846 8270 | BDL | ug/l | 6 | BDL | ug/l | 6 | BDL | ug/l | 5 | | ug/l | 5 |
| Anthracene | SW846 8270 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 | | ug/l | 2 |
| Benzo(a)anthracene | SW846 8270 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 | | ug/l | 3 |
| Benzo(a)pyrene | SW846 8270 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 | | ug/l | 2 |
| Benzo(b)fluoranthene | SW846 8270 | BDL | ug/l | 4 | BDL | ug/l | 4 | BDL | ug/l | 4 | | ug/l | 4 |
| Benzo(g,h,i)perylene | SW846 8270 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 | | ug/l | 3 |
| Benzo(k)fluoranthene | SW846 8270 | BDL | ug/l | 4 | BDL | ug/l | 4 | BDL | ug/l | 4 | | ug/l | 4 |
| Chrysene | SW846 8270 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 | | ug/l | 3 |
| Dibenzo(a,h)anthracene | SW846 8270 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 | | ug/l | 3 |
| Fluoranthene | SW846 8270 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 | | ug/l | 2 |
| Fluorene | SW846 8270 | BDL | ug/l | 4 | BDL | ug/l | 4 | BDL | ug/l | 4 | | ug/l | 4 |
| Indeno(1,2,3-cd)pyrene | SW846 8270 | BDL | ug/l | 2 | BDL | ug/l | 2 | BDL | ug/l | 2 | | ug/l | 2 |
| Naphthalene | SW846 8270 | BDL | ug/l | 7 | BDL | ug/l | 7 | BDL | ug/l | 7 | | ug/l | 7 |
| Phenanthrene | SW846 8270 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 | | ug/l | 3 |
| Pyrene | SW846 8270 | BDL | ug/l | 3 | BDL | ug/l | 3 | BDL | ug/l | 3 | | ug/l | 3 |
| 1-Methylnaphthalene | SW846 8270 | BDL | ug/l | 5 | BDL | ug/l | 5 | BDL | ug/l | 5 | | ug/l | 5 |
| 2-Methylnaphthalene | SW846 8270 | BDL | ug/l | 7 | BDL | ug/l | 7 | BDL | ug/l | 7 | | ug/l | 7 |

| SURROGATE RECOVERIES Compound | Acceptance Limits | | | | |
|---|---|---|---|---|---|
| Nitrobenzene-d5 | 35-114 | 83 | 67 | 74 | |
| 2-Fluorobiphenyl | 43-116 | 87 | 55 | 74 | |
| Terphenyl-d14 | 33-141 | 90 | 58 | 85 | |

**Comments:** ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.
N/S = Not Submitted.

**Approved by:** J W Moore for Jerry Dees, Laboratory Director

**Date/Time:** 22-May-96 @ 07:48
Report Generated

PWC 5090/14

**End of Report**

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone (904) 452-4728/3642
Autovon 922-4728/3642

# Laboratory Report
**EDB by Method 504**

**Requester:** NPWC Environmental
**Address:** Bldg. 3887, NAS Pensacola, FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Report Number:** 9604053 E
**Sample Date:** 24 Apr 96
**Received Date:** 24 Apr 96
**Sample Site:** Bronson Field, Bldg. 1159
**Job Order #:** 130 5001

| Sample ID# | Lab | 1- 61660 | | | 2- 61661 | | | 3- 61662 | | | 4- 61663 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Name | Requester | MW-2 | | | MW-3 | | | MW-4 | | | MW-5 | | |
| Collector Name | | P. J. B. | | | P. J. B. | | | P. J. B. | | | P. J. B. | | |
| Date/Time | Comp start | | | | | | | | | | | | |
| Collected | Comp stop | | | | | | | | | | | | |
| (Military) | Grab | 24 Apr 96 @ 1100 | | | 24 Apr 96 @ 1030 | | | 24 Apr 96 @ 1130 | | | 24 Apr 96 @ 0930 | | |
| Sample Type | Comp/Grab | Grab | | | Grab | | | Grab | | | Grab | | |
| Analyst | | B. Jacquart | | | B. Jacquart | | | B. Jacquart | | | B. Jacquart | | |
| Date of Analysis | | 10 May 96 | | | 10 May 96 | | | 10 May 96 | | | 10 May 96 | | |
| Sample Matrix | | Groundwater | | | Groundwater | | | Groundwater | | | Groundwater | | |
| Dilution | | Dilution | X | 1 | Dilution | X | 1 | Dilution | X | 1 | Dilution | X | 1 |
| PARAMETER | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. |
| Volatiles by GCMS (Capillary) | METHOD # | 1- 61660 | units | Limit | 2- 61661 | units | Limit | 3- 61662 | units | Limit | 4- 61663 | units | Limit |
| Ethylene Dibromide | EPA 504 | BDL | ug/l | 0.02 | BDL | ug/l | 0.02 | BDL | ug/l | 0.02 | BDL | ug/l | 0.02 |

| SURROGATE RECOVERIES Compound | Acceptance Limits | | | | |
|---|---|---|---|---|---|
| 2,4,5,6-Tetrachloro-m-xylene | 60-140 | 92 | 91 | 114 | 98 |

Comments: ug/l=micrograms per liter. BDL=Below Detection Limit.

Approved by: JCMoore for Jerry Dees, Laboratory Director

Date/Time: 14-May-96 @ 14:22
Report Generated

PWC 5090/14



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone (904) 452-4728/3642
Autovon 922-4728/3642

# Laboratory Report
**EDB by Method 504**

**Requester:** NPWC Environmental
**Address:** Bldg. 3887, NAS Pensacola, FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Report Number:** 9604053 F
**Sample Date:** 24 Apr 96
**Received Date:** 24 Apr 96
**Sample Site:** Bronson Field, Bldg. 1159
**Job Order #:** 130 5001

| Sample ID# | Lab | 1- 61664 | 2- 61665 | 3- 61666 | 4- |
|---|---|---|---|---|---|
| Sample Name | Requester | MW-6 | Duplicate | Eq. Blank | |
| Collector Name | | P. J. B. | P. J. B. | P. J. B. | |
| Date/Time | Comp start | | | | |
| Collected | Comp stop | | | | |
| (Military) | Grab | 24 Apr 96 @ 1000 | N/S @ N/S | 24 Apr 96 @ 0900 | |
| Sample Type | Comp/Grab | Grab | Grab | Grab | |
| Analyst | | B. Jacquart | B. Jacquart | B. Jacquart | |
| Date of Analysis | | 10 May 96 | 10 May 96 | 10 May 96 | |
| Sample Matrix | | Groundwater | Groundwater | Deionized water | |
| Dilution | | Dilution X 1 | Dilution X 1 | Dilution X 1 | Dilution X 1 |

| PARAMETER | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatiles by GCMS (Capillary) | METHOD # | 1- 61664 | units | Limit | 2- 61665 | units | Limit | 3- 61666 | units | Limit | 4- | units | Limit |
| Ethylene Dibromide | EPA 504 | BDL | ug/l | 0.02 | BDL | ug/l | 0.02 | BDL | ug/l | 0.02 | | ug/l | 0.02 |

| SURROGATE RECOVERIES Compound | Acceptance Limits | | | | |
|---|---|---|---|---|---|
| 2,4,5,6-Tetrachloro-m-xylene | 60-140 | 116 | 117 | 98 | |

Comments: ug/l=micrograms per liter. BDL=Below Detection Limit.
N/S = Not Submitted.

Approved by: J A Moore for Jerry Dees, Laboratory Director

Date/Time: 14-May-96 @ 14:21
Report Generated

PWC 5090/14



End of Report

D-12

CC

# American Environmental Network, Inc.

11 East Olive Road • Pensacola, FL 32514 • (904) 474-1001

May 7, 1996

INVOICE NUMBER 810400
LAB CODE 160

NAS, CO, PWC

DEFENSE FINANCE & ACCOUNTING SERVICE, OP
OAKLAND , CA 94623-3870

FILE COPY
Original Sent to Oakland, CA

Accession #: 604521
Client Name: NAS, CO, PWC
Office: NAS PENSACOLA, FLORIDA
Project Name: FL PRO
Project Num: CALL #9034
Project Location: BF 1159
Report Sent To: JERRY DEES
P. O. Number: STUB #6116-6166
Billing Client: 514002

| Samples | Test | Matrix | Description | Actual Price | Extended Price |
|---|---|---|---|---|---|
| 7 | FLPRO | AQ | FLPRO\PETRO. HYDROCARBON RANGE C8-C40 | 150.00 | 1,050.00 |
| | | | | Total: | $1,050.00 |

STUB #6116-6166
CALL #9034
JON #1305001
ITEM #010

D-13

E1 0 DAYS



1 1/2 % Finance Charge on Balance Due over 30 Days

**********
* REMIT PAYMENT TO: *
* American Environmental Network (FL) Inc. *
* P.O. Box 5418 *
* Boston, MA 02206 *

American Environmental Network, Inc.

11 East Olive Road • Pensacola, FL 32514 • (904) 474-1001

SIGNATURE PAGE

Reviewed by: _____
AEN Project Manager

| | |
|---|---|
| Client: | NAS, CO, PWC<br>NAS PENSACOLA, FLORIDA |
| Project Name: | FL PRO |
| Project Number: | CALL #9034 |
| Project Location: | BF 1159 |
| Accession Number: | 604521 |
| Project Manager: | JERRY DEES |
| Sampled By: | PJB |

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

# Analysis Report

Analysis: FLPRO\PETRO. HYDROCARBON RANGE C8-C40

| | |
|---|---|
| Accession: | 604521 |
| Client: | NAS, CO, PWC |
| Project Number: | CALL #9034 |
| Project Name: | FL PRO |
| Project Location: | BF 1159 |
| Department: | SEMI-VOLATILE FUELS |

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001



"FINAL REPORT FORMAT - SINGLE"

Accession: 604521
Client: NAS, CO, PWC
Project Number: CALL #9034
Project Name: FL PRO
Project Location: BF 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

---

Lab Id: 001 Sample Date/Time: 24-APR-96 1100
Client Sample Id: 61660 Received Date: 26-APR-96

Batch: FPW035 Extraction Date: 27-APR-96
Blank: A Dry Weight %: N/A Analysis Date: 03-MAY-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 1400 | 100 | |
| NONATRIACONTANE | %REC/SURR | 72 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 105 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001



"FINAL REPORT FORMAT - SINGLE"

Accession: 604521
Client: NAS, CO, PWC
Project Number: CALL #9034
Project Name: FL PRO
Project Location: BF 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

---

Lab Id: 002
Client Sample Id: 61661

Sample Date/Time: 24-APR-96 1030
Received Date: 26-APR-96

Batch: FPW035
Blank: A Dry Weight %: N/A

Extraction Date: 27-APR-96
Analysis Date: 03-MAY-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 2300 | 100 | |
| NONATRIACONTANE | %REC/SURR | 67 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 121 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001



"FINAL REPORT FORMAT - SINGLE"

Accession: 604521
Client: NAS, CO, PWC
Project Number: CALL #9034
Project Name: FL PRO
Project Location: BF 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

---

Lab Id: 003 Sample Date/Time: 24-APR-96 1130
Client Sample Id: 61662 Received Date: 26-APR-96

Batch: FPW035 Extraction Date: 27-APR-96
Blank: A Dry Weight %: N/A Analysis Date: 03-MAY-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 1300 | 100 | |
| NONATRIACONTANE | %REC/SURR | 76 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 88 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 604521
Client: NAS, CO, PWC
Project Number: CALL #9034
Project Name: FL PRO
Project Location: BF 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

---

Lab Id: 004 Sample Date/Time: 24-APR-96 0930
Client Sample Id: 61663 MWS Received Date: 26-APR-96

Batch: FPW035 Extraction Date: 27-APR-96
Blank: A Dry Weight %: N/A Analysis Date: 03-MAY-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 1700 | 100 | |
| NONATRIACONTANE | %REC/SURR | 182 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 121 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 604521
Client: NAS, CO, PWC
Project Number: CALL #9034
Project Name: FL PRO
Project Location: BF 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

---

Lab Id: 005
Client Sample Id: 61664 MW-6

Sample Date/Time: 24-APR-96 1000
Received Date: 26-APR-96

Batch: FPW035
Blank: A Dry Weight %: N/A

Extraction Date: 27-APR-96
Analysis Date: 03-MAY-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 1800 | 100 | |
| NONATRIACONTANE | %REC/SURR | 100 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 98 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001



"FINAL REPORT FORMAT - SINGLE"

Accession: 604521
Client: NAS, CO, PWC
Project Number: CALL #9034
Project Name: FL PRO
Project Location: BF 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

---

Lab Id: 006 Sample Date/Time: 24-APR-96 N/S
Client Sample Id: 61665 Received Date: 26-APR-96

Batch: FPW035 Extraction Date: 27-APR-96
Blank: A Dry Weight %: N/A Analysis Date: 03-MAY-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 2000 | 100 | |
| NONATRIACONTANE | %REC/SURR | 105 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 88 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 604521
Client: NAS, CO, PWC
Project Number: CALL #9034
Project Name: FL PRO
Project Location: BF 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

---

Lab Id: 007 Sample Date/Time: 24-APR-96 0900
Client Sample Id: 61666 Received Date: 26-APR-96

Batch: FPW035 Extraction Date: 27-APR-96
Blank: A Dry Weight %: N/A Analysis Date: 03-MAY-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 430 | 100 | |
| NONATRIACONTANE | %REC/SURR | 123 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 99 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001



"Method Report Summary"

Accession Number: 604521
Client: NAS, CO, PWC
Project Number: CALL #9034
Project Name: FL PRO
Project Location: BF 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40

| Client Sample Id: | Parameter: | Unit: | Result: |
|---|---|---|---|
| 61660 2 | TOTAL PETROLEUM HYDROCARBON | UG/L | 1400 |
| 61661 3 | TOTAL PETROLEUM HYDROCARBON | UG/L | 2300 |
| 61662 4 | TOTAL PETROLEUM HYDROCARBON | UG/L | 1300 |
| 61663 5 | TOTAL PETROLEUM HYDROCARBON | UG/L | 1700 |
| 61664 6 | TOTAL PETROLEUM HYDROCARBON | UG/L | 1800 |
| 61665 | TOTAL PETROLEUM HYDROCARBON | UG/L | 2000 |
| 61666 | TOTAL PETROLEUM HYDROCARBON | UG/L | 430 |

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

# Quality Control Report

Analysis: FLPRO\PETRO. HYDROCARBON RANGE C8-C40

| | |
|---|---|
| Accession: | 604521 |
| Client: | NAS, CO, PWC |
| Project Number: | CALL #9034 |
| Project Name: | FL PRO |
| Project Location: | BF 1159 |
| Department: | SEMI-VOLATILE FUELS |

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001



"QC Report"

Title: Water Blank
Batch: FPW035
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992

Blank Id: A Date Analyzed: 02-MAY-96 Date Extracted: 27-APR-96

| Parameters: | Units: | Results: | Reporting Limits: |
|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | ND | 100 |
| ORTHO TER PHENYL | %REC/SURR | 112 | 82-142 |
| ANALYST | INITIALS | KS | |
| C-39 | %REC/SURR | ND | 42-193 |

Comments:

"QC Report"

Title: Water Reagent
Batch: FPW035
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992

RS Date Analyzed: 02-MAY-96 RS Date Extracted: 27-APR-96
RSD Date Analyzed: 02-MAY-96 RSD Date Extracted: 27-APR-96

| Parameters: | Spike Added | Sample Conc | RS Conc | RS %Rec | RSD Conc | RSD %Rec | RPD | RPD Lmts | Rec Lmts |
|---|---|---|---|---|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | 4998 | <100 | 4872 | 97 | 5012 | 100 | 3 | 30 | 57-122 |
| Surrogates: | | | | | | | | | |
| ORTHO TER PHENYL | | | | 114 | | 108 | | | 82-142 |
| C-39 | | | | 103 | | 103 | | | 42-193 |

Comments:

Notes:
N/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT
UG/L = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.
SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

Common notation for Organic reporting

N/S = NOT SUBMITTED
N/A = NOT APPLICABLE
D = DILUTED OUT
UG = MICROGRAMS
UG/L = PARTS PER BILLION.
UG/KG = PARTS PER BILLION.
MG/M3 = MILLIGRAM PER CUBIC METER.
PPMV = PART PER MILLION BY VOLUME.
MG/KG = PARTS PER MILLION.
MG/L = PARTS PER MILLION.
< = LESS THAN DETECTION LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS

SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

ORGANIC SOILS ARE REPORTED ON A DRYWEIGHT BASIS.

ND = NOT DETECTED ABOVE REPORTING LIMIT.

RPT LIMIT = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION)

ATI/GC/FID
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME IONIZATION DETECTOR (FID).

ATI/GC/FIX
ATI GAS CHROMATOGRAPHIC METHOD FOR ANALYSIS OF FIXED GASES EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD) AND FLAME IONIZATION DETECTOR (FID).

ATI/GC/FPD
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME PHOTOMETRIC DETECTOR (FPD) IN SULFUR-SPECIFIC MODE.

ATI/GC/PID
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH PHOTOIONIZATION DETECTOR (PID).

ATI/GC/TCD
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD).

LJT = LISA THOMASON
SW = STEVE WILHITE
KW = KAREN WADSWORTH
PL = PAUL LESCHENSKY
RW = ROBERT WOLFE
BV = BEN VAUGHN
BC = BETH COLEMAN
KS = KENDALL SMITH
KK = KERRY KUST
DWB = DAVID W. BOWERS
RP = ROB PEREZ

*American Environmental Network, Inc.*
11 East Olive Road • Pensacola, FL 32514 • (904) 474-1001

# CHAIN OF CUSTODY

AEN ACCESSION #: 604521

## PART 1 - Bottle Shipment Information

CLIENT: NAVC ENV LAB

CLIENT PROJECT NUMBER: STUB # 6116 - 6166

| QUANTITY OF SAMPLE CONTAINERS SHIPPED | PRESERVATIVE | | | | | | | PLASTIC CONTAINERS | | | | | | | GLASS CONTAINERS | | | | | | | | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $H_2SO_4$ | HNO3 | HCL | Zn Acetate | $Na_2S_2O_3$ | Unpreserved | NaOH | 8 oz. | 16 oz. | 32 oz. | ½ gallon | 1 gallon | Whirl-pak | 100-ML Cup | 120 ml (A) | 1 liter (A) | 1 liter (C) | 40 ml Vial | 4 oz. wm | 8 oz. wm | 16 oz. wm | 32 oz. wm | D.I. Trip Blank | |
| 14 | | | | | | | | | | | | | | | | ✓ | | | | | | | | |

| Relinquished By: | Time | Date | Received By: | Time | Date |
|---|---|---|---|---|---|
| | | | | | |

## PART 2 - Sample/Project Information

SAMPLE MATRIX CODES

DW DRINKING WATER — AI AIR — SW SURFACE WATER
WW WASTEWATER — SO SOIL — SL SLUDGE
GW GROUNDWATER — OI OIL — ST STORMWATER

PARAMETERS AND PRESERVATIVES REQUESTED

| SAMPLE I.D. | SAMPLE DATE | SAMPLE TIME | MATRIX | FL PRO | TOTAL # OF BOTTLES |
|---|---|---|---|---|---|
| 6166D | 4/24/96 | 1100 | GW | ✓ | 2 |
| 6166I | | 1050 | GW | ✓ | 2 |
| 6166Z | | 1130 | GW | ✓ | 2 |
| 6166S | | 0930 | GW | ✓ | 2 |
| 6166Y | | 1000 | GW | ✓ | 2 |
| 6165 | | NS | GW | ✓ | 2 |
| 6166b | ↓ | 0900 | DI | ✓ | 2 |
| | | | | | |
| | | | | | |
| | | | | | Eiw |
| | | | | Total Number of Bottles/Containers: | 14 |

| Relinquished By | Date | Time | Received By | Date | Time |
|---|---|---|---|---|---|
| [illegible] | 4/26/96 | 0815 | Peter Shuler | 4/26/96 | 0815 |
| Peter Shuler | 4/26/96 | 0900 | [illegible] | 4/26/96 | 0900 |
| | | | | | |
| | | | | | |

| | | | |
|---|---|---|---|
| Client NAVC ENV LAB CODE 920 | | | Purchase Order Number STUB # 6116-6166 |
| Address BLDG 5297 | | | Project Number CALL #9034 |
| City PENSACOLA | State FL | Zip 32508 | Project Name FL PRO |
| Phone Number (904) 452-5642 | Fax Number (904) 452-2799 | | Project Location BF 1159 |
| Project Manager JERRY DEES | | | Sampled By PJB |

| TURNAROUND TIMES | check below | SPECIAL INSTRUCTIONS |
|---|---|---|
| Standard - 14-21 days | ✓ | STUB #6116-6166 VERBAL DUE 5/3/96 |
| RUSH (must be approved in advance) | | CALL #9034 WRITTEN DUE 5/10/96 |
| <- 48 hours - 2x standard price | | JOB 1305001 |
| 3-7 days - 1.5x standard price | | ITEM #010 |
| TCLP - 1 week rush 1.5x standard price | | D-28 |
| QC Level none I II III IV (circle one) | | Copies of report needed 1 |

FORM # 12694

WHITE — LAB CANARY — REPORT PINK — CLIENT

# Navy Public Works Center
## Environmental Laboratory

Bldg 3887, Code 920
NAS Pensacola, FL 32508-5303
Phone (904) 452-4728/3642
DSN 922-4728/3642
FAX (904) 452-2387/2799

# Laboratory Report
**Total Lead**

**Requester:** NPWC Environmental
**Address:** Bldg. 3887, NAS Pensacola, FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Report Number:** 9606053
**Sample Date:** 16 May 96
**Received Date:** 21 May 96
**Sample Site:** Bronson Field Site 1159
**Job Order #:** 130 5001

| Sample ID# | Lab | 1- 62219 | 2- 62220 | 3- 62221 | 4- | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | MW-3 | DUP - 1 | MW-2 | | ICP - Brian Nelson |
| Collector Name | | RDH | RDH | RDH | | |
| Date/Time Collected (Military) | Comp start | | | | | |
| | Comp stop | | | | | Date(s) of analysis: |
| | Grab | 16 May 96 @ 1306 | 16 May 96 @ 1306 | 16 May 96 @ 1321 | | ICP - 12 Jun 96 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | | |
| Sample Matrix | | Groundwater | Groundwater | Groundwater | | |

| PARAMETER Metals: | METHOD # | ID# 1- 62219 | units | Det. Limit | ID# 2- 62220 | units | Det. Limit | ID# 3- 62221 | units | Det. Limit | ID# 4- | units | Det. Limit | Preservative(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead (Pb) | SW 6010A | X 0.24 | mg/l | 0.05 | 0.27 | mg/l | 0.05 | 0.05 | mg/l | 0.05 | | mg/l | 0.05 | None |

**Comments:** mg/kg=milligrams per kilogram. mg/l=milligrams per liter. BDL=Below Detection Limit.
This is a corrected report.

**Approved by:** Jerry Dees, Laboratory Director
**Date/Time:** 01-Jul-96 10:54

PWC 5090/14

**End of Report**

D-29

# Navy Public Works Center
## Environmental Laboratory

Bldg 3887, Code 920
NAS Pensacola, FL 32508-5303
Phone (904) 452-4728
DSN 922-4728
FAX (904) 452-2387/2799

# Laboratory Report
**Total Lead**

**Requester:** NPWC Environmental
**Address:** Bldg. 3887, NAS Pensacola, FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Report Number:** 9606052
**Sample Date:** 16 May 96
**Received Date:** 21 May 96
**Sample Site:** Bronson Field Site 1159
**Job Order #:** 130 5001

| Sample ID# | Lab | 1- 62215 | 2- 62216 | 3- 62217 | 4- 62218 | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | MW-5 | MW-4 | MW-6 | MW-1 | ICP - Brian Nelson |
| Collector Name | | RDH | RDH | RDH | RDH | |
| Date/Time | Comp start | | | | | |
| Collected | Comp stop | | | | | Date(s) of analysis: |
| (Military) | Grab | 16 May 96 @ 1135 | 16 May 96 @ 1132 | 16 May 96 @ 1212 | 16 May 96 @ 1238 | ICP - 12 Jun 96 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | Grab | |
| Sample Matrix | | Groundwater | Groundwater | Groundwater | Groundwater | |

| PARAMETER | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metals: | METHOD # | 1- 62215 | units | Limit | 2- 62216 | units | Limit | 3- 62217 | units | Limit | 4- 62218 | units | Limit | Preservative(s) |
| Lead(Pb) | SW 6010A | X 0.07 | mg/l | 0.05 | 0.11 | mg/l | 0.05 | 0.08 | mg/l | 0.05 | 0.07 | mg/l | 0.05 | None |

**Comments:** mg/kg=milligrams per kilogram. mg/l=milligrams per liter. BDL=Below Detection Limit.

**Approved by:** Jerry Dees, Laboratory Director

**Date/Time:** 18-Jun-96 12:59

**End of Report**

PWC 5090/14

D-30

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

# Analytical Report

**601/602 Volatiles by Method 8260**

Lab Report Number: 62326
Sample Date: 05/22/96
Received Date: 05/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 62326 |
| Sample Name / Location | MW-1<br>BF1159 |
| Collector's Name | RDH |
| Date & Time Collected | 5/22/96 @ 1920 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 05/24/96 / JM |
| Date of Analysis | 05/2/496 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 62326 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 57 | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 2 | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 260 | ug/L | 1 | |

## SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 113 |
| Toluene-d8 | 86-119 | 121 ** |
| Bromoflourobenzene | 85-116 | 105 |

COMMENTS : ** = This sample was analyzed twice and this surrogate recovered high both times.

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Deas, Laboratory Director

Date: 6/23/96
Report Generated

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
FTN 922-4728/3642

Client: NPWC Environmental
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

Lab Report Number: 62326
Sample Date: 05/22/96
Received Date: 05/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- **62326** | | |
| Sample Name / Location | MW-1 BF1159 | | |
| Collector's Name | RDH | | |
| Date & Time Collected | 5/22/96 @ 1920 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | M. Chambers | | |
| Date of Extraction / Initials | 5/24/96; JJ | | |
| Date of Analysis | 6/6/96 | | |
| Sample Matrix | GW | | |
| Dilution | X 1 | | |
| COMPOUND NAME | 1- **62326** | units | Det. Limit |
| Acenaphthene | BDL | UG/L | 5 |
| Acenaphthylene | BDL | UG/L | 5 |
| Anthracene | BDL | UG/L | 2 |
| Benzo(a)anthracene | BDL | UG/L | 3 |
| Benzo(a)pyrene | BDL | UG/L | 2 |
| Benzo(b)flouranthene | BDL | UG/L | 4 |
| Benzo(g,h,i)perylene | BDL | UG/L | 3 |
| Benzo(k)flouranthene | BDL | UG/L | 4 |
| Chrysene | BDL | UG/L | 3 |
| Dibenz(a,h)anthracene | BDL | UG/L | 3 |
| Flouranthene | BDL | UG/L | 2 |
| Fluorene | BDL | UG/L | 4 |
| Indeno(1,2,3-cd)pyrene | BDL | UG/L | 2 |
| 1-Methylnaphthalene | BDL | UG/L | 7 |
| 2-Methylnaphthalene | BDL | UG/L | 5 |
| Naphthalene | BDL | UG/L | 7 |
| Phenanthrene | BDL | UG/L | 3 |
| Pyrene | BDL | UG/L | 3 |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 65 |
| 2-Flourobiphenyl | 43-116 | 69 |
| Terphenyl -d14 | 33-141 | 80 |

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Date/Time : 6/24/96 1100

"FINAL REPORT FORMAT - SINGLE"

Accession: 605504
Client: NAS, CO, PWC
Project Number: CALL #9038
Project Name: J.N. #13005001
Project Location: BRONSON FIELD
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

---

Lab Id: 004
Client Sample Id: MW-1 1159

Sample Date/Time: 22-MAY-96 1920
Received Date: 23-MAY-96

Batch: FPW043
Blank: A Dry Weight %: N/A

Extraction Date: 23-MAY-96
Analysis Date: 04-JUN-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 680 | 100 | |
| NONATRIACONTANE | %REC/SURR | 65 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 104 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

Common notation for Organic reporting

./S = NOT SUBMITTED
N/A = NOT APPLICABLE
D = DILUTED OUT
UG = MICROGRAMS
UG/L = PARTS PER BILLION.
UG/KG = PARTS PER BILLION.
MG/M3 = MILLIGRAM PER CUBIC METER.
PPMV = PART PER MILLION BY VOLUME.
MG/KG = PARTS PER MILLION.
MG/L = PARTS PER MILLION.
< = LESS THAN DETECTION LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS

SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

ORGANIC SOILS ARE REPORTED ON A DRYWEIGHT BASIS.

ND = NOT DETECTED ABOVE REPORTING LIMIT.

RPT LIMIT = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION)

ATI/GC/FID
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME IONIZATION DETECTOR (FID).

ATI/GC/FIX
ATI GAS CHROMATOGRAPHIC METHOD FOR ANALYSIS OF FIXED GASES EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD) AND FLAME IONIZATION DETECTOR (FID).

TI/GC/FPD
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME PHOTOMETRIC DETECTOR (FPD) IN SULFUR-SPECIFIC MODE.

ATI/GC/PID
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH PHOTOIONIZATION DETECTOR (PID).

ATI/GC/TCD
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD).

LJT = LISA THOMASON
SW = STEVE WILHITE
KW = KAREN WADSWORTH
PL = PAUL LESCHENSKY
RW = ROBERT WOLFE
BV = BEN VAUGHN
BC = BETH COLEMAN
KS = KENDALL SMITH
KK = KERRY KUST
DWB = DAVID W. BOWERS
RP = ROB PEREZ

"QC Report"

Title: Water Reagent
Batch: FPW043
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992

RS Date Analyzed: 03-JUN-96
RSD Date Analyzed: 03-JUN-96
RS Date Extracted: 23-MAY-96
RSD Date Extracted: 23-MAY-96

| Parameters: | Spike Added | Sample Conc | RS Conc | RS %Rec | RSD Conc | RSD %Rec | RPD | RPD Lmts | Rec Lmts |
|---|---|---|---|---|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | 4998 | <100 | 5100 | 102 | 5459 | 109 | 7 | 30 | 57-122 |
| Surrogates: | | | | | | | | | |
| ORTHO TER PHENYL | | | | 109 | | 93 | | | 82-142 |
| C-39 | | | | 46 | | 62 | | | 42-193 |

Comments:

Notes:
N/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT
UG/L = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.
SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001



"QC Report"

Title: Water Blank
Batch: FPW043
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992

Blank Id: A Date Analyzed: 03-JUN-96 Date Extracted: 23-MAY-96

| Parameters: | Units: | Results: | Reporting Limits: |
|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | ND | 100 |
| ORTHO TER PHENYL | %REC/SURR | 88 | 82-142 |
| ANALYST | INITIALS | KS | |
| C-39 | %REC/SURR | 64 | 42-193 |

Comments:

American Environmental Network, Inc.
11 East Olive Road • Pensacola, FL 32514 • (904) 474-1001

# CHAIN OF CUSTODY

AEN ACCESSION #: 6D55504

## PART 1 - Bottle Shipment Information

CLIENT:

CLIENT PROJECT NUMBER:

| QUANTITY OF SAMPLE CONTAINERS SHIPPED | PRESERVATIVE | | | | | | | PLASTIC CONTAINERS | | | | | | | GLASS CONTAINERS | | | | | | | | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $H_2SO_4$ | HNO3 | HCL | Zn Acetate | $Na_2S_2O_3$ | Unpreserved | NaOH | 8 oz. | 16 oz. | 32 oz. | ½ gallon | 1 gallon | Whirl-pak | 100-ML Cup | 120 ml (A) | 1 liter (A) | 1 liter (C) | 40 ml Vial | 4 oz. wm | 8 oz. wm | 16 oz. wm | 32 oz. wm | D.I. Trip Blank | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished By: | Time | Date | Received By: | Time | Date |
|---|---|---|---|---|---|
| | | | | | |

## PART 2 - Sample/Project Information

SAMPLE MATRIX CODES

DW DRINKING WATER — AI AIR — SW SURFACE WATER
WW WASTEWATER — SO SOIL — SL SLUDGE
GW GROUNDWATER — OI OIL — ST STORMWATER

PARAMETERS AND PRESERVATIVES REQUESTED

| SAMPLE I.D. | SAMPLE DATE | SAMPLE TIME | MATRIX | FIL PRES | <118.1 | | | | | | | | | | | | TOTAL # OF BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 1120 | 5-22-96 | 1425 | GW | ✓ | | | | | | | | | | | | | 3 |
| MW-1 1162 | | 1850 | GW | ✓ | | | | | | | | | | | | | 2 |
| EQUIPMENT BLANK | | 1845 | WATER | ✓ | | | | | | | | | | | | | 2 |
| MW-1 1159 | | 1920 | GW | ✓ | | | | | | | | | | | | | 2 |
| MW-1 1140NW | | 1940 | GW | ✓ | | | | | | | | | | | | | 2 |
| MW-1 1140NE | | 2005 | GW | ✓ | | | | | | | | | | | | | 2 |
| DUP-1 1140NW | | 1940 | GW | ✓ | | | | | | | | | | | | | 2 |
| MW-1 1122 | ROH | 2115 | GW | | ✓ | | | | | | | | | | | | 2 |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

Total Number of Bottles/Containers: 17

| Relinquished By | Date | Time | Received By | Date | Time |
|---|---|---|---|---|---|
| [illegible] | 5-23-96 | 0915 | Linda L. Kilt | 5/23/96 | 0915 |
| | | | | | |
| | | | | | |
| | | | | | |

| | | | |
|---|---|---|---|
| Client NAS | | | Purchase Order Number STUB # 6138-4908 |
| Address | | | Project Number CALL # 9038 |
| City | State | Zip | Project Name J.N. # 1305001 |
| Phone Number (904) 452-2170 | Fax Number ( ) | | Project Location BRONSON FIELD |
| Project Manager GREG CAMPBLE | | | Sampled By RICKY HAGENDORFER / BARRY HICKS |

| TURNAROUND TIMES | check below | SPECIAL INSTRUCTIONS |
|---|---|---|
| Standard - 14-21 days | ✓ | |
| RUSH (must be approved in advance) | | |
| <- 48 hours - 2x standard price | | |
| 3-7 days - 1.5x standard price | | |
| TCLP - 1 week rush 1.5x standard price | | |
| QC Level none I II III IV (circle one) | | Copies of report needed _____ |

FORM # 12694



WHITE — LAB CANARY — REPORT PINK — CLIENT

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

# Analytical Report

**601/602 Volatiles by Method 8260**

Lab Report Number: 62493
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 62493 |
| Sample Name / Location | MW-7<br>BF -1159 |
| Collector's Name | PJB/LMG |
| Date & Time Collected | 6/4/96 @ 0915 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 06/10/96 / JM |
| Date of Analysis | 06/10/96 |
| Sample Matrix | GW |
| Dilution | X 5 |

| Compound Name | 1- 62493 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 5 | |
| Bromodichloromethane | BDL | ug/L | 5 | |
| Bromoform | BDL | ug/L | 10 | |
| Bromomethane | BDL | ug/L | 15 | |
| Carbon Tetrachloride | BDL | ug/L | 5 | |
| Chlorobenzene | BDL | ug/L | 5 | |
| Chloroethane | BDL | ug/L | 5 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 25 | |
| Chloroform | BDL | ug/L | 5 | |
| Chloromethane | BDL | ug/L | 5 | |
| Dibromochloromethane | BDL | ug/L | 5 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 5 | |
| Dichlorodiflouromethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethane | BDL | ug/L | 5 | |
| 1,2-Dichloroethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethene | BDL | ug/L | 5 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 5 | |
| 1,2-Dichloropropane | BDL | ug/L | 5 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 5 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 5 | |
| Ethylbenzene | BDL | ug/L | 5 | |
| Methylene Chloride | BDL | ug/L | 25 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 25 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 5 | |
| Tetrachloroethene | BDL | ug/L | 5 | |
| Toluene | BDL | ug/L | 5 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 5 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 5 | |
| Trichloroethene | BDL | ug/L | 5 | |
| Trichloroflouromethane | BDL | ug/L | 5 | |
| Vinyl Chloride | BDL | ug/L | 5 | |
| Xylenes (Total) | BDL | ug/L | 5 | |

## SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 100 |
| Toluene-d8 | 86-119 | 109 |
| Bromoflourobenzene | 85-116 | 102 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated

**Navy Public Works Center**
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
N 922-4728/3642

Client: NPWC Environmental
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

**Analytical Report**
**610 PAH's by Method 8270**

Lab Report Number: 62493
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- **62493** | | |
| Sample Name / Location | MW-7<br>BF -1159 | | |
| Collector's Name | PJB/LMG | | |
| Date & Time Collected | 6/4/96 @ 0915 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | M. Chambers | | |
| Date of Extraction / Initials | 6/6/96; JJ | | |
| Date of Analysis | 6/10/96 | | |
| Sample Matrix | GW | | |
| Dilution | X 1.1 | | |
| COMPOUND NAME | 1- **62493** | units | Det. Limit |
| Acenaphthene | BDL | UG/L | 6 |
| Acenaphthylene | BDL | UG/L | 6 |
| Anthracene | BDL | UG/L | 2 |
| Benzo(a)anthracene | BDL | UG/L | 3 |
| Benzo(a)pyrene | BDL | UG/L | 2 |
| Benzo(b)flouranthene | BDL | UG/L | 4 |
| Benzo(g,h,i)perylene | BDL | UG/L | 3 |
| Benzo(k)flouranthene | BDL | UG/L | 4 |
| Chrysene | BDL | UG/L | 3 |
| Dibenz(a,h)anthracene | BDL | UG/L | 3 |
| 'ouranthene | BDL | UG/L | 2 |
| r-lourene | BDL | UG/L | 4 |
| Indeno(1,2,3-cd)pyrene | BDL | UG/L | 2 |
| 1-Methylnaphthalene * | BDL | UG/L | 6 |
| 2-Methylnaphthalene | BDL | UG/L | 8 |
| Naphthalene | BDL | UG/L | 8 |
| Phenanthrene | BDL | UG/L | 3 |
| Pyrene | BDL | UG/L | 3 |

## SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 58 |
| 2-Flourobiphenyl | 43-116 | 63 |
| Terphenyl -d14 | 33-141 | 66 |

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Date/Time : 6/25/96 1145

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report

**Ethylene Dibromide by Method 504**

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 62493 A
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 62493 | | | |
| Sample Name / Location | MW-7<br>BF -1159 | | | |
| Collector's Name | PJB/LMG | | | |
| Date & Time Collected | 6/4/96 @ 0915 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 06/12/96 -BJ | | | |
| Date of Analysis | 06/12/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| **Compound Name** | **1- 62493** | **units** | **Det. Limit** | **Flags** |
| **Ethylene Dibromide (EDB)** | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 61 % |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated
Page 1 of 1 End of Report

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

# Analytical Report

## 601/602 Volatiles by Method 8260

Lab Report Number: 62494
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 62494 |
| Sample Name / Location | MW-8<br>BF - 1159 |
| Collector's Name | PJB/LMG |
| Date & Time Collected | 6/4/96 @ 0930 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 06/6/96 / JM |
| Date of Analysis | 06/6/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 62494 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 21 | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 110 | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 106 |
| Toluene-d8 | 86-119 | 113 |
| Bromoflourobenzene | 85-116 | 105 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Bees, Laboratory Director

Date: 6/24/96
Report Generated

**Navy Public Works Center**
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
'N 922-4728/3642

Client: NPWC Environmental
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

**Analytical Report**
**610 PAH's by Method 8270**

Lab Report Number: 62494
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- **62494** | | |
| Sample Name / Location | MW-8<br>BF - 1159 | | |
| Collector's Name | PJB/LMG | | |
| Date & Time Collected | 6/4/96 @ 0930 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | M. Chambers | | |
| Date of Extraction / Initials | 6/6/96; JJ | | |
| Date of Analysis | 6/10/96 | | |
| Sample Matrix | GW | | |
| Dilution | X 1.1 | | |
| COMPOUND NAME | 1- **62494** | units | Det. Limit |
| Acenaphthene | BDL | UG/L | 6 |
| Acenaphthylene | BDL | UG/L | 6 |
| Anthracene | BDL | UG/L | 2 |
| Benzo(a)anthracene | BDL | UG/L | 3 |
| Benzo(a)pyrene | BDL | UG/L | 2 |
| Benzo(b)flouranthene | BDL | UG/L | 4 |
| Benzo(g,h,i)perylene | BDL | UG/L | 3 |
| Benzo(k)flouranthene | BDL | UG/L | 4 |
| Chrysene | BDL | UG/L | 3 |
| Dibenz(a,h)anthracene | BDL | UG/L | 3 |
| 'louranthene | BDL | UG/L | 2 |
| Flourene | BDL | UG/L | 4 |
| Indeno(1,2,3-cd)pyrene | BDL | UG/L | 2 |
| 1-Methylnaphthalene * | BDL | UG/L | 6 |
| 2-Methylnaphthalene | BDL | UG/L | 8 |
| Naphthalene | BDL | UG/L | 8 |
| Phenanthrene | BDL | UG/L | 3 |
| Pyrene | BDL | UG/L | 3 |

## SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 84 |
| 2-Flourobiphenyl | 43-116 | 81 |
| Terphenyl -d14 | 33-141 | 90 |

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Date/Time : 6/25/96 1145

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report

**Ethylene Dibromide by Method 504**

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 62494 A
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- **62494** | | | |
| Sample Name / Location | MW-8<br>BF - 1159 | | | |
| Collector's Name | PJB/LMG | | | |
| Date & Time Collected | 6/4/96 @ 0930 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 06/12/96 -BJ | | | |
| Date of Analysis | 06/12/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| **Compound Name** | **1- 62494** | **units** | **Det. Limit** | **Flags** |
| **Ethylene Dibromide (EDB)** | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 98 % |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
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Page 1 of 1 End of Report

**Navy Public Works Center**
Environmental Laboratory
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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

# Analytical Report

**601/602 Volatiles by Method 8260**

Lab Report Number: 62495
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 62495 |
| Sample Name / Location | MW-9<br>BF - 1159 |
| Collector's Name | PJB/LMG |
| Date & Time Collected | 6/4/96 @ 0945 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 06/10/96 / JM |
| Date of Analysis | 06/10/96 |
| Sample Matrix | GW |
| Dilution | X 5 |

| Compound Name | 1- 62495 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 5 | |
| Bromodichloromethane | BDL | ug/L | 5 | |
| Bromoform | BDL | ug/L | 10 | |
| Bromomethane | BDL | ug/L | 15 | |
| Carbon Tetrachloride | BDL | ug/L | 5 | |
| Chlorobenzene | BDL | ug/L | 5 | |
| Chloroethane | BDL | ug/L | 5 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 25 | |
| Chloroform | BDL | ug/L | 5 | |
| Chloromethane | BDL | ug/L | 5 | |
| Dibromochloromethane | BDL | ug/L | 5 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 5 | |
| Dichlorodiflouromethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethane | BDL | ug/L | 5 | |
| 1,2-Dichloroethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethene | BDL | ug/L | 5 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 5 | |
| 1,2-Dichloropropane | BDL | ug/L | 5 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 5 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 5 | |
| Ethylbenzene | 15 | ug/L | 5 | |
| Methylene Chloride | BDL | ug/L | 25 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 25 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 5 | |
| Tetrachloroethene | BDL | ug/L | 5 | |
| Toluene | BDL | ug/L | 5 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 5 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 5 | |
| Trichloroethene | BDL | ug/L | 5 | |
| Trichloroflouromethane | BDL | ug/L | 5 | |
| Vinyl Chloride | BDL | ug/L | 5 | |
| Xylenes (Total) | 240 | ug/L | 5 | |

## SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 102 |
| Toluene-d8 | 86-119 | 105 |
| Bromoflourobenzene | 85-116 | 100 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated

**Navy Public Works Center**
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
922-4728/3642

Client: NPWC Environmental
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

**Analytical Report**
**610 PAH's by Method 8270**

Lab Report Number: 62495
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- **62495** | | |
| Sample Name / Location | MW-9<br>BF - 1159 | | |
| Collector's Name | PJB/LMG | | |
| Date & Time Collected | 6/4/96 @ 0945 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | M. Chambers | | |
| Date of Extraction / Initials | 6/6/96; JJ | | |
| Date of Analysis | 6/11/96 | | |
| Sample Matrix | GW | | |
| Dilution | X 1.1 | | |
| COMPOUND NAME | 1- **62495** | units | Det. Limit |
| Acenaphthene | BDL | UG/L | 6 |
| Acenaphthylene | BDL | UG/L | 6 |
| Anthracene | BDL | UG/L | 2 |
| Benzo(a)anthracene | BDL | UG/L | 3 |
| Benzo(a)pyrene | BDL | UG/L | 2 |
| Benzo(b)flouranthene | BDL | UG/L | 4 |
| Benzo(g,h,i)perylene | BDL | UG/L | 3 |
| Benzo(k)flouranthene | BDL | UG/L | 4 |
| Chrysene | BDL | UG/L | 3 |
| Dibenz(a,h)anthracene | BDL | UG/L | 3 |
| uranthene | BDL | UG/L | 2 |
| Flourene | BDL | UG/L | 4 |
| Indeno(1,2,3-cd)pyrene | BDL | UG/L | 2 |
| 1-Methylnaphthalene * | BDL | UG/L | 6 |
| 2-Methylnaphthalene | BDL | UG/L | 8 |
| Naphthalene | BDL | UG/L | 8 |
| Phenanthrene | BDL | UG/L | 3 |
| Pyrene | BDL | UG/L | 3 |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 84 |
| 2-Flourobiphenyl | 43-116 | 85 |
| Terphenyl -d14 | 33-141 | 92 |

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Date/Time : 6/25/96 1145

**Navy Public Works Center**
Environmental Laboratory
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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report

**Ethylene Dibromide by Method 504**

| | |
|---|---|
| Client: | NPWC Environmental |
| Address: | Bldg 3887 |
| | NAS Pensacola, Fl 32508 |
| Phone #: | 452-4728 |
| Contact: | Greg Campbell |

| | |
|---|---|
| Lab Report Number: | 62495 A |
| Sample Date: | 06/4/96 |
| Received Date: | 06/4/96 |
| Sample Site: | Bronson Field |
| Job Order No.: | 130 5001 |

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 62495 | | | |
| Sample Name / Location | MW-9<br>BF - 1159 | | | |
| Collector's Name | PJB/LMG | | | |
| Date & Time Collected | 6/4/96 @ 0945 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 06/12/96 -BJ | | | |
| Date of Analysis | 06/12/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| **Compound Name** | **1- 62495** | **units** | **Det. Limit** | **Flags** |
| **Ethylene Dibromide (EDB)** | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 101 % |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated
Page 1 of 1 End of Report

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

# Analytical Report

**601/602 Volatiles by Method 8260**

Lab Report Number: 62496
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 62496 |
| Sample Name / Location | MW-10<br>BF -1159 |
| Collector's Name | PJB/LMG |
| Date & Time Collected | 6/4/96 @ 1000 |
| Sample Type (composite or grab) | Grab |
| Analyst | J Moore |
| Date of Extraction / Initials | 06/10/96 / JM |
| Date of Analysis | 06/10/96 |
| Sample Matrix | GW |
| Dilution | X 5 |

| Compound Name | 1- 62496 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 5 | |
| Bromodichloromethane | BDL | ug/L | 5 | |
| Bromoform | BDL | ug/L | 10 | |
| Bromomethane | BDL | ug/L | 15 | |
| Carbon Tetrachloride | BDL | ug/L | 5 | |
| Chlorobenzene | BDL | ug/L | 5 | |
| Chloroethane | BDL | ug/L | 5 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 25 | |
| Chloroform | BDL | ug/L | 5 | |
| Chloromethane | BDL | ug/L | 5 | |
| Dibromochloromethane | BDL | ug/L | 5 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 5 | |
| Dichlorodiflouromethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethane | BDL | ug/L | 5 | |
| 1,2-Dichloroethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethene | BDL | ug/L | 5 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 5 | |
| 1,2-Dichloropropane | BDL | ug/L | 5 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 5 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 5 | |
| Ethylbenzene | BDL | ug/L | 5 | |
| Methylene Chloride | BDL | ug/L | 25 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 25 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 5 | |
| Tetrachloroethene | BDL | ug/L | 5 | |
| Toluene | BDL | ug/L | 5 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 5 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 5 | |
| Trichloroethene | BDL | ug/L | 5 | |
| Trichloroflouromethane | BDL | ug/L | 5 | |
| Vinyl Chloride | BDL | ug/L | 5 | |
| Xylenes (Total) | BDL | ug/L | 5 | |

## SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 104 |
| Toluene-d8 | 86-119 | 106 |
| Bromoflourobenzene | 85-116 | 102 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated

**Navy Public Works Center**
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
N 922-4728/3642

Client: NPWC Environmental
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

**Analytical Report**
**610 PAH's by Method 8270**

Lab Report Number: 62496
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- **62496** | | |
| Sample Name / Location | MW-10<br>BF -1159 | | |
| Collector's Name | PJB/LMG | | |
| Date & Time Collected | 6/4/96 @ 1000 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | M. Chambers | | |
| Date of Extraction / Initials | 6/6/96; JJ | | |
| Date of Analysis | 6/11/96 | | |
| Sample Matrix | GW | | |
| Dilution | X 1.15 | | |
| COMPOUND NAME | 1- **62496** | units | Det. Limit |
| Acenaphthene | BDL | UG/L | 6 |
| Acenaphthylene | BDL | UG/L | 6 |
| Anthracene | BDL | UG/L | 2 |
| Benzo(a)anthracene | BDL | UG/L | 3 |
| Benzo(a)pyrene | BDL | UG/L | 2 |
| Benzo(b)flouranthene | BDL | UG/L | 5 |
| Benzo(g,h,i)perylene | BDL | UG/L | 3 |
| Benzo(k)flouranthene | BDL | UG/L | 5 |
| Chrysene | BDL | UG/L | 3 |
| Dibenz(a,h)anthracene | BDL | UG/L | 3 |
| uranthene | BDL | UG/L | 2 |
| Flourene | BDL | UG/L | 5 |
| Indeno(1,2,3-cd)pyrene | BDL | UG/L | 2 |
| 1-Methylnaphthalene * | BDL | UG/L | 6 |
| 2-Methylnaphthalene | BDL | UG/L | 8 |
| Naphthalene | BDL | UG/L | 8 |
| Phenanthrene | BDL | UG/L | 3 |
| Pyrene | BDL | UG/L | 3 |

## SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 77 |
| 2-Flourobiphenyl | 43-116 | 75 |
| Terphenyl -d14 | 33-141 | 81 |

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Date/Time : 6/25/96 1145

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report

**Ethylene Dibromide by Method 504**

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 62496 A
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 62496 | | | |
| Sample Name / Location | MW-10<br>BF -1159 | | | |
| Collector's Name | PJB/LMG | | | |
| Date & Time Collected | 6/4/96 @ 1000 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 06/12/96 -BJ | | | |
| Date of Analysis | 06/12/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| **Compound Name** | **1- 62496** | **units** | **Det. Limit** | **Flags** |
| **Ethylene Dibromide (EDB)** | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 87 % |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
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Page 1 of 1 End of Report

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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

# Analytical Report

## 601/602 Volatiles by Method 8260

Lab Report Number: 62497
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 62497 |
| Sample Name / Location | MW-11<br>BF -1159 |
| Collector's Name | PJB/LMG |
| Date & Time Collected | 6/4/96 @ 1015 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 06/10/96 / JM |
| Date of Analysis | 06/10/96 |
| Sample Matrix | GW |
| Dilution | X 5 |

| Compound Name | 1- 62497 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 5 | |
| Bromodichloromethane | BDL | ug/L | 5 | |
| Bromoform | BDL | ug/L | 10 | |
| Bromomethane | BDL | ug/L | 15 | |
| Carbon Tetrachloride | BDL | ug/L | 5 | |
| Chlorobenzene | BDL | ug/L | 5 | |
| Chloroethane | BDL | ug/L | 5 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 25 | |
| Chloroform | BDL | ug/L | 5 | |
| Chloromethane | BDL | ug/L | 5 | |
| Dibromochloromethane | BDL | ug/L | 5 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 5 | |
| Dichlorodiflouromethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethane | BDL | ug/L | 5 | |
| 1,2-Dichloroethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethene | BDL | ug/L | 5 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 5 | |
| 1,2-Dichloropropane | BDL | ug/L | 5 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 5 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 5 | |
| Ethylbenzene | BDL | ug/L | 5 | |
| Methylene Chloride | BDL | ug/L | 25 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 25 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 5 | |
| Tetrachloroethene | BDL | ug/L | 5 | |
| Toluene | BDL | ug/L | 5 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 5 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 5 | |
| Trichloroethene | BDL | ug/L | 5 | |
| Trichloroflouromethane | BDL | ug/L | 5 | |
| Vinyl Chloride | BDL | ug/L | 5 | |
| Xylenes (Total) | 20 | ug/L | 5 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 102 |
| Toluene-d8 | 86-119 | 110 |
| Bromoflourobenzene | 85-116 | 103 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
N 922-4728/3642

Client: NPWC Environmental
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

Lab Report Number: 62497
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- **62497** | | |
| Sample Name / Location | MW-11<br>BF -1159 | | |
| Collector's Name | PJB/LMG | | |
| Date & Time Collected | 6/4/96 @ 1015 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | M. Chambers | | |
| Date of Extraction / Initials | 6/6/96; JJ | | |
| Date of Analysis | 6/11/96 | | |
| Sample Matrix | GW | | |
| Dilution | X 1.1 | | |
| COMPOUND NAME | 1- **62497** | units | Det. Limit |
| Acenaphthene | BDL | UG/L | 6 |
| Acenaphthylene | BDL | UG/L | 6 |
| Anthracene | BDL | UG/L | 2 |
| Benzo(a)anthracene | BDL | UG/L | 3 |
| Benzo(a)pyrene | BDL | UG/L | 2 |
| Benzo(b)flouranthene | BDL | UG/L | 4 |
| Benzo(g,h,i)perylene | BDL | UG/L | 3 |
| Benzo(k)flouranthene | BDL | UG/L | 4 |
| Chrysene | BDL | UG/L | 3 |
| Dibenz(a,h)anthracene | BDL | UG/L | 3 |
| uranthene | BDL | UG/L | 2 |
| Flourene | BDL | UG/L | 4 |
| Indeno(1,2,3-cd)pyrene | BDL | UG/L | 2 |
| 1-Methylnaphthalene * | BDL | UG/L | 6 |
| 2-Methylnaphthalene | BDL | UG/L | 8 |
| Naphthalene | BDL | UG/L | 8 |
| Phenanthrene | BDL | UG/L | 3 |
| Pyrene | BDL | UG/L | 3 |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 71 |
| 2-Flourobiphenyl | 43-116 | 70 |
| Terphenyl -d14 | 33-141 | 77 |

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Date/Time : 6/25/96 1145

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Environmental Laboratory
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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report

**Ethylene Dibromide by Method 504**

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 62497 A
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 62497 | | | |
| Sample Name / Location | MW-11<br>BF -1159 | | | |
| Collector's Name | PJB/LMG | | | |
| Date & Time Collected | 6/4/96 @ 1015 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 06/12/96 -BJ | | | |
| Date of Analysis | 06/12/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| **Compound Name** | **1- 62497** | **units** | **Det. Limit** | **Flags** |
| **Ethylene Dibromide (EDB)** | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 85 % |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated
Page 1 of 1 End of Report

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Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

# Analytical Report

**601/602 Volatiles by Method 8260**

Lab Report Number: 62498
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 62498 | | | |
| Sample Name / Location | MW-12 BF -1159 | | | |
| Collector's Name | PJB/LMG | | | |
| Date & Time Collected | 6/4/96 @ 1030 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 06/10/96 / JM | | | |
| Date of Analysis | 06/10/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | | X | 5 | |
| **Compound Name** | **1- 62498** | **units** | **Det. Limit** | **Flags** |
| Benzene | BDL | ug/L | 5 | |
| Bromodichloromethane | BDL | ug/L | 5 | |
| Bromoform | BDL | ug/L | 10 | |
| Bromomethane | BDL | ug/L | 15 | |
| Carbon Tetrachloride | BDL | ug/L | 5 | |
| Chlorobenzene | BDL | ug/L | 5 | |
| Chloroethane | BDL | ug/L | 5 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 25 | |
| Chloroform | BDL | ug/L | 5 | |
| Chloromethane | BDL | ug/L | 5 | |
| Dibromochloromethane | BDL | ug/L | 5 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 5 | |
| Dichlorodiflouromethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethane | BDL | ug/L | 5 | |
| 1,2-Dichloroethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethene | BDL | ug/L | 5 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 5 | |
| 1,2-Dichloropropane | BDL | ug/L | 5 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 5 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 5 | |
| Ethylbenzene | 30 | ug/L | 5 | |
| Methylene Chloride | BDL | ug/L | 25 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 25 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 5 | |
| Tetrachloroethene | BDL | ug/L | 5 | |
| Toluene | BDL | ug/L | 5 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 5 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 5 | |
| Trichloroethene | BDL | ug/L | 5 | |
| Trichloroflouromethane | BDL | ug/L | 5 | |
| Vinyl Chloride | BDL | ug/L | 5 | |
| Xylenes (Total) | 100 | ug/L | 5 | |

## SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 104 |
| Toluene-d8 | 86-119 | 109 |
| Bromoflourobenzene | 85-116 | 105 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
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Client: NPWC Environmental
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Phone 452-4728
Contac Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

Lab Report Number: 62498
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- **62498** | | |
| Sample Name / Location | MW-12<br>BF -1159 | | |
| Collector's Name | PJB/LMG | | |
| Date & Time Collected | 6/4/96 @ 1030 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | M. Chambers | | |
| Date of Extraction / Initials | 6/6/96; JJ | | |
| Date of Analysis | 6/11/96 | | |
| Sample Matrix | GW | | |
| Dilution | X 1.2 | | |
| COMPOUND NAME | 1- **62498** | units | Det. Limit |
| Acenaphthene | BDL | UG/L | 6 |
| Acenaphthylene | BDL | UG/L | 6 |
| Anthracene | BDL | UG/L | 2 |
| Benzo(a)anthracene | BDL | UG/L | 4 |
| Benzo(a)pyrene | BDL | UG/L | 2 |
| Benzo(b)flouranthene | BDL | UG/L | 5 |
| Benzo(g,h,i)perylene | BDL | UG/L | 4 |
| Benzo(k)flouranthene | BDL | UG/L | 5 |
| Chrysene | BDL | UG/L | 4 |
| Dibenz(a,h)anthracene | BDL | UG/L | 4 |
| uranthene | BDL | UG/L | 2 |
| Flourene | BDL | UG/L | 5 |
| Indeno(1,2,3-cd)pyrene | BDL | UG/L | 2 |
| 1-Methylnaphthalene * | BDL | UG/L | 6 |
| 2-Methylnaphthalene | BDL | UG/L | 8 |
| Naphthalene | BDL | UG/L | 8 |
| Phenanthrene | BDL | UG/L | 4 |
| Pyrene | BDL | UG/L | 4 |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 76 |
| 2-Flourobiphenyl | 43-116 | 79 |
| Terphenyl -d14 | 33-141 | 90 |

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Date/Time : 6/25/96 1145

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DSN 922-4728/3642

# Analytical Report

**Ethylene Dibromide by Method 504**

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 62498 A
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 62498 | | | |
| Sample Name / Location | MW-12<br>BF -1159 | | | |
| Collector's Name | PJB/LMG | | | |
| Date & Time Collected | 6/4/96 @ 1030 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 06/12/96 -BJ | | | |
| Date of Analysis | 06/12/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| **Compound Name** | **1- 62498** | **units** | **Det. Limit** | **Flags** |
| **Ethylene Dibromide (EDB)** | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 91 % |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Daes, Laboratory Director

Date: 6/24/96
Report Generated
Page 1 of 1 End of Report

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DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

# Analytical Report

## 601/602 Volatiles by Method 8260

Lab Report Number: 62499
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 62499 |
| Sample Name / Location | MW-13<br>BF-1159 |
| Collector's Name | PJB/LMG |
| Date & Time Collected | 6/4/96 @ 1045 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 06/10/96 / JM |
| Date of Analysis | 06/10/96 |
| Sample Matrix | GW |
| Dilution | X 5 |

| Compound Name | 1- 62499 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 5 | |
| Bromodichloromethane | BDL | ug/L | 5 | |
| Bromoform | BDL | ug/L | 10 | |
| Bromomethane | BDL | ug/L | 15 | |
| Carbon Tetrachloride | BDL | ug/L | 5 | |
| Chlorobenzene | BDL | ug/L | 5 | |
| Chloroethane | BDL | ug/L | 5 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 25 | |
| Chloroform | BDL | ug/L | 5 | |
| Chloromethane | BDL | ug/L | 5 | |
| Dibromochloromethane | BDL | ug/L | 5 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 5 | |
| Dichlorodiflouromethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethane | BDL | ug/L | 5 | |
| 1,2-Dichloroethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethene | BDL | ug/L | 5 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 5 | |
| 1,2-Dichloropropane | BDL | ug/L | 5 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 5 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 5 | |
| Ethylbenzene | BDL | ug/L | 5 | |
| Methylene Chloride | BDL | ug/L | 25 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 25 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 5 | |
| Tetrachloroethene | BDL | ug/L | 5 | |
| Toluene | BDL | ug/L | 5 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 5 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 5 | |
| Trichloroethene | BDL | ug/L | 5 | |
| Trichloroflouromethane | BDL | ug/L | 5 | |
| Vinyl Chloride | BDL | ug/L | 5 | |
| Xylenes (Total) | BDL | ug/L | 5 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 103 |
| Toluene-d8 | 86-119 | 104 |
| Bromoflourobenzene | 85-116 | 103 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated

**Navy Public Works Center**
Environmental Laboratory

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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
922-4728/3642

Client: NPWC Environmental
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

**Analytical Report**
**610 PAH's by Method 8270**

Lab Report Number: 62499
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- **62499** | | |
| Sample Name / Location | MW-13<br>BF-1159 | | |
| Collector's Name | PJB/LMG | | |
| Date & Time Collected | 6/4/96 @ 1045 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | M. Chambers | | |
| Date of Extraction / Initials | 6/6/96; JJ | | |
| Date of Analysis | 6/11/96 | | |
| Sample Matrix | GW | | |
| Dilution | X 1.2 | | |
| COMPOUND NAME | 1- **62499** | units | Det. Limit |
| Acenaphthene | BDL | UG/L | 6 |
| Acenaphthylene | BDL | UG/L | 6 |
| Anthracene | BDL | UG/L | 2 |
| Benzo(a)anthracene | BDL | UG/L | 4 |
| Benzo(a)pyrene | BDL | UG/L | 2 |
| Benzo(b)flouranthene | BDL | UG/L | 5 |
| Benzo(g,h,i)perylene | BDL | UG/L | 4 |
| Benzo(k)flouranthene | BDL | UG/L | 5 |
| Chrysene | BDL | UG/L | 4 |
| Dibenz(a,h)anthracene | BDL | UG/L | 4 |
| uranthene | BDL | UG/L | 2 |
| Flourene | BDL | UG/L | 5 |
| Indeno(1,2,3-cd)pyrene | BDL | UG/L | 2 |
| 1-Methylnaphthalene * | BDL | UG/L | 6 |
| 2-Methylnaphthalene | BDL | UG/L | 8 |
| Naphthalene | BDL | UG/L | 8 |
| Phenanthrene | BDL | UG/L | 4 |
| Pyrene | BDL | UG/L | 4 |

## SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 72 |
| 2-Flourobiphenyl | 43-116 | 64 |
| Terphenyl -d14 | 33-141 | 76 |

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Date/Time : 6/25/96 1145

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Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report

**Ethylene Dibromide by Method 504**

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 62499 A
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 62499 | | | |
| Sample Name / Location | MW-13<br>BF-1159 | | | |
| Collector's Name | PJB/LMG | | | |
| Date & Time Collected | 6/4/96 @ 1045 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 06/12/96 -BJ | | | |
| Date of Analysis | 06/12/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | | x | 1 | |
| **Compound Name** | **1- 62499** | **units** | **Det. Limit** | **Flags** |
| **Ethylene Dibromide (EDB)** | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 96 % |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Rees, Laboratory Director

Date: 6/24/96
Report Generated
Page 1 of 1 End of Report

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Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
**601/602 Volatiles by Method 8260**

Lab Report Number: 62500
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 62500 |
| Sample Name / Location | MW-14<br>BF - 1159 |
| Collector's Name | PJB/LMG |
| Date & Time Collected | 6/4/96 @ 1100 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 06/10/96 / JM |
| Date of Analysis | 06/10/96 |
| Sample Matrix | GW |
| Dilution | X 5 |

| Compound Name | 1- 62500 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 5 | |
| Bromodichloromethane | 8 | ug/L | 5 | |
| Bromoform | BDL | ug/L | 10 | |
| Bromomethane | BDL | ug/L | 15 | |
| Carbon Tetrachloride | BDL | ug/L | 5 | |
| Chlorobenzene | BDL | ug/L | 5 | |
| Chloroethane | BDL | ug/L | 5 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 25 | |
| Chloroform | BDL | ug/L | 5 | |
| Chloromethane | BDL | ug/L | 5 | |
| Dibromochloromethane | BDL | ug/L | 5 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 5 | |
| Dichlorodiflouromethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethane | BDL | ug/L | 5 | |
| 1,2-Dichloroethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethene | BDL | ug/L | 5 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 5 | |
| 1,2-Dichloropropane | BDL | ug/L | 5 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 5 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 5 | |
| Ethylbenzene | 33 | ug/L | 5 | |
| Methylene Chloride | BDL | ug/L | 25 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 25 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 5 | |
| Tetrachloroethene | BDL | ug/L | 5 | |
| Toluene | 8 | ug/L | 5 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 5 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 5 | |
| Trichloroethene | BDL | ug/L | 5 | |
| Trichloroflouromethane | BDL | ug/L | 5 | |
| Vinyl Chloride | BDL | ug/L | 5 | |
| Xylenes (Total) | 250 | ug/L | 5 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 104 |
| Toluene-d8 | 86-119 | 111 |
| Bromoflourobenzene | 85-116 | 101 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Bees, Laboratory Director

Date: 6/24/96
Report Generated

 End of Report

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
922-4728/3642

Client: NPWC Environmental
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

Lab Report Number: 62500
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- **62500** | | |
| Sample Name / Location | MW-14<br>BF - 1159 | | |
| Collector's Name | PJB/LMG | | |
| Date & Time Collected | 6/4/96 @ 1100 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | M. Chambers | | |
| Date of Extraction / Initials | 6/6/96; JJ | | |
| Date of Analysis | 6/13/96 | | |
| Sample Matrix | GW | | |
| Dilution | X 1.2 | | |
| COMPOUND NAME | 1- **62500** | units | Det. Limit |
| Acenaphthene | BDL | UG/L | 6 |
| Acenaphthylene | BDL | UG/L | 6 |
| Anthracene | BDL | UG/L | 2 |
| Benzo(a)anthracene | BDL | UG/L | 4 |
| Benzo(a)pyrene | BDL | UG/L | 2 |
| Benzo(b)flouranthene | BDL | UG/L | 5 |
| Benzo(g,h,i)perylene | BDL | UG/L | 4 |
| Benzo(k)flouranthene | BDL | UG/L | 5 |
| Chrysene | BDL | UG/L | 4 |
| Dibenz(a,h)anthracene | BDL | UG/L | 4 |
| ouranthene | BDL | UG/L | 2 |
| Flourene | BDL | UG/L | 5 |
| Indeno(1,2,3-cd)pyrene | BDL | UG/L | 2 |
| 1-Methylnaphthalene * | BDL | UG/L | 6 |
| 2-Methylnaphthalene | BDL | UG/L | 8 |
| Naphthalene | BDL | UG/L | 8 |
| Phenanthrene | BDL | UG/L | 4 |
| Pyrene | BDL | UG/L | 4 |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 52 |
| 2-Flourobiphenyl | 43-116 | 49 |
| Terphenyl -d14 | 33-141 | 60 |

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Date/Time : 6/25/96 1145

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report

**Ethylene Dibromide by Method 504**

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 62500 A
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 62500 | | | |
| Sample Name / Location | MW-14<br>BF - 1159 | | | |
| Collector's Name | PJB/LMG | | | |
| Date & Time Collected | 6/4/96 @ 1100 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 06/13/96 -BJ | | | |
| Date of Analysis | 06/13/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| **Compound Name** | **1- 62500** | **units** | **Det. Limit** | **Flags** |
| **Ethylene Dibromide (EDB)** | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 83 % |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated
Page 1 of 1 End of Report

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Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

# Analytical Report

## 601/602 Volatiles by Method 8260

Lab Report Number: 62501
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 62501 | | | |
| Sample Name / Location | MW-15 BF -1159 | | | |
| Collector's Name | PJB/LMG | | | |
| Date & Time Collected | 6/4/96 @ 1115 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 06/10/96 / JM | | | |
| Date of Analysis | 06/10/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | | X | 5 | |
| **Compound Name** | **1- 62501** | **units** | **Det. Limit** | **Flags** |
| Benzene | BDL | ug/L | 5 | |
| Bromodichloromethane | 5 | ug/L | 5 | |
| Bromoform | BDL | ug/L | 10 | |
| Bromomethane | BDL | ug/L | 15 | |
| Carbon Tetrachloride | BDL | ug/L | 5 | |
| Chlorobenzene | BDL | ug/L | 5 | |
| Chloroethane | BDL | ug/L | 5 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 25 | |
| Chloroform | BDL | ug/L | 5 | |
| Chloromethane | BDL | ug/L | 5 | |
| Dibromochloromethane | BDL | ug/L | 5 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 5 | |
| Dichlorodiflouromethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethane | BDL | ug/L | 5 | |
| 1,2-Dichloroethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethene | BDL | ug/L | 5 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 5 | |
| 1,2-Dichloropropane | BDL | ug/L | 5 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 5 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 5 | |
| Ethylbenzene | 8 | ug/L | 5 | |
| Methylene Chloride | BDL | ug/L | 25 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 25 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 5 | |
| Tetrachloroethene | BDL | ug/L | 5 | |
| Toluene | 9 | ug/L | 5 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 5 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 5 | |
| Trichloroethene | BDL | ug/L | 5 | |
| Trichloroflouromethane | BDL | ug/L | 5 | |
| Vinyl Chloride | BDL | ug/L | 5 | |
| Xylenes (Total) | 120 | ug/L | 5 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 105 |
| Toluene-d8 | 86-119 | 109 |
| Bromoflourobenzene | 85-116 | 102 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated

 End of Report

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**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
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Phone (904) 452-4728/3642
N 922-4728/3642

Client: NPWC Environmental
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

Lab Report Number: 62501
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **62501** |
| Sample Name / Location | MW-15<br>BF -1159 |
| Collector's Name | PJB/LMG |
| Date & Time Collected | 6/4/96 @ 1115 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 6/6/96; JJ |
| Date of Analysis | 6/13/96 |
| Sample Matrix | GW |
| Dilution | X 1.1 |

| COMPOUND NAME | 1- **62501** | units | Det. Limit |
|---|---|---|---|
| Acenaphthene | BDL | UG/L | 6 |
| Acenaphthylene | BDL | UG/L | 6 |
| Anthracene | BDL | UG/L | 2 |
| Benzo(a)anthracene | BDL | UG/L | 3 |
| Benzo(a)pyrene | BDL | UG/L | 2 |
| Benzo(b)flouranthene | BDL | UG/L | 4 |
| Benzo(g,h,i)perylene | BDL | UG/L | 3 |
| Benzo(k)flouranthene | BDL | UG/L | 4 |
| Chrysene | BDL | UG/L | 3 |
| Dibenz(a,h)anthracene | BDL | UG/L | 3 |
| 'ouranthene | BDL | UG/L | 2 |
| Flourene | BDL | UG/L | 4 |
| Indeno(1,2,3-cd)pyrene | BDL | UG/L | 2 |
| 1-Methylnaphthalene * | BDL | UG/L | 6 |
| 2-Methylnaphthalene | BDL | UG/L | 8 |
| Naphthalene | BDL | UG/L | 8 |
| Phenanthrene | BDL | UG/L | 3 |
| Pyrene | BDL | UG/L | 3 |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 48 |
| 2-Flourobiphenyl | 43-116 | 49 |
| Terphenyl -d14 | 33-141 | 51 |

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Date/Time : 6/25/96 1145

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Environmental Laboratory
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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report

**Ethylene Dibromide by Method 504**

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 62501 A
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 62501 | | | |
| Sample Name / Location | MW-15<br>BF -1159 | | | |
| Collector's Name | PJB/LMG | | | |
| Date & Time Collected | 6/4/96 @ 1115 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 06/13/96 -BJ | | | |
| Date of Analysis | 06/13/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| **Compound Name** | **1- 62501** | **units** | **Det. Limit** | **Flags** |
| **Ethylene Dibromide (EDB)** | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 79 % |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Deas, Laboratory Director

Date: 6/24/96
Report Generated
Page 1 of 1 End of Report

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

# Analytical Report

**601/602 Volatiles by Method 8260**

Lab Report Number: 62502
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 62502 |
| Sample Name / Location | MW-16<br>BF -1159 |
| Collector's Name | PJB/LMG |
| Date & Time Collected | 6/4/96 @ 1130 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 06/11/96 / JM |
| Date of Analysis | 06/11/96 |
| Sample Matrix | GW |
| Dilution | X 5 |

| Compound Name | 1- 62502 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 5 | |
| Bromodichloromethane | BDL | ug/L | 5 | |
| Bromoform | BDL | ug/L | 10 | |
| Bromomethane | BDL | ug/L | 15 | |
| Carbon Tetrachloride | BDL | ug/L | 5 | |
| Chlorobenzene | BDL | ug/L | 5 | |
| Chloroethane | BDL | ug/L | 5 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 25 | |
| Chloroform | BDL | ug/L | 5 | |
| Chloromethane | BDL | ug/L | 5 | |
| Dibromochloromethane | BDL | ug/L | 5 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 5 | |
| Dichlorodiflouromethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethane | BDL | ug/L | 5 | |
| 1,2-Dichloroethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethene | BDL | ug/L | 5 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 5 | |
| 1,2-Dichloropropane | BDL | ug/L | 5 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 5 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 5 | |
| Ethylbenzene | 8 | ug/L | 5 | |
| Methylene Chloride | BDL | ug/L | 25 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 25 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 5 | |
| Tetrachloroethene | BDL | ug/L | 5 | |
| Toluene | BDL | ug/L | 5 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 5 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 5 | |
| Trichloroethene | BDL | ug/L | 5 | |
| Trichloroflouromethane | BDL | ug/L | 5 | |
| Vinyl Chloride | BDL | ug/L | 5 | |
| Xylenes (Total) | 220 | ug/L | 5 | |

## SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 102 |
| Toluene-d8 | 86-119 | 110 |
| Bromoflourobenzene | 85-116 | 101 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Deos, Laboratory Director

Date: 6/24/96
Report Generated

 End of Report

D-65

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
N 922-4728/3642

Client: NPWC Environmental
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

Lab Report Number: 62502
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- **62502** | | |
| Sample Name / Location | MW-16<br>BF -1159 | | |
| Collector's Name | PJB/LMG | | |
| Date & Time Collected | 6/4/96 @ 1130 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | M. Chambers | | |
| Date of Extraction / Initials | 6/6/96; JJ | | |
| Date of Analysis | 6/13/96 | | |
| Sample Matrix | GW | | |
| Dilution | X 1.1 | | |
| COMPOUND NAME | 1- **62502** | units | Det. Limit |
| Acenaphthene | BDL | UG/L | 6 |
| Acenaphthylene | BDL | UG/L | 6 |
| Anthracene | BDL | UG/L | 2 |
| Benzo(a)anthracene | BDL | UG/L | 3 |
| Benzo(a)pyrene | BDL | UG/L | 2 |
| Benzo(b)flouranthene | BDL | UG/L | 4 |
| Benzo(g,h,i)perylene | BDL | UG/L | 3 |
| Benzo(k)flouranthene | BDL | UG/L | 4 |
| Chrysene | BDL | UG/L | 3 |
| Dibenz(a,h)anthracene | BDL | UG/L | 3 |
| 'ouranthene | BDL | UG/L | 2 |
| Flourene | BDL | UG/L | 4 |
| Indeno(1,2,3-cd)pyrene | BDL | UG/L | 2 |
| 1-Methylnaphthalene * | BDL | UG/L | 6 |
| 2-Methylnaphthalene | BDL | UG/L | 8 |
| Naphthalene | BDL | UG/L | 8 |
| Phenanthrene | BDL | UG/L | 3 |
| Pyrene | BDL | UG/L | 3 |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 55 |
| 2-Flourobiphenyl | 43-116 | 47 |
| Terphenyl -d14 | 33-141 | 55 |

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Date/Time : 6/25/96 1145

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report

**Ethylene Dibromide by Method 504**

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 62502 A
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 62502 | | | |
| Sample Name / Location | MW-16<br>BF -1159 | | | |
| Collector's Name | PJB/LMG | | | |
| Date & Time Collected | 6/4/96 @ 1130 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 06/13/96 -BJ | | | |
| Date of Analysis | 06/13/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| **Compound Name** | **1- 62502** | **units** | **Det. Limit** | **Flags** |
| **Ethylene Dibromide (EDB)** | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 77 % |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Lees, Laboratory Director

Date: 6/24/96
Report Generated
Page 1 of 1 End of Report

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Environmental Laboratory
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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

# Analytical Report

## 601/602 Volatiles by Method 8260

Lab Report Number: 62503
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 62503 |
| Sample Name / Location | MW-17<br>BF -1159 |
| Collector's Name | PJB/LMG |
| Date & Time Collected | 6/4/96 @ 1145 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 06/11/96 / JM |
| Date of Analysis | 06/11/96 |
| Sample Matrix | GW |
| Dilution | X 5 |

| Compound Name | 1- 62503 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 5 | |
| Bromodichloromethane | BDL | ug/L | 5 | |
| Bromoform | BDL | ug/L | 10 | |
| Bromomethane | BDL | ug/L | 15 | |
| Carbon Tetrachloride | BDL | ug/L | 5 | |
| Chlorobenzene | BDL | ug/L | 5 | |
| Chloroethane | BDL | ug/L | 5 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 25 | |
| Chloroform | BDL | ug/L | 5 | |
| Chloromethane | BDL | ug/L | 5 | |
| Dibromochloromethane | BDL | ug/L | 5 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 5 | |
| Dichlorodiflouromethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethane | BDL | ug/L | 5 | |
| 1,2-Dichloroethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethene | BDL | ug/L | 5 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 5 | |
| 1,2-Dichloropropane | BDL | ug/L | 5 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 5 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 5 | |
| Ethylbenzene | 50 | ug/L | 5 | |
| Methylene Chloride | BDL | ug/L | 25 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 25 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 5 | |
| Tetrachloroethene | BDL | ug/L | 5 | |
| Toluene | 19 | ug/L | 5 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 5 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 5 | |
| Trichloroethene | BDL | ug/L | 5 | |
| Trichloroflouromethane | BDL | ug/L | 5 | |
| Vinyl Chloride | BDL | ug/L | 5 | |
| Xylenes (Total) | 410 | ug/L | 5 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 102 |
| Toluene-d8 | 86-119 | 109 |
| Bromoflourobenzene | 85-116 | 102 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated

**Navy Public Works Center**
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
√ 922-4728/3642

Client: NPWC Environmental
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

Lab Report Number: 62503
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- **62503** | | |
| Sample Name / Location | MW-17<br>BF -1159 | | |
| Collector's Name | PJB/LMG | | |
| Date & Time Collected | 6/4/96 @ 1145 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | M. Chambers | | |
| Date of Extraction / Initials | 6/6/96; JJ | | |
| Date of Analysis | 6/12/96 | | |
| Sample Matrix | GW | | |
| Dilution | X 1.2 | | |
| COMPOUND NAME | 1- **62503** | units | Det. Limit |
| Acenaphthene | BDL | UG/L | 6 |
| Acenaphthylene | BDL | UG/L | 6 |
| Anthracene | BDL | UG/L | 2 |
| Benzo(a)anthracene | BDL | UG/L | 4 |
| Benzo(a)pyrene | BDL | UG/L | 2 |
| Benzo(b)flouranthene | BDL | UG/L | 5 |
| Benzo(g,h,i)perylene | BDL | UG/L | 4 |
| Benzo(k)flouranthene | BDL | UG/L | 5 |
| Chrysene | BDL | UG/L | 4 |
| Dibenz(a,h)anthracene | BDL | UG/L | 4 |
| ouranthene | BDL | UG/L | 2 |
| Flourene | BDL | UG/L | 5 |
| Indeno(1,2,3-cd)pyrene | BDL | UG/L | 2 |
| 1-Methylnaphthalene * | BDL | UG/L | 6 |
| 2-Methylnaphthalene | BDL | UG/L | 8 |
| Naphthalene | BDL | UG/L | 8 |
| Phenanthrene | BDL | UG/L | 4 |
| Pyrene | BDL | UG/L | 4 |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 64 |
| 2-Flourobiphenyl | 43-116 | 61 |
| Terphenyl -d14 | 33-141 | 70 |

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Greg Campbell Date/Time : 6/12/96 1145

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Environmental Laboratory
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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report

**Ethylene Dibromide by Method 504**

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 62503 A
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 62503 | | | |
| Sample Name / Location | MW-17<br>BF -1159 | | | |
| Collector's Name | PJB/LMG | | | |
| Date & Time Collected | 6/4/96 @ 1145 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 06/13/96 -BJ | | | |
| Date of Analysis | 06/13/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| **Compound Name** | **1- 62503** | **units** | **Det. Limit** | **Flags** |
| **Ethylene Dibromide (EDB)** | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 78 % |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated

Page 1 of 1 End of Report

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
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DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

# Analytical Report

**601/602 Volatiles by Method 8260**

Lab Report Number: 62504
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 62504 |
| Sample Name / Location | MW-18<br>BF - 1159 |
| Collector's Name | PJB/LMG |
| Date & Time Collected | 6/4/96 @ 1200 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 06/11/96 / JM |
| Date of Analysis | 06/11/96 |
| Sample Matrix | GW |
| Dilution | X 5 |

| Compound Name | 1- 62504 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 5 | |
| Bromodichloromethane | BDL | ug/L | 5 | |
| Bromoform | BDL | ug/L | 10 | |
| Bromomethane | BDL | ug/L | 15 | |
| Carbon Tetrachloride | BDL | ug/L | 5 | |
| Chlorobenzene | BDL | ug/L | 5 | |
| Chloroethane | BDL | ug/L | 5 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 25 | |
| Chloroform | BDL | ug/L | 5 | |
| Chloromethane | BDL | ug/L | 5 | |
| Dibromochloromethane | BDL | ug/L | 5 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 5 | |
| Dichlorodiflouromethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethane | BDL | ug/L | 5 | |
| 1,2-Dichloroethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethene | BDL | ug/L | 5 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 5 | |
| 1,2-Dichloropropane | BDL | ug/L | 5 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 5 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 5 | |
| Ethylbenzene | 15 | ug/L | 5 | |
| Methylene Chloride | BDL | ug/L | 25 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 25 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 5 | |
| Tetrachloroethene | BDL | ug/L | 5 | |
| Toluene | 6 | ug/L | 5 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 5 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 5 | |
| Trichloroethene | BDL | ug/L | 5 | |
| Trichloroflouromethane | BDL | ug/L | 5 | |
| Vinyl Chloride | BDL | ug/L | 5 | |
| Xylenes (Total) | 93 | ug/L | 5 | |

## SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 100 |
| Toluene-d8 | 86-119 | 110 |
| Bromoflourobenzene | 85-116 | 100 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 6/25/96
Report Generated

**Navy Public Works Center**
Environmental Laboratory

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Client: NPWC Environmental
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

**Analytical Report**
**610 PAH's by Method 8270**

Lab Report Number: 62504
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- **62504** | | |
| Sample Name / Location | MW-18<br>BF - 1159 | | |
| Collector's Name | PJB/LMG | | |
| Date & Time Collected | 6/4/96 @ 1200 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | M. Chambers | | |
| Date of Extraction / Initials | 6/6/96; JJ | | |
| Date of Analysis | 6/13/96 | | |
| Sample Matrix | GW | | |
| Dilution | | X | 1.2 |
| COMPOUND NAME | 1- **62504** | units | Det. Limit |
| Acenaphthene | BDL | UG/L | 6 |
| Acenaphthylene | BDL | UG/L | 6 |
| Anthracene | BDL | UG/L | 2 |
| Benzo(a)anthracene | BDL | UG/L | 4 |
| Benzo(a)pyrene | BDL | UG/L | 2 |
| Benzo(b)flouranthene | BDL | UG/L | 5 |
| Benzo(g,h,i)perylene | BDL | UG/L | 4 |
| Benzo(k)flouranthene | BDL | UG/L | 5 |
| Chrysene | BDL | UG/L | 4 |
| Dibenz(a,h)anthracene | BDL | UG/L | 4 |
| uranthene | BDL | UG/L | 2 |
| Flourene | BDL | UG/L | 5 |
| Indeno(1,2,3-cd)pyrene | BDL | UG/L | 2 |
| 1-Methylnaphthalene * | BDL | UG/L | 6 |
| 2-Methylnaphthalene | BDL | UG/L | 8 |
| Naphthalene | BDL | UG/L | 8 |
| Phenanthrene | BDL | UG/L | 4 |
| Pyrene | BDL | UG/L | 4 |

## SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 37 |
| 2-Flourobiphenyl | 43-116 | 30 ** |
| Terphenyl -d14 | 33-141 | 42 |

COMMENTS : ** = One surrogate allowed outside acceptance limits by method.

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Date/Time : 6/25/96 1550

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Phone (904) 452-4728/3642
DSN 922-4728/3642

**Analytical Report**
**Ethylene Dibromide by Method 504**

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 62504 A
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 62504 | | | |
| Sample Name / Location | MW-18<br>BF - 1159 | | | |
| Collector's Name | PJB/LMG | | | |
| Date & Time Collected | 6/4/96 @ 1200 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 06/13/96 -BJ | | | |
| Date of Analysis | 06/13/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| **Compound Name** | **1- 62504** | **units** | **Det. Limit** | **Flags** |
| **Ethylene Dibromide (EDB)** | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 77 % |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated
Page 1 of 1 End of Report

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Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

# Analytical Report

## 601/602 Volatiles by Method 8260

Lab Report Number: 62505
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 62505 |
| Sample Name / Location | Equipment Blank BF -1159 |
| Collector's Name | PJB/LMG |
| Date & Time Collected | 6/4/96 @ 0900 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 06/06/96 / JM |
| Date of Analysis | 06/06/96 |
| Sample Matrix | DI Water |
| Dilution | X 1 |

| Compound Name | 1- 62505 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 104 |
| Toluene-d8 | 86-119 | 105 |
| Bromoflourobenzene | 85-116 | 103 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 6/25/96
Report Generated

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Environmental Laboratory
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Phone (904) 452-4728/3642
↓ 922-4728/3642

Client: NPWC Environmental
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

Lab Report Number: 62505
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- **62505** | | |
| Sample Name / Location | Equipment Blank BF -1159 | | |
| Collector's Name | PJB/LMG | | |
| Date & Time Collected | 6/4/96 @ 0900 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | M. Chambers | | |
| Date of Extraction / Initials | 6/6/96; JJ | | |
| Date of Analysis | 6/12/96 | | |
| Sample Matrix | DI Water | | |
| Dilution | X 1 | | |
| COMPOUND NAME | 1- **62505** | units | Det. Limit |
| Acenaphthene | BDL | UG/L | 5 |
| Acenaphthylene | BDL | UG/L | 5 |
| Anthracene | BDL | UG/L | 2 |
| Benzo(a)anthracene | BDL | UG/L | 3 |
| Benzo(a)pyrene | BDL | UG/L | 2 |
| Benzo(b)flouranthene | BDL | UG/L | 4 |
| Benzo(g,h,i)perylene | BDL | UG/L | 3 |
| Benzo(k)flouranthene | BDL | UG/L | 4 |
| Chrysene | BDL | UG/L | 3 |
| Dibenz(a,h)anthracene | BDL | UG/L | 3 |
| uranthene | BDL | UG/L | 2 |
| Flourene | BDL | UG/L | 4 |
| Indeno(1,2,3-cd)pyrene | BDL | UG/L | 2 |
| 1-Methylnaphthalene * | BDL | UG/L | 5 |
| 2-Methylnaphthalene | BDL | UG/L | 7 |
| Naphthalene | BDL | UG/L | 7 |
| Phenanthrene | BDL | UG/L | 3 |
| Pyrene | BDL | UG/L | 3 |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 58 |
| 2-Flourobiphenyl | 43-116 | 62 |
| Terphenyl -d14 | 33-141 | 79 |

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Date/Time : 6/25/96 1145

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Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report

**Ethylene Dibromide by Method 504**

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 62505 A
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 62505 | | | |
| Sample Name / Location | Equipment Blank BF -1159 | | | |
| Collector's Name | PJB/LMG | | | |
| Date & Time Collected | 6/4/96 @ 0900 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 06/13/96 -BJ | | | |
| Date of Analysis | 06/13/96 | | | |
| Sample Matrix | DI Water | | | |
| Dilution | X 1 | | | |
| **Compound Name** | **1- 62505** | **units** | **Det. Limit** | **Flags** |
| **Ethylene Dibromide (EDB)** | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 103 % |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated
Page 1 of 1 End of Report

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Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

# Analytical Report

**601/602 Volatiles by Method 8260**

Lab Report Number: 62506
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 62506 |
| Sample Name / Location | Duplicate<br>BF -1159 |
| Collector's Name | PJB/LMG |
| Date & Time Collected | 6/4/96 @ Not Submitted |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 06/11/96 / JM |
| Date of Analysis | 06/11/96 |
| Sample Matrix | GW |
| Dilution | X 5 |

| Compound Name | 1- 62506 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 5 | |
| Bromodichloromethane | BDL | ug/L | 5 | |
| Bromoform | BDL | ug/L | 10 | |
| Bromomethane | BDL | ug/L | 15 | |
| Carbon Tetrachloride | BDL | ug/L | 5 | |
| Chlorobenzene | BDL | ug/L | 5 | |
| Chloroethane | BDL | ug/L | 5 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 25 | |
| Chloroform | BDL | ug/L | 5 | |
| Chloromethane | BDL | ug/L | 5 | |
| Dibromochloromethane | BDL | ug/L | 5 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 5 | |
| Dichlorodiflouromethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethane | BDL | ug/L | 5 | |
| 1,2-Dichloroethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethene | BDL | ug/L | 5 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 5 | |
| 1,2-Dichloropropane | BDL | ug/L | 5 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 5 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 5 | |
| Ethylbenzene | BDL | ug/L | 5 | |
| Methylene Chloride | BDL | ug/L | 25 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 25 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 5 | |
| Tetrachloroethene | BDL | ug/L | 5 | |
| Toluene | BDL | ug/L | 5 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 5 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 5 | |
| Trichloroethene | BDL | ug/L | 5 | |
| Trichloroflouromethane | BDL | ug/L | 5 | |
| Vinyl Chloride | BDL | ug/L | 5 | |
| Xylenes (Total) | BDL | ug/L | 5 | |

## SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 102 |
| Toluene-d8 | 86-119 | 106 |
| Bromoflourobenzene | 85-116 | 101 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated

 End of Report

D-77

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
922-4728/3642

Client: NPWC Environmental
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

Lab Report Number: 62506
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- **62506** | | |
| Sample Name / Location | Duplicate BF -1159 | | |
| Collector's Name | PJB/LMG | | |
| Date & Time Collected | 6/4/96 @ | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | M. Chambers | | |
| Date of Extraction / Initials | 6/6/96; JJ | | |
| Date of Analysis | 6/14/96 | | |
| Sample Matrix | GW | | |
| Dilution | X 1 | | |
| COMPOUND NAME | 1- **62506** | units | Det. Limit |
| Acenaphthene | BDL | UG/L | 5 |
| Acenaphthylene | BDL | UG/L | 5 |
| Anthracene | BDL | UG/L | 2 |
| Benzo(a)anthracene | BDL | UG/L | 3 |
| Benzo(a)pyrene | BDL | UG/L | 2 |
| Benzo(b)flouranthene | BDL | UG/L | 4 |
| Benzo(g,h,i)perylene | BDL | UG/L | 3 |
| Benzo(k)flouranthene | BDL | UG/L | 4 |
| Chrysene | BDL | UG/L | 3 |
| Dibenz(a,h)anthracene | BDL | UG/L | 3 |
| uoranthene | BDL | UG/L | 2 |
| Flourene | BDL | UG/L | 4 |
| Indeno(1,2,3-cd)pyrene | BDL | UG/L | 2 |
| 1-Methylnaphthalene * | BDL | UG/L | 5 |
| 2-Methylnaphthalene | BDL | UG/L | 7 |
| Naphthalene | BDL | UG/L | 7 |
| Phenanthrene | BDL | UG/L | 3 |
| Pyrene | BDL | UG/L | 3 |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 54 |
| 2-Flourobiphenyl | 43-116 | 56 |
| Terphenyl -d14 | 33-141 | 64 |

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Date/Time : 6/25/96 1145

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report

**Ethylene Dibromide by Method 504**

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 62506 A
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 62506 | | | |
| Sample Name / Location | Duplicate BF -1159 | | | |
| Collector's Name | PJB/LMG | | | |
| Date & Time Collected | 6/4/96 @ Not Submitted | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 06/13/96 -BJ | | | |
| Date of Analysis | 06/13/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| **Compound Name** | **1- 62506** | **units** | **Det. Limit** | **Flags** |
| **Ethylene Dibromide (EDB)** | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 95 % |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Does, Laboratory Director

Date: 6/24/96
Report Generated
Page 1 of 1 End of Report

**Navy Public Works Center**
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

# Analytical Report

## 601/602 Volatiles by Method 8260

Lab Report Number: 62507
Sample Date: 06/4/96
Received Date: 06/4/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 62507 |
| Sample Name / Location | Trip Blank BF -1159 |
| Collector's Name | PJB/LMG |
| Date & Time Collected | 6/4/96 @ |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 06/6/96 / JM |
| Date of Analysis | 06/6/96 |
| Sample Matrix | DI Water |
| Dilution | X 1 |

| Compound Name | 1- 62507 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | 5 | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 105 |
| Toluene-d8 | 86-119 | 106 |
| Bromoflourobenzene | 85-116 | 104 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 6/25/96
Report Generated



D-80

Joe

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 820
NAS Pensacola, FL 32508-6500

Ph#-(904)452-4728
Autovon-922-4728

Report Required? Yes No DEP? Yes No

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305001

Lab ID Number:
Sample Date: 6.4.96
Received Date: 6.4.96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1- 6-2493 | #2- 6-2494 | #3- 6-2495 | #4- 6-2496 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name or Location | ---------- | MW-7 | MW-8 | MW-9 | MW-10 | |
| Sampled by | ---------- | PJB/LMG | PJB/LMG | PJB/LMG | PJB/LMG | |
| Composite Date/Time Collected | Begin | | | | | KAG |
| | Frequency | | | | | |
| | End | | | | | |
| Grab Time | ---------- | 0915 | 0930 | 0945 | 1000 | |
| Sample Matrix | ---------- | GW | GW | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 2 EDB | X | 2 EDB | X | 2 EDB | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 3 VOA | X | 3 VOA | X | 3 VOA | X | 3 VOA | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GC/MS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GC/MS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GC/MS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GC/MS-Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GC/MS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | X | 2 PAH | X | 2 PAH | | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | X | 2 TPH | X | 2 TPH | X | 2 TPH | X | 2 TPH | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: Peter J. Bu / WES, Inc.
Date/Time: 6-4-96 1430

Received by: Brenda Thornton
Date/Time: 6-4-96 1430

PWC 351078

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 820
NAS Pensacola, FL 32508-6500

Ph#-(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305001

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 6.4.96
Received Date: 6.4.96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1- 2497 | #2- 2498 | #3- 2499 | #4- 2500 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name or Location | ---------- | MW-11 | MW-12 | MW-13 | MW-14 | |
| Sampled by | ---------- | RJB/LMG | RJB/LMG | RJB/LMG | RJB/LMG | KAG |
| Composite Date/Time Collected | Begin | | | | | |
| | Frequency | | | | | |
| | End | | | | | |
| Grab Time | ---------- | 1015 | 1030 | 1045 | 1100 | |
| Sample Matrix | ---------- | GW | GW | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 2 EDB | X | 2 EDB | X | 2 EDB | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 3 VOA | X | 3 VOA | X | 3 VOA | X | 3 VOA | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org. /GCMS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | X | 2 PAH | X | 2 PAH | | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | X | 2 TPH | X | 2 TPH | X | 2 TPH | X | 2 TPH | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Comments:

Relinquished by: Petit L. Von / NES, Inc.
Date/Time: 6-4-96 1430

Received by: Brenda Hagenclope
Date/Time: 6-4-96 1430

PWC 2510/5

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 820
NAS Pensacola, FL 32508-6500
Ph#-(904)452-4728
Autovon-922-4728

Report Required? Yes No DEP? Yes No

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305001

Lab ID Number:
Sample Date: 6·4·96
Received Date: 6·4·96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | 01- 6·2501 | 02- 6·2502 | 03-6·2503 | 04-6·2504 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name or Location | ---------- | MW-15 | MW-16 | MW-17 | MW-18 | |
| Sampled by | ---------- | PJB/LMG | PJB/LMG | PJB/LMG | PJB/LMG | |
| Composite Date/Time Collected | Begin | | | | | KAG |
| | Frequency | | | | | |
| | End | | | | | |
| Grab Time | ---------- | 1115 | 1130 | 1145 | 1200 | |
| Sample Matrix | ---------- | GW | GW | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 2 EDB | X | 2 EDB | X | 2 EDB | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 3 VOA | X | 3 VOA | X | 3 VOA | X | 3 VOA | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GC/MS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GC/MS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mls2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mls2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GC/MS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GC/MS-Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GC/MS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | X | 2 PAH | X | 2 PAH | | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | X | 2 TPH | X | 2 TPH | X | 2 TPH | X | 2 TPH | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Comments:

Relinquished by: Patrick L Von / WES, Inc.
Date/Time: 6-4-96 1430

Received by: Brenda Lofendorf
Date/Time: 6-4-96 1430

PWC 9510/8

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg 3287, Code 820
NAS Pensacola, FL 32508-6500
Ph#-(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 130 5001

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 6·4·96
Received Date: 6·4·96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1- 6-2505 | #2- 6-2506 | #3- 6-2507 | #4- | Notes: |
|---|---|---|---|---|---|---|
| Sample Name or Location | ---------- | EQ. BLANK | Duplicate | Trip blank | | KAG |
| Sampled by | ---------- | RJB/LMG | RJB/LMG | RJB/LMG | | |
| Composite Date/Time Collected | Begin | | | | | |
| | Frequency | | | | | |
| | End | | | | | |
| Grab Time | ---------- | 0900 | — | AM | | |
| Sample Matrix | ---------- | DI | GW | DI | | |

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | Y | 2 EDB | X | 2 EDB | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 3 VOA | X | 3 VOA | X | 2 VOA | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | | | | | | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | X | 2 TPH | X | 2 TPH | | | | | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Comments:

Relinquished by: Patti L. Von/WES, Inc.
Date/Time: 6-14-96 1430

Received by: Brenda Stegendorfer
Date/Time: 6-4-96 1430

PWC 95109

# American Environmental Network, Inc.

11 East Olive Road • Pensacola, FL 32514 • (904) 474-1001

June 18, 1996

INVOICE NUMBER 811299
LAB CODE 160

NAS, CO, PWC

DEFENSE FINANCE & ACCOUNTING SERVICE, OP
OAKLAND , CA 94623-3870

Accession #: 606084
Client Name: NAS, CO, PWC
Office: NAS PENSACOLA, FLORIDA
Project Name: FL PRO
Project Num: CALL #9043
Project Location: BRONSON SITE 1159
Report Sent To: JERRY DEES
P. O. Number: STUB #6150-9283
Billing Client: 514002

**FILE COPY**
**Original Sent to Oakland, CA**

| amples | Test | Matrix | Description | Actual Price | Extended Price |
|---|---|---|---|---|---|
| 1 | FLPRO | AQ | FLPRO\PETRO. HYDROCARBON RANGE C8-C40 | 150.00 | 2,100.00 |
| | | | | Total: | $2,100.00 |

STUB #6150-9283
CALL #9043
JON #1305001
ITEM #013

ET 30 DAYS

Page 1

1 '2 % Finance Charge on Balance Due over 30 Days

**********
* REMIT PAYMENT TO: *
* American Environmental Network (FL) Inc. *
* P.O. Box 5419 D-85 *
* Boston, MA 02206 *
**********

INVOICE ORIGINAL COPY

American Environmental Network, Inc.

11 East Olive Road • Pensacola, FL 32514 • (904) 474-1001

SIGNATURE PAGE

Reviewed by: _____
AEN Project Manager

| | |
|---|---|
| Client: | NAS, CO, PWC<br>NAS PENSACOLA, FLORIDA |
| Project Name: | FL PRO |
| Project Number: | CALL #9043 |
| Project Location: | BRONSON SITE 1159 |
| Accession Number: | 606084 |
| Project Manager: | JERRY DEES |
| Sampled By: | PJB |

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

# Analysis Report

Analysis: FLPRO\PETRO. HYDROCARBON RANGE C8-C40

| | |
|---|---|
| Accession: | 606084 |
| Client: | NAS, CO, PWC |
| Project Number: | CALL #9043 |
| Project Name: | FL PRO |
| Project Location: | BRONSON SITE 1159 |
| Department: | SEMI-VOLATILE FUELS |

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001



"FINAL REPORT FORMAT - SINGLE"

Accession: 606084
Client: NAS, CO, PWC
Project Number: CALL #9043
Project Name: FL PRO
Project Location: BRONSON SITE 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

---

Lab Id: 001 Sample Date/Time: 04-JUN-96 0915
Client Sample Id: 62493 BF SITE 1159 (mw-7) Received Date: 06-JUN-96

Batch: FPW050 Extraction Date: 08-JUN-96
Blank: A Dry Weight %: N/A Analysis Date: 11-JUN-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 220 | 100 | |
| NONATRIACONTANE | %REC/SURR | 45 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 94 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001



"FINAL REPORT FORMAT - SINGLE"

| | |
|---|---|
| Accession: | 606084 |
| Client: | NAS, CO, PWC |
| Project Number: | CALL #9043 |
| Project Name: | FL PRO |
| Project Location: | BRONSON SITE 1159 |
| Test: | FLPRO\PETRO. HYDROCARBON RANGE C8-C40 |
| Analysis Method: | PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015 |
| Extraction Method: | 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992 |
| Matrix: | GROUNDWATER |
| QC Level: | I |

| | | | |
|---|---|---|---|
| Lab Id: | 002 | Sample Date/Time: | 04-JUN-96 0930 |
| Client Sample Id: | 62494 BF SITE 1159 (mw-8) | Received Date: | 06-JUN-96 |
| Batch: FPW050 | | Extraction Date: | 08-JUN-96 |
| Blank: A | Dry Weight %: N/A | Analysis Date: | 11-JUN-96 |

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | ND | 100 | |
| NONATRIACONTANE | %REC/SURR | 47 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 82 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 606084
Client: NAS, CO, PWC
Project Number: CALL #9043
Project Name: FL PRO
Project Location: BRONSON SITE 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

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Lab Id: 003 Sample Date/Time: 04-JUN-96 0945
Client Sample Id: 62495 BF SITE 1159 (mw-9) Received Date: 06-JUN-96

Batch: FPW050 Extraction Date: 08-JUN-96
Blank: A Dry Weight %: N/A Analysis Date: 12-JUN-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 190 | 100 | |
| NONATRIACONTANE | %REC/SURR | 60 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 89 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 606084
Client: NAS, CO, PWC
Project Number: CALL #9043
Project Name: FL PRO
Project Location: BRONSON SITE 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

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Lab Id: 004 Sample Date/Time: 04-JUN-96 1000
Client Sample Id: 62496 BF SITE 1159 (mw-10) Received Date: 06-JUN-96

Batch: FPW050 Extraction Date: 08-JUN-96
Blank: A Dry Weight %: N/A Analysis Date: 12-JUN-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 220 | 100 | |
| NONATRIACONTANE | %REC/SURR | 52 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 99 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 606084
Client: NAS, CO, PWC
Project Number: CALL #9043
Project Name: FL PRO
Project Location: BRONSON SITE 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

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Lab Id: 005 Sample Date/Time: 04-JUN-96 1015
Client Sample Id: 62497 BF SITE 1159 (mw-11) Received Date: 06-JUN-96

Batch: FPW050 Extraction Date: 08-JUN-96
Blank: A Dry Weight %: N/A Analysis Date: 12-JUN-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 210 | 100 | |
| NONATRIACONTANE | %REC/SURR | 47 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 89 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 606084
Client: NAS, CO, PWC
Project Number: CALL #9043
Project Name: FL PRO
Project Location: BRONSON SITE 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

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Lab Id: 006 Sample Date/Time: 04-JUN-96 1030
Client Sample Id: 62498 BF SITE 1159 (mw-12) Received Date: 06-JUN-96

Batch: FPW050 Extraction Date: 08-JUN-96
Blank: A Dry Weight %: N/A Analysis Date: 12-JUN-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 140 | 100 | |
| NONATRIACONTANE | %REC/SURR | 42 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 89 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 606084
Client: NAS, CO, PWC
Project Number: CALL #9043
Project Name: FL PRO
Project Location: BRONSON SITE 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

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Lab Id: 007 Sample Date/Time: 04-JUN-96 1045
Client Sample Id: 62499 BF SITE 1159 (mw-13) Received Date: 06-JUN-96

Batch: FPW050 Extraction Date: 08-JUN-96
Blank: A Dry Weight %: N/A Analysis Date: 12-JUN-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 120 | 100 | |
| NONATRIACONTANE | %REC/SURR | 52 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 83 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 606084
Client: NAS, CO, PWC
Project Number: CALL #9043
Project Name: FL PRO
Project Location: BRONSON SITE 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

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Lab Id: 008 Sample Date/Time: 04-JUN-96 1100
Client Sample Id: 62500 BF SITE 1159 (mw-14) Received Date: 06-JUN-96

Batch: FPW050 Extraction Date: 08-JUN-96
Blank: A Dry Weight %: N/A Analysis Date: 12-JUN-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 400 | 100 | |
| NONATRIACONTANE | %REC/SURR | 58 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 89 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 606084
Client: NAS, CO, PWC
Project Number: CALL #9043
Project Name: FL PRO
Project Location: BRONSON SITE 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

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Lab Id: 009
Client Sample Id: 62501 BF SITE 1159 (mw-15)
Sample Date/Time: 04-JUN-96 1115
Received Date: 06-JUN-96

Batch: FPW050
Blank: A
Dry Weight %: N/A
Extraction Date: 08-JUN-96
Analysis Date: 12-JUN-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 730 | 100 | |
| NONATRIACONTANE | %REC/SURR | 89 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 113 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

"FINAL REPORT FORMAT - SINGLE"

| | |
|---|---|
| Accession: | 606084 |
| Client: | NAS, CO, PWC |
| Project Number: | CALL #9043 |
| Project Name: | FL PRO |
| Project Location: | BRONSON SITE 1159 |
| Test: | FLPRO\PETRO. HYDROCARBON RANGE C8-C40 |
| Analysis Method: | PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015 |
| Extraction Method: | 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992 |
| Matrix: | GROUNDWATER |
| QC Level: | I |

| | | | |
|---|---|---|---|
| Lab Id: | 010 | Sample Date/Time: | 04-JUN-96 1130 |
| Client Sample Id: | 62502 BF SITE 1159 (mw-16) | Received Date: | 06-JUN-96 |
| Batch: FPW050 | | Extraction Date: | 08-JUN-96 |
| Blank: A | Dry Weight %: N/A | Analysis Date: | 12-JUN-96 |

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 470 | 100 | |
| NONATRIACONTANE | %REC/SURR | 69 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 94 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 606084
Client: NAS, CO, PWC
Project Number: CALL #9043
Project Name: FL PRO
Project Location: BRONSON SITE 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

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Lab Id: 011
Client Sample Id: 62503 BF SITE 1159 (mw-17)
Sample Date/Time: 04-JUN-96 1145
Received Date: 06-JUN-96

Batch: FPW050
Blank: A
Dry Weight %: N/A
Extraction Date: 08-JUN-96
Analysis Date: 12-JUN-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 260 | 100 | |
| NONATRIACONTANE | %REC/SURR | 65 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 88 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 606084
Client: NAS, CO, PWC
Project Number: CALL #9043
Project Name: FL PRO
Project Location: BRONSON SITE 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

---

Lab Id: 012
Client Sample Id: 62504 BF SITE 1159 (mw-18)
Sample Date/Time: 04-JUN-96 1200
Received Date: 06-JUN-96

Batch: FPW050
Blank: A
Dry Weight %: N/A
Extraction Date: 08-JUN-96
Analysis Date: 12-JUN-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | 280 | 100 | |
| NONATRIACONTANE | %REC/SURR | 55 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 88 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

"FINAL REPORT FORMAT - SINGLE"

| | |
|---|---|
| Accession: | 606084 |
| Client: | NAS, CO, PWC |
| Project Number: | CALL #9043 |
| Project Name: | FL PRO |
| Project Location: | BRONSON SITE 1159 |
| Test: | FLPRO\PETRO. HYDROCARBON RANGE C8-C40 |
| Analysis Method: | PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015 |
| Extraction Method: | 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992 |
| Matrix: | GROUNDWATER |
| QC Level: | I |

| | | | |
|---|---|---|---|
| Lab Id: | 013 | Sample Date/Time: | 04-JUN-96 0900 |
| Client Sample Id: | 62505 BF SITE 1159 | Received Date: | 06-JUN-96 |
| Batch: FPW050 | | Extraction Date: | 08-JUN-96 |
| Blank: A | Dry Weight %: N/A | Analysis Date: | 12-JUN-96 |

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | ND | 100 | |
| NONATRIACONTANE | %REC/SURR | 50 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 86 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 606084
Client: NAS, CO, PWC
Project Number: CALL #9043
Project Name: FL PRO
Project Location: BRONSON SITE 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

---

Lab Id: 014 Sample Date/Time: 04-JUN-96 N/S
Client Sample Id: 62506 BF SITE 1159 Received Date: 06-JUN-96

Batch: FPW050 Extraction Date: 08-JUN-96
Blank: A Dry Weight %: N/A Analysis Date: 12-JUN-96

| Parameter: | Units: | Results: | Rpt Lmts: | Q: |
|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | ND | 100 | |
| NONATRIACONTANE | %REC/SURR | 49 | 42-193 | |
| ORTHO TER PHENYL | %REC/SURR | 83 | 82-142 | |
| ANALYST | INITIALS | KS | | |

Comments:

"Method Report Summary"

Accession Number: 606084
Client: NAS, CO, PWC
Project Number: CALL #9043
Project Name: FL PRO
Project Location: BRONSON SITE 1159
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40

| Client Sample Id: | Parameter: | Unit: | Result: |
|---|---|---|---|
| 62493 BF SITE 1159 | TOTAL PETROLEUM HYDROCARBON | UG/L | 220 |
| 62495 BF SITE 1159 | TOTAL PETROLEUM HYDROCARBON | UG/L | 190 |
| 62496 BF SITE 1159 | TOTAL PETROLEUM HYDROCARBON | UG/L | 220 |
| 62497 BF SITE 1159 | TOTAL PETROLEUM HYDROCARBON | UG/L | 210 |
| 62498 BF SITE 1159 | TOTAL PETROLEUM HYDROCARBON | UG/L | 140 |
| 62499 BF SITE 1159 | TOTAL PETROLEUM HYDROCARBON | UG/L | 120 |
| 62500 BF SITE 1159 | TOTAL PETROLEUM HYDROCARBON | UG/L | 400 |
| 62501 BF SITE 1159 | TOTAL PETROLEUM HYDROCARBON | UG/L | 730 |
| 62502 BF SITE 1159 | TOTAL PETROLEUM HYDROCARBON | UG/L | 470 |
| 62503 BF SITE 1159 | TOTAL PETROLEUM HYDROCARBON | UG/L | 260 |
| 62504 BF SITE 1159 | TOTAL PETROLEUM HYDROCARBON | UG/L | 280 |

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

# Quality Control Report

Analysis: FLPRO\PETRO. HYDROCARBON RANGE C8-C40

| | |
|---|---|
| Accession: | 606084 |
| Client: | NAS, CO, PWC |
| Project Number: | CALL #9043 |
| Project Name: | FL PRO |
| Project Location: | BRONSON SITE 1159 |
| Department: | SEMI-VOLATILE FUELS |

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001


Date 14-Jun-96

"QC Report"

Title: Water Blank
Batch: FPW050
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992

Blank Id: A Date Analyzed: 11-JUN-96 Date Extracted: 08-JUN-96

| Parameters: | Units: | Results: | Reporting Limits: |
|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | UG/L | ND | 100 |
| ORTHO TER PHENYL | %REC/SURR | 87 | 82-142 |
| ANALYST | INITIALS | KS | |
| C-39 | %REC/SURR | 58 | 42-193 |

Comments:

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001



"QC Report"

Title: Water Reagent
Batch: FPW050
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992

RS Date Analyzed: 13-JUN-96 RS Date Extracted: 08-JUN-96
RSD Date Analyzed: 13-JUN-96 RSD Date Extracted: 08-JUN-96

| Parameters: | Spike Added | Sample Conc | RS Conc | RS %Rec | RSD Conc | RSD %Rec | RPD | RPD Lmts | Rec Lmts |
|---|---|---|---|---|---|---|---|---|---|
| TOTAL PETROLEUM HYDROCARBON | 4998 | <100 | 3610 | 72 | 3674 | 74 | 3 | 30 | 57-122 |
| Surrogates: | | | | | | | | | |
| ORTHO TER PHENYL | | | | 127 | | 120 | | | 82-142 |
| C-39 | | | | 62 | | 70 | | | 42-193 |

Comments:

Notes:
N/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT
UG/L = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.
SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

Common notation for Organic reporting

N/S = NOT SUBMITTED
N/A = NOT APPLICABLE
D = DILUTED OUT
UG = MICROGRAMS
UG/L = PARTS PER BILLION.
UG/KG = PARTS PER BILLION.
MG/M3 = MILLIGRAM PER CUBIC METER.
PPMV = PART PER MILLION BY VOLUME.
MG/KG = PARTS PER MILLION.
MG/L = PARTS PER MILLION.
< = LESS THAN DETECTION LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS

SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

ORGANIC SOILS ARE REPORTED ON A DRYWEIGHT BASIS.

ND = NOT DETECTED ABOVE REPORTING LIMIT.

RPT LIMIT = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION)

ATI/GC/FID
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME IONIZATION DETECTOR (FID).

ATI/GC/FIX
ATI GAS CHROMATOGRAPHIC METHOD FOR ANALYSIS OF FIXED GASES EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD) AND FLAME IONIZATION DETECTOR (FID).

ATI/GC/FPD
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME PHOTOMETRIC DETECTOR (FPD) IN SULFUR-SPECIFIC MODE.

ATI/GC/PID
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH PHOTOIONIZATION DETECTOR (PID).

ATI/GC/TCD
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD).

LJT = LISA THOMASON
SW = STEVE WILHITE
KW = KAREN WADSWORTH
PL = PAUL LESCHENSKY
RW = ROBERT WOLFE
BV = BEN VAUGHN
BC = BETH COLEMAN
KS = KENDALL SMITH
KK = KERRY KUST
DWB = DAVID W. BOWERS
RP = ROB PEREZ

HC14 1 of 2

Analytical Technologies, Inc.
11 East Olive Road • Pensacola, Florida 32514 • (904) 474-1001

# CHAIN OF CUSTODY

**PART 1 - Bottle Shipment Information** ATI ACCESSION #: 606084

CLIENT: NPWC ENV LAB CLIENT PROJECT NUMBER: STUB #6150-9283

| QUANTITY OF SAMPLE CONTAINERS SHIPPED | PRESERVATIVE | | | | | | | PLASTIC CONTAINERS | | | | | | | GLASS CONTAINERS | | | | | | | | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $H_2SO_4$ | HNO3 | HCL | Zn Acetate | $Na_2S_2O_3$ | Unpreserved | NaOH | 8 oz. | 16 oz. | 32 oz. | ½ gallon | 1 gallon | Whirl-pak | 100-ML Cup | 120 ml (A) | 1 liter (A) | 1 liter (C) | 40 ml Vial | 4 oz. wm | 8 oz. wm | 16 oz. wm | 32 oz. wm | D.I. Trip Blank | |
| ~~28~~ 20 | | | | | | | | | | | | | | | | ✓ | | | | | | | | |

| Relinquished By: | Time | Date | Received By: | Time | Date |
|---|---|---|---|---|---|
| | | | | | |

**PART 2 - Sample/Project Information**

SAMPLE MATRIX CODES

DW DRINKING WATER, WW WASTEWATER, GW GROUNDWATER, AI AIR, SO SOIL, OI OIL, SW SURFACE WATER, SL SLUDGE, ST STORMWATER

PARAMETERS AND PRESERVATIVES REQUESTED

| SAMPLE I.D. | SAMPLE DATE | SAMPLE TIME | MATRIX | FL PRO | | | | | | | | | | | TOTAL # OF BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 62493 BF 1159 | 6/4/96 | 0915 | GW | ✓ | | | | | | | | | | 1 | 2 |
| 62494 | | 0930 | | ✓ | | | | | | | | | | 2 | 2 |
| 62495 | | 0945 | | ✓ | | | | | | | | | | 3 | 2 |
| 62496 | | 1000 | | ✓ | | | | | | | | | | 4 | 2 |
| 62497 | | 1015 | | ✓ | | | | | | | | | | 5 | 2 |
| 62498 | | 1030 | | ✓ | | | | | | | | | | 6 | 2 |
| 62499 | | 1045 | | ✓ | | | | | | | | | | 7 | 2 |
| 62500 | | 1100 | | ✓ | | | | | | | | | | 8 | 2 |
| 62501 | | 1115 | | ✓ | | | | | | | | | | 9 | 2 |
| 62502 | | 1130 | | ✓ | | | | | | | | | | 10 | 2 |

Total Number of Bottles/Containers: 20

| Relinquished By | Date | Time | Received By | Date | Time |
|---|---|---|---|---|---|
| Kathy Reynolds | 6/6/96 | 1115 | [illegible] | 6/6/96 | 1115 |
| [illegible] | 6/6/96 | 1230 | [illegible] | 6/6/96 | 1230 |
| | | | | | |

| | | | |
|---|---|---|---|
| Client NPWC ENV LAB CODE 920 | | | Purchase Order Number STUB #6150-9283 |
| Address BLDG 5297 | | | Project Number CALL #9043 |
| City PENSACOLA | State FL | Zip 32508 | Project Name FL PRO |
| Phone Number (904) 452-3642 | Fax Number (904) 452-2799 | | Project Location BROWSON SITE 1159 |
| Project Manager | | | Sampled By VSB |

| TURNAROUND TIMES | check below | SPECIAL INSTRUCTIONS |
|---|---|---|
| Standard - 14-21 days | ✓ | STUB #6150-9283 Verbal 6/13/96 |
| RUSH (must be approved in advance) | | CALL #9045 Written 6/20/96 |
| <- 48 hours - 2x standard price | | SON 1505001 |
| 3-7 days - 1.5x standard price | | ITEM #C13 |
| TCLP - 1 week rush 1.5x standard price | | |
| QC Level none I II III IV (circle one) | | Copies of report needed 1 |

FORM # 12694 — METRO PRINTING, INC., HUNTSVILLE, ALABAMA 35801 D-107 WHITE — LAB CANARY — REPORT PINK — CLIENT

HEN

P9 2012

Analytical Technologies, Inc.
11 East Olive Road • Pensacola, Florida 32514 • (904) 474-1001

# CHAIN OF CUSTODY

**PART 1 - Bottle Shipment Information** ATI ACCESSION #: 606084

CLIENT: NPWC ENV LAB | CLIENT PROJECT NUMBER: STUB# 6150-9283

| QUANTITY OF SAMPLE CONTAINERS SHIPPED | PRESERVATIVE | | | | | | | PLASTIC CONTAINERS | | | | | | | GLASS CONTAINERS | | | | | | | | | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $H_2SO_4$ | HNO3 | HCL | Zn Acetate | $Na_2S_2O_3$ | Unpreserved | NaOH | 8 oz. | 16 oz. | 32 oz. | ½ gallon | 1 gallon | Whirl-pak | 100-ML Cup | 120 ml (A) | 1 liter (A) | 1 liter (C) | 40 ml Vial | 4 oz. wm | 8 oz. wm | 16 oz. wm | 32 oz. wm | D.I. Trip Blank | |
| 8 | | | | | | | | | | | | | | | | ✓ | | | | | | | | |

| Relinquished By: | Time | Date | Received By: | Time | Date |
|---|---|---|---|---|---|
| | | | | | |

**PART 2 - Sample/Project Information**

SAMPLE MATRIX CODES

DW DRINKING WATER, WW WASTEWATER, GW GROUNDWATER, AI AIR, SO SOIL, OI OIL, SW SURFACE WATER, SL SLUDGE, ST STORMWATER

| SAMPLE I.D. | SITE | SAMPLE DATE | SAMPLE TIME | MATRIX | PARAMETERS AND PRESERVATIVES REQUESTED: RCRA | | | | | | | | | | | | TOTAL # OF BOTTLES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 62503 DF | 1159 | 6/4/96 | 1145 | GW | ✓ | | | | | | | | | | | 11 | 2 |
| 62504 | | | 1200 | | ✓ | | | | | | | | | | | 12 | 2 |
| 62505 | | | 0900 | | ✓ | | | | | | | | | | | 13 | 2 |
| 62506 | | | NS | | ✓ | | | | | | | | | | | 14 | 2 |

Total Number of Bottles/Containers: 8

| Relinquished By | Date | Time | Received By | Date | Time |
|---|---|---|---|---|---|
| Kathy Bennett | 6/6/96 | 1115 | [illegible] | 6/6/96 | 1115 |
| [illegible] | 6/6/96 | 1232 | [illegible] | 6/6/96 | 1232 |

| | | | |
|---|---|---|---|
| Client NPWC | | | Purchase Order Number 6150-9283 |
| Address | | | Project Number |
| City | State | Zip | Project Name |
| Phone Number ( ) | Fax Number ( ) | | Project Location |
| Project Manager | | | Sampled By |

| TURNAROUND TIMES | check below | SPECIAL INSTRUCTIONS |
|---|---|---|
| Standard - 14-21 days | ✓ | |
| RUSH (must be approved in advance) | | |
| <- 48 hours - 2x standard price | | |
| 3-7 days - 1.5x standard price | | |
| TCLP - 1 week rush 1.5x standard price | | |
| QC Level none I II III IV (circle one) | | Copies of report needed 1 |

FORM # 12694 — METRO PRINTING, INC., HUNTSVILLE, ALABAMA 35801 D-108 WHITE — LAB CANARY — REPORT PINK — CLIENT

# Navy Public Works Center
## Environmental Laboratory

Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500
Phone 904-452-3642/4758
Autovon 922-3642

# Laboratory Report
### Lead in Water

| | |
|---|---|
| **Requester:** | PWC Environmental |
| **Address:** | Bldg. 3887 |
| | NAS Pensacola, FL 32508 |
| **Phone #:** | 452-4728 |
| **Contact:** | Greg Campbell |

| | |
|---|---|
| **Lab ID Number:** | 9607108 A |
| **Sample Dates:** | 27-28 Jun 96 |
| **Received Date:** | 08 Jul 96 |
| **Sample Site:** | Bronson Field Site 1159 |
| **Job Order #:** | 130 5001 |

| **Sample ID#** | Lab | 1- 62872 | 2- 62873 | 3- 62874 | 4- 62875 | Analyst(s): |
|---|---|---|---|---|---|---|
| **Sample Name** | Requester | Site 1159 MW-12 | Site 1159 MW-13 | Site 1159 MW-14 | Site 1159 MW-15 | ICP- Brian Nelson |
| **Collector Name** | | W.W.P. | W.W.P | T.H. | N/S | |
| **Date/Time** | Comp start | | | | | |
| **Collected** | Comp stop | | | | | Date(s) of analysis: |
| **(Military)** | Grab | 27 Jun 96 @ 1752 | 27 Jun 96 @ 1728 | 27 Jun 96 @ 1815 | 27 Jun 96 @ 1900 | ICP- 22 Jul 96 |
| **Sample Type** | Comp/Grab | Grab | Grab | Grab | Grab | |
| **Sample Matrix** | | Groundwater | Groundwater | Groundwater | Groundwater | |

| PARAMETER | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Metals:** | **METHOD #** | 1- 62872 | units | Limit | 2- 62873 | units | Limit | 3- 62874 | units | Limit | 4- 62875 | units | Limit | **Preservative(s)** |
| Lead(Pb) | SW 6010 | X BDL | mg/l | 0.05 | X BDL | mg/l | 0.05 | X 0.05 | mg/l | 0.05 | X 0.1 | mg/l | 0.05 | N/S |

| **Sample ID#** | Lab | 5- 62876 | 6- 62877 | 7- 62878 | 8- 62879 | Analyst(s): |
|---|---|---|---|---|---|---|
| **Sample Name** | Requester | Site 1159 MW-16 | Site 1159 MW-17 | Site 1159 MW-11 | Site 1159 MW-8 | ICP- Brian Nelson |
| **Collector Name** | | N/S | N/S | W.W.P | W.W.P | |
| **Date/Time** | Comp start | | | | | |
| **Collected** | Comp stop | | | | | Date(s) of analysis: |
| **(Military)** | Grab | 27 Jun 96 @ 2000 | 27 Jun 96 @ 2040 | 28 Jun 96 @ 0814 | 28 Jun 96 @ 0837 | ICP- 22 Jul 96 |
| **Sample Type** | Comp/Grab | Grab | Grab | Grab | Grab | |
| **Sample Matrix** | | Groundwater | Groundwater | Groundwater | Groundwater | |

| PARAMETER | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Metals:** | **METHOD #** | 5- 62876 | units | Limit | 6- 62877 | units | Limit | 7- 62878 | units | Limit | 8- 62879 | units | Limit | **Preservative(s)** |
| Lead(Pb) | SW 6010 | X BDL | mg/l | 0.05 | X BDL | mg/l | 0.05 | X BDL | mg/l | 0.05 | X BDL | mg/l | 0.05 | $HNO_3$ |

**Comments:** mg/l=milligrams per liter. N/S=Not Submitted.

**Approved by:** J. W. Moore, Chemist
Jerry Dees, Laboratory Director

**Date/Time:** Corrected Report 11-Sep-96 13:36

PWC 5090/14

**End of Report**

D-109

# Navy Public Works Center
## Environmental Laboratory

# Laboratory Report
### Lead in Water

Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500
Phone 904-452-3642/4758
Autovon 922-3642

**Requester:** PWC Environmental
**Address:** Bldg. 3887, NAS Pensacola, FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Lab ID Number:** 9607109 A
**Sample Date:** 28 Jun 96
**Received Date:** 08 Jul 96
**Sample Site:** Bronson Field Site 1159
**Job Order #:** 130 5001

| Sample ID# | Lab | 1- 62880 | 2- 62881 | 3- 62882 | 4- 62883 | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | Site 1159 MW-10 | Site 1159 MW-9 | Site 1159 MW-7 | Site 1159 MW-18 | ICP- Brian Nelson |
| Collector Name | | W.W.P. | W.W.P. | W.W.P. | W.W.P. | |
| Date/Time Collected (Military) | Comp start | | | | | |
| | Comp stop | | | | | Date(s) of analysis: |
| | Grab | 28 Jun 96 @ 0927 | 28 Jun 96 @ 1005 | 28 Jun 96 @ 1130 | 28 Jun 96 @ 1102 | ICP- 22 Jul 96 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | Grab | |
| Sample Matrix | | Groundwater | Groundwater | Groundwater | Groundwater | |

| PARAMETER Metals: | METHOD # | ID# 1- 62880 | units | Det. Limit | ID# 2- 62881 | units | Det. Limit | ID# 3- 62882 | units | Det. Limit | ID# 4- 62883 | units | Det. Limit | Preservative(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead(Pb) | SW 6010 | X 0.06 | mg/l | 0.05 | X 0.08 | mg/l | 0.05 | X BDL | mg/l | 0.05 | X BDL | mg/l | 0.05 | $HNO_3$ |

D-110

**Comments:** mg/l=milligrams per liter.

**Approved by:** J W Moore, Chemist for Jerry Dees, Laboratory Director **Date/Time:** 25-Jul-96 11:49

PWC 5090/14

**End of Report**

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 63542
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- **63542** |
| Sample Name / Location | MW - 19<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 0945 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 08/17/96; JM |
| Date of Analysis | 08/16/96 & 08/17/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1 |

| Compound Name | 1- 63542 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 8 | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 94 |
| Toluene-d8 | 86-119 | 96 |
| Bromoflourobenzene | 85-116 | 95 |

COMMENTS : T= Value reported is less than the laboratory detection limit. The data is reported for informational purposes only.

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director
D-111

Date: 8/29/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 63542
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- **63542** |
| Sample Name / Location | MW - 19<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 0945 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 08/20/96 JJ |
| Date of Analysis | 08/21/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1 |

| Compound Name | 1- 63542 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 5 | |
| Acenaphthylene | BDL | ug/L | 5 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 3 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)flouranthene | BDL | ug/L | 4 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 3 | |
| Benzo(k)flouranthene | BDL | ug/L | 4 | |
| Chrysene | BDL | ug/L | 3 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 3 | |
| Flouranthene | BDL | ug/L | 2 | |
| Flourene | BDL | ug/L | 4 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 5 | |
| 2-Methylnaphthalene | BDL | ug/L | 7 | |
| Naphthalene | BDL | ug/L | 7 | |
| Phenanthrene | BDL | ug/L | 3 | |
| Pyrene | BDL | ug/L | 3 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 69 |
| 2-Flourobiphenyl | 43-116 | 71 |
| Terphenyl -d14 | 33-141 | 94 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 8/29/96
Report Generated



D-112

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 63542
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 63542 | | | |
| Sample Name / Location | MW - 19<br>BF 1159 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 08/14/96 @ 0945 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 08/16/96 BJ | | | |
| Date of Analysis | 08/16/96 | | | |
| Sample Matrix | Groundwater | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 63542 | units | Det. Limit | Flags |
| Ethylene Dibromide (EDB) | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 109 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : J. W. Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/9/96
Report Generated
Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

## Analytical Report
### Petroleum Range Organics by FLPRO

**Lab Report Number:** 63542
**Sample Date:** 08/14/96
**Received Date:** 08/15/96
**Sample Site:** BF 1159
**Job Order No.:** 1305002

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- 63542 | | |
| Sample Name / Location | MW - 19<br>BF 1159 | | |
| Collector's Name | PJB | | |
| Date & Time Collected | 08/14/96 @ 0945 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | B. Jacquart | | |
| Date of extraction / Initials | 08/20/96 JJ | | |
| Date of Analysis | 09/04/96 | | |
| Sample Matrix | Groundwater | | |
| Dilution | | x | 1 |
| **Parameter** | **1- 63542** | **units** | **Det. Limit** |
| Petroleum Range Organics by FLPRO | 0.36 | mg/L | 0.2 |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 107 |
| Nonatriacontane (C-39) | 42-193 * | 99 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Millgram per liter. mg/Kg = Milligram per kilogram.

Approved by : J W Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/10/96

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 63543
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63543 |
| Sample Name / Location | MW - 20<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 1000 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 08/17/96; JM |
| Date of Analysis | 08/17/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1 |

| Compound Name | 1- 63543 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 5 | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 109 |
| Toluene-d8 | 86-119 | 104 |
| Bromoflourobenzene | 85-116 | 104 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-115

Date: 8/29/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

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Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 63543
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- **63543** |
| Sample Name / Location | MW - 20<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 1000 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 08/20/96 JJ |
| Date of Analysis | 08/21/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1 |

| Compound Name | 1- 63543 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 5 | |
| Acenaphthylene | BDL | ug/L | 5 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 3 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)flouranthene | BDL | ug/L | 4 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 3 | |
| Benzo(k)flouranthene | BDL | ug/L | 4 | |
| Chrysene | BDL | ug/L | 3 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 3 | |
| Flouranthene | BDL | ug/L | 2 | |
| Flourene | BDL | ug/L | 4 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 5 | |
| 2-Methylnaphthalene | BDL | ug/L | 7 | |
| Naphthalene | BDL | ug/L | 7 | |
| Phenanthrene | BDL | ug/L | 3 | |
| Pyrene | BDL | ug/L | 3 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 67 |
| 2-Flourobiphenyl | 43-116 | 73 |
| Terphenyl -d14 | 33-141 | 99 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 8/29/96
Report Generated
Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
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DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 63543
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 63543 | | | |
| Sample Name / Location | MW - 20<br>BF 1159 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 08/14/96 @ 1000 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 08/16/96 BJ | | | |
| Date of Analysis | 08/16/96 | | | |
| Sample Matrix | Groundwater | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 63543 | units | Det. Limit | Flags |
| Ethylene Dibromide (EDB) | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 109 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : for J W Moore, Chemist
Jerry Dees, Laboratory Director

Date: 9/11/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

# Analytical Report
## Petroleum Range Organics by FLPRO

**Lab Report Number:** 63543
**Sample Date:** 08/14/96
**Received Date:** 08/15/96
**Sample Site:** BF 1159
**Job Order No.:** 1305002

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- 63543 | | |
| Sample Name / Location | MW - 20<br>BF 1159 | | |
| Collector's Name | PJB | | |
| Date & Time Collected | 08/14/96 @ 1000 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | B. Jacquart | | |
| Date of extraction / Initials | 08/20/96 JJ | | |
| Date of Analysis | 09/04/96 | | |
| Sample Matrix | Groundwater | | |
| Dilution | | x | 1 |
| Parameter | 1- 63543 | units | Det. Limit |
| Petroleum Range Organics by FLPRO | 0.34 | mg/L | 0.2 |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 95 |
| Nonatriacontane (C-39) | 42-193 * | 55 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Milligram per liter. mg/Kg = Milligram per kilogram.

Approved by : J. W Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/10/96

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 63544
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63544 |
| Sample Name / Location | MW - 21<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 1015 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 08/17/96; JM |
| Date of Analysis | 08/17/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1 |

| Compound Name | 1- 63544 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 17 | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 69 | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 106 |
| Toluene-d8 | 86-119 | 101 |
| Bromoflourobenzene | 85-116 | 102 |

COMMENTS : T = Value reported is less than the laboratory method detection limit and is reported for informational purposes only.

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-119

Date: 8/29/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 63544
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63544 |
| Sample Name / Location | MW - 21<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 1015 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 08/20/96 JJ |
| Date of Analysis | 08/22/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1 |

| Compound Name | 1- 63544 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 5 | |
| Acenaphthylene | BDL | ug/L | 5 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 3 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)flouranthene | BDL | ug/L | 4 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 3 | |
| Benzo(k)flouranthene | BDL | ug/L | 4 | |
| Chrysene | BDL | ug/L | 3 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 3 | |
| Flouranthene | BDL | ug/L | 2 | |
| Flourene | BDL | ug/L | 4 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 5 | |
| 2-Methylnaphthalene | BDL | ug/L | 7 | |
| Naphthalene | BDL | ug/L | 7 | |
| Phenanthrene | BDL | ug/L | 3 | |
| Pyrene | BDL | ug/L | 3 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 52 |
| 2-Flourobiphenyl | 43-116 | 60 |
| Terphenyl -d14 | 33-141 | 102 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 8/29/96
Report Generated
Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 63544
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63544 |
| Sample Name / Location | MW - 21<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 1015 |
| Sample Type (composite or grab) | Grab |
| Analyst | B. Jacquart |
| Date of Extraction / Initials | 08/16/96 BJ |
| Date of Analysis | 08/16/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1 |

| Compound Name | 1- 63544 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Ethylene Dibromide (EDB) | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 114 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : for J. W. Moore, Chemist
Jerry Dees, Laboratory Director

Date: 9/11/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

| | |
|---|---|
| Client: | NPWC Environmental |
| Address: | Bldg. 3887, Code 910<br>NAS Pensacola,FL 32508 |
| Phone #: | 452-4728 |
| Contact: | Greg Campbell |

| | |
|---|---|
| Lab Report Number: | 63544 |
| Sample Date: | 08/14/96 |
| Received Date: | 08/15/96 |
| Sample Site: | BF 1159 |
| Job Order No.: | 1305002 |

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- 63544 | | |
| Sample Name / Location | MW - 21<br>BF 1159 | | |
| Collector's Name | PJB | | |
| Date & Time Collected | 08/14/96 @ 1015 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | B. Jacquart | | |
| Date of extraction / Initials | 08/20/96 JJ | | |
| Date of Analysis | 09/04/96 | | |
| Sample Matrix | Groundwater | | |
| Dilution | | x | 1 |
| Parameter | 1- 63544 | units | Det. Limit |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 81 |
| Nonatriacontane (C-39) | 42-193 * | 41 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Millgram per liter. mg/Kg = Milligram per kilogram.

Approved by : J. W. Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/10/96

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 63545
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- **63545** |
| Sample Name / Location | MW - 22<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 1030 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 08/17/96; JM |
| Date of Analysis | 08/17/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1 |

| Compound Name | 1- 63545 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | 5 | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 12 | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 23 | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 45 | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 114 |
| Toluene-d8 | 86-119 | 97 |
| Bromoflourobenzene | 85-116 | 96 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-123

Date: 8/29/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 63545
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63545 |
| Sample Name / Location | MW - 22<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 1030 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 08/20/96 JJ |
| Date of Analysis | 08/22/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1.09 |

| Compound Name | 1- 63545 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 5 | |
| Acenaphthylene | BDL | ug/L | 5 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 3 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)flouranthene | BDL | ug/L | 4 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 3 | |
| Benzo(k)flouranthene | BDL | ug/L | 4 | |
| Chrysene | BDL | ug/L | 3 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 3 | |
| Flouranthene | BDL | ug/L | 2 | |
| Flourene | BDL | ug/L | 4 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 5 | |
| 2-Methylnaphthalene | BDL | ug/L | 8 | |
| Naphthalene | BDL | ug/L | 8 | |
| Phenanthrene | BDL | ug/L | 3 | |
| Pyrene | BDL | ug/L | 3 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 57 |
| 2-Flourobiphenyl | 43-116 | 62 |
| Terphenyl -d14 | 33-141 | 92 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 8/29/96
Report Generated
Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 63545
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 63545 | | | |
| Sample Name / Location | MW - 22<br>BF 1159 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 08/14/96 @ 1030 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 08/16/96 BJ | | | |
| Date of Analysis | 08/16/96 | | | |
| Sample Matrix | Groundwater | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 63545 | units | Det. Limit | Flags |
| Ethylene Dibromide (EDB) | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 82 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : for J. W. Moore, Chemist
Jerry Dees, Laboratory Director

Date: 9/9/96
Report Generated
Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 63545
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- 63545 | | |
| Sample Name / Location | MW - 22<br>BF 1159 | | |
| Collector's Name | PJB | | |
| Date & Time Collected | 08/14/96 @ 1030 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | B. Jacquart | | |
| Date of extraction / Initials | 08/20/96 JJ | | |
| Date of Analysis | 09/04/96 | | |
| Sample Matrix | Groundwater | | |
| Dilution | | x | 1 |
| Parameter | 1- 63545 | units | Det. Limit |
| Petroleum Range Organics by FLPRO | 0.55 | mg/L | 0.25 |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 88 |
| Nonatriacontane (C-39) | 42-193 * | 46 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Milligram per liter. mg/Kg = Milligram per kilogram.

Approved by : JCMoore, Chemist for Jerry Dees, Laboratory Director

Date: 9/10/96

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 63546
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63546 |
| Sample Name / Location | MW - 23<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 1045 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 08/18/96; JM |
| Date of Analysis | 08/16/96 & 8/18/96 |
| Sample Matrix | Groundwater |
| Dilution | X 20 |

| Compound Name | 1- 63546 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | 880 | ug/L | 20 | |
| Bromodichloromethane | BDL | ug/L | 20 | |
| Bromoform | BDL | ug/L | 40 | |
| Bromomethane | BDL | ug/L | 60 | |
| Carbon Tetrachloride | BDL | ug/L | 20 | |
| Chlorobenzene | BDL | ug/L | 20 | |
| Chloroethane | BDL | ug/L | 20 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 100 | |
| Chloroform | BDL | ug/L | 20 | |
| Chloromethane | BDL | ug/L | 20 | |
| Dibromochloromethane | BDL | ug/L | 20 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 20 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 20 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 20 | |
| Dichlorodiflouromethane | BDL | ug/L | 20 | |
| 1,1-Dichloroethane | BDL | ug/L | 20 | |
| 1,2-Dichloroethane | BDL | ug/L | 20 | |
| 1,1-Dichloroethene | BDL | ug/L | 20 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 20 | |
| 1,2-Dichloropropane | BDL | ug/L | 20 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 20 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 20 | |
| Ethylbenzene | 300 | ug/L | 20 | |
| Methylene Chloride | BDL | ug/L | 100 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 100 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 20 | |
| Tetrachloroethene | BDL | ug/L | 20 | |
| Toluene | 2900 | ug/L | 20 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 20 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 20 | |
| Trichloroethene | BDL | ug/L | 20 | |
| Trichloroflouromethane | BDL | ug/L | 20 | |
| Vinyl Chloride | BDL | ug/L | 20 | |
| Xylenes (Total) | 2200 | ug/L | 20 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 101 |
| Toluene-d8 | 86-119 | 99 |
| Bromoflourobenzene | 85-116 | 99 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

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Date: 8/29/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 63546
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63546 |
| Sample Name / Location | MW - 23<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 1045 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 08/20/96 JJ |
| Date of Analysis | 08/22/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1 |

| Compound Name | 1- 63546 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 5 | |
| Acenaphthylene | BDL | ug/L | 5 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 3 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)flouranthene | BDL | ug/L | 4 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 3 | |
| Benzo(k)flouranthene | BDL | ug/L | 4 | |
| Chrysene | BDL | ug/L | 3 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 3 | |
| Flouranthene | BDL | ug/L | 2 | |
| Flourene | BDL | ug/L | 4 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 5 | |
| 2-Methylnaphthalene | BDL | ug/L | 7 | |
| Naphthalene | BDL | ug/L | 7 | |
| Phenanthrene | BDL | ug/L | 3 | |
| Pyrene | BDL | ug/L | 3 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 49 |
| 2-Flourobiphenyl | 43-116 | 50 |
| Terphenyl -d14 | 33-141 | 87 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 8/29/96
Report Generated
Page 1 of 1 End of Report

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# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 63546
Sample Date: 08/14/96
Received Date: 08/15/98
Sample Site: BF 1159
Job Order No.: 1305002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 63546 | | | |
| Sample Name / Location | MW - 23<br>BF 1159 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 08/14/96 @ 1045 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 08/16/96 BJ | | | |
| Date of Analysis | 08/16/96 | | | |
| Sample Matrix | Groundwater | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 63546 | units | Det. Limit | Flags |
| Ethylene Dibromide (EDB) | 0.19 | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 98 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : for J. W. Moore Chemist
Jerry Dees, Laboratory Director

Date: 9/11/96
Report Generated
Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

## Analytical Report
### Petroleum Range Organics by FLPRO

**Lab Report Number:** 63546
**Sample Date:** 08/14/96
**Received Date:** 08/15/96
**Sample Site:** BF 1159
**Job Order No.:** 1305002

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- 63546 | | |
| Sample Name / Location | MW - 23<br>BF 1159 | | |
| Collector's Name | PJB | | |
| Date & Time Collected | 08/14/96 @ 1045 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | B. Jacquart | | |
| Date of extraction / Initials | 08/20/96 JJ | | |
| Date of Analysis | 09/04/96 | | |
| Sample Matrix | Groundwater | | |
| Dilution | | x | 1 |
| Parameter | 1- 63546 | units | Det. Limit |
| Petroleum Range Organics by FLPRO | 6.7 | mg/L | 0.25 |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 114 |
| Nonatriacontane (C-39) | 42-193 * | 115 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Millgram per liter. mg/Kg = Milligram per kilogram.

Approved by : J W Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/11/96

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 63547
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63547 |
| Sample Name / Location | MW - 24<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 0930 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 08/17/96; JM |
| Date of Analysis | 08/17/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1 |

| Compound Name | 1- 63547 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | 4 | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 36 | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 66 | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 120 | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 97 |
| Toluene-d8 | 86-119 | 106 |
| Bromoflourobenzene | 85-116 | 94 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D - 131

Date: 8/29/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 63547
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63547 |
| Sample Name / Location | MW - 24<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 0930 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 08/20/96 JJ |
| Date of Analysis | 08/22/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1.25 |

| Compound Name | 1- 63547 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 6 | |
| Acenaphthylene | BDL | ug/L | 6 | |
| Anthracene | BDL | ug/L | 3 | |
| Benzo(a)anthracene | BDL | ug/L | 4 | |
| Benzo(a)pyrene | BDL | ug/L | 3 | |
| Benzo(b)flouranthene | BDL | ug/L | 5 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 4 | |
| Benzo(k)flouranthene | BDL | ug/L | 5 | |
| Chrysene | BDL | ug/L | 4 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 4 | |
| Flouranthene | BDL | ug/L | 3 | |
| Flourene | BDL | ug/L | 5 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 3 | |
| 1-Methylnaphthalene * | BDL | ug/L | 6 | |
| 2-Methylnaphthalene | BDL | ug/L | 9 | |
| Naphthalene | BDL | ug/L | 9 | |
| Phenanthrene | BDL | ug/L | 4 | |
| Pyrene | BDL | ug/L | 4 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 62 |
| 2-Flourobiphenyl | 43-116 | 70 |
| Terphenyl -d14 | 33-141 | 102 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 8/29/96
Report Generated

Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 63547
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 63547 | | | |
| Sample Name / Location | MW - 24<br>BF 1159 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 08/14/96 @ 0930 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 08/16/96 BJ | | | |
| Date of Analysis | 08/16/96 | | | |
| Sample Matrix | Groundwater | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 63547 | units | Det. Limit | Flags |
| Ethylene Dibromide (EDB) | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 103 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : for JWMoore, Chemist
Jerry Dees, Laboratory Director

Date: 9/9/96
Report Generated
Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 63547
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- 63547 | | |
| Sample Name / Location | MW - 24<br>BF 1159 | | |
| Collector's Name | PJB | | |
| Date & Time Collected | 08/14/96 @ 0930 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | B. Jacquart | | |
| Date of extraction / Initials | 08/20/96 JJ | | |
| Date of Analysis | 09/04/96 | | |
| Sample Matrix | Groundwater | | |
| Dilution | | x | 1 |
| Parameter | 1- 63547 | units | Det. Limit |
| Petroleum Range Organics by FLPRO | 0.76 | mg/L | 0.25 |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 110 |
| Nonatriacontane (C-39) | 42-193 * | 93 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Milligram per liter. mg/Kg = Milligram per kilogram.

Approved by : Jw Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/11/96

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 63548
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63548 |
| Sample Name / Location | MW - 25<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 1145 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 08/17/96; JM |
| Date of Analysis | 08/17/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1 |

| Compound Name | 1- 63548 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | 10 | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 100 | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 11 | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 420 | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 107 |
| Toluene-d8 | 86-119 | 110 |
| Bromoflourobenzene | 85-116 | 98 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-135

Date: 8/29/96
Report Generated

 End of Report

# Navy Public Works Center
## Environmental Laboratory

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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 63548
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- **63548** |
| Sample Name / Location | MW - 25<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 1145 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 08/20/96 JJ |
| Date of Analysis | 08/22/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1.18 |

| Compound Name | 1- 63548 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 6 | |
| Acenaphthylene | BDL | ug/L | 6 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 4 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)flouranthene | BDL | ug/L | 5 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 4 | |
| Benzo(k)flouranthene | BDL | ug/L | 5 | |
| Chrysene | BDL | ug/L | 4 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 4 | |
| Flouranthene | BDL | ug/L | 2 | |
| Flourene | BDL | ug/L | 5 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 6 | |
| 2-Methylnaphthalene | BDL | ug/L | 8 | |
| Naphthalene | BDL | ug/L | 8 | |
| Phenanthrene | BDL | ug/L | 4 | |
| Pyrene | BDL | ug/L | 4 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 50 |
| 2-Flourobiphenyl | 43-116 | 53 |
| Terphenyl -d14 | 33-141 | 81 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 8/29/96
Report Generated
Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

**Lab Report Number:** 63548
**Sample Date:** 08/14/96
**Received Date:** 08/15/96
**Sample Site:** BF 1159
**Job Order No.:** 1305002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 63548 | | | |
| Sample Name / Location | MW - 25<br>BF 1159 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 08/14/96 @ 1145 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 08/16/96 BJ | | | |
| Date of Analysis | 08/16/96 | | | |
| Sample Matrix | Groundwater | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 63548 | units | Det. Limit | Flags |
| Ethylene Dibromide (EDB) | BDL | ug/L | 0.02 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 65 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : J. W. Moore Chemist for Jerry Dees, Laboratory Director

Date: 9/9/96
Report Generated
Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 63548
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- 63548 | | |
| Sample Name / Location | MW - 25<br>BF 1159 | | |
| Collector's Name | PJB | | |
| Date & Time Collected | 08/14/96 @ 1145 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | B. Jacquart | | |
| Date of extraction / Initials | 08/20/96 JJ | | |
| Date of Analysis | 09/04/96 | | |
| Sample Matrix | Groundwater | | |
| Dilution | x 1 | | |
| Parameter | 1- 63548 | units | Det. Limit |
| Petroleum Range Organics by FLPRO | 1.8 | mg/L | 0.25 |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 99 |
| Nonatriacontane (C-39) | 42-193 * | 59 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Millgram per liter. mg/Kg = Milligram per kilogram.

Approved by : J W Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/11/96

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 63549
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63549 |
| Sample Name / Location | MW - 26<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 1130 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 08/18/96; JM |
| Date of Analysis | 08/16/96 & 08/18/96 |
| Sample Matrix | Groundwater |
| Dilution | X 5 |

| Compound Name | 1- 63549 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 5 | |
| Bromodichloromethane | 11 | ug/L | 5 | |
| Bromoform | BDL | ug/L | 10 | |
| Bromomethane | BDL | ug/L | 15 | |
| Carbon Tetrachloride | BDL | ug/L | 5 | |
| Chlorobenzene | BDL | ug/L | 5 | |
| Chloroethane | BDL | ug/L | 5 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 25 | |
| Chloroform | BDL | ug/L | 5 | |
| Chloromethane | BDL | ug/L | 5 | |
| Dibromochloromethane | BDL | ug/L | 5 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 5 | |
| Dichlorodiflouromethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethane | BDL | ug/L | 5 | |
| 1,2-Dichloroethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethene | BDL | ug/L | 5 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 5 | |
| 1,2-Dichloropropane | BDL | ug/L | 5 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 5 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 5 | |
| Ethylbenzene | 100 | ug/L | 5 | |
| Methylene Chloride | BDL | ug/L | 25 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 25 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 5 | |
| Tetrachloroethene | BDL | ug/L | 5 | |
| Toluene | 23 | ug/L | 5 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 5 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 5 | |
| Trichloroethene | BDL | ug/L | 5 | |
| Trichloroflouromethane | BDL | ug/L | 5 | |
| Vinyl Chloride | BDL | ug/L | 5 | |
| Xylenes (Total) | 640 | ug/L | 5 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 110 |
| Toluene-d8 | 86-119 | 106 |
| Bromoflourobenzene | 85-116 | 103 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-139

Date: 8/29/96
Report Generated

# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### 610 PAH's by Method 8270

Lab Report Number: 63549
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63549 |
| Sample Name / Location | MW - 26<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 1130 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 08/20/96 JJ |
| Date of Analysis | 08/22/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1 |

| Compound Name | 1- 63549 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 5 | |
| Acenaphthylene | BDL | ug/L | 5 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 3 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)flouranthene | BDL | ug/L | 4 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 3 | |
| Benzo(k)flouranthene | BDL | ug/L | 4 | |
| Chrysene | BDL | ug/L | 3 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 3 | |
| Flouranthene | BDL | ug/L | 2 | |
| Flourene | BDL | ug/L | 4 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 5 | |
| 2-Methylnaphthalene | BDL | ug/L | 7 | |
| Naphthalene | BDL | ug/L | 7 | |
| Phenanthrene | BDL | ug/L | 3 | |
| Pyrene | BDL | ug/L | 3 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 54 |
| 2-Flourobiphenyl | 43-116 | 55 |
| Terphenyl -d14 | 33-141 | 81 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 8/29/96
Report Generated



D-140

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
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Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 63549
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 63549 | | | |
| Sample Name / Location | MW - 26<br>BF 1159 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 08/14/96 @ 1130 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 08/16/96 BJ | | | |
| Date of Analysis | 08/16/96 | | | |
| Sample Matrix | Groundwater | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 63549 | units | Det. Limit | Flags |
| Ethylene Dibromide (EDB) | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 71 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : J. W. Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/9/96
Report Generated
Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Lab Report Number:** 63549
**Sample Date:** 08/14/96
**Received Date:** 08/15/96
**Sample Site:** BF 1159
**Job Order No.:** 1305002

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- 63549 | | |
| Sample Name / Location | MW - 26<br>BF 1159 | | |
| Collector's Name | PJB | | |
| Date & Time Collected | 08/14/96 @ 1130 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | B. Jacquart | | |
| Date of extraction / Initials | 08/20/96 JJ | | |
| Date of Analysis | 09/04/96 | | |
| Sample Matrix | Groundwater | | |
| Dilution | | x | 1 |
| Parameter | 1- 63549 | units | Det. Limit |
| Petroleum Range Organics by FLPRO | 1.9 | mg/L | 0.25 |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 110 |
| Nonatriacontane (C-39) | 42-193 * | 89 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Millgram per liter. mg/Kg = Milligram per kilogram.

Approved by : A.W. Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/11/96

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 63550
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63550 |
| Sample Name / Location | MW - 27<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 1100 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 08/16/96 JM |
| Date of Analysis | 08/16/96 & 08/18/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1 |

| Compound Name | 1- 63550 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | 110 | ug/L | 1 | |
| Bromodichloromethane | 2 | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 70 | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 590 | ug/L | 5 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 830 | ug/L | 5 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 75 |
| Toluene-d8 | 86-119 | 116 |
| Bromoflourobenzene | 85-116 | 87 |

COMMENTS : L = Off-scale high. Concentration of analyte was above highest calibration standard.

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-143

Date: 8/29/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### 610 PAH's by Method 8270

Lab Report Number: 63550
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63550 |
| Sample Name / Location | MW - 27<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 1100 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 08/20/96 JJ |
| Date of Analysis | 08/22/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1 |

| Compound Name | 1- 63550 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 5 | |
| Acenaphthylene | BDL | ug/L | 5 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 3 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)flouranthene | BDL | ug/L | 4 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 3 | |
| Benzo(k)flouranthene | BDL | ug/L | 4 | |
| Chrysene | BDL | ug/L | 3 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 3 | |
| Flouranthene | BDL | ug/L | 2 | |
| Flourene | BDL | ug/L | 4 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 5 | |
| 2-Methylnaphthalene | BDL | ug/L | 7 | |
| Naphthalene | BDL | ug/L | 7 | |
| Phenanthrene | BDL | ug/L | 3 | |
| Pyrene | BDL | ug/L | 3 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 52 |
| 2-Flourobiphenyl | 43-116 | 51 |
| Terphenyl -d14 | 33-141 | 79 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 8/29/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 63550
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 63550 | | | |
| Sample Name / Location | MW - 27<br>BF 1159 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 08/14/96 @ 1100 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 08/16/96 BJ | | | |
| Date of Analysis | 08/16/96 | | | |
| Sample Matrix | Groundwater | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 63550 | units | Det. Limit | Flags |
| Ethylene Dibromide (EDB) | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 84 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : for J W Moore, Chemist
Jerry Dees, Laboratory Director

Date: 9/9/96
Report Generated



D-145

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

| | |
|---|---|
| Client: | NPWC Environmental |
| Address: | Bldg. 3887, Code 910<br>NAS Pensacola,FL 32508 |
| Phone #: | 452-4728 |
| Contact: | Greg Campbell |

| | |
|---|---|
| Lab Report Number: | 63550 |
| Sample Date: | 08/14/96 |
| Received Date: | 08/15/96 |
| Sample Site: | BF 1159 |
| Job Order No.: | 1305002 |

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- 63550 | | |
| Sample Name / Location | MW - 27<br>BF 1159 | | |
| Collector's Name | PJB | | |
| Date & Time Collected | 08/14/96 @ 1100 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | B. Jacquart | | |
| Date of extraction / Initials | 08/20/96 JJ | | |
| Date of Analysis | 09/04/96 | | |
| Sample Matrix | Groundwater | | |
| Dilution | | x | 1 |
| Parameter | 1- 63550 | units | Det. Limit |
| Petroleum Range Organics by FLPRO | 4.8 | mg/L | 0.25 |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 109 |
| Nonatriacontane (C-39) | 42-193 * | 100 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Millgram per liter. mg/Kg = Milligram per kilogram.

Approved by : J W Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/11/96

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 63551
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63551 |
| Sample Name / Location | MW - 28<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 1115 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 08/18/96; JM |
| Date of Analysis | 08/18/96 |
| Sample Matrix | Groundwater |
| Dilution | X 20 |

| Compound Name | 1- 63551 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | 38 | ug/L | 20 | |
| Bromodichloromethane | BDL | ug/L | 20 | |
| Bromoform | BDL | ug/L | 40 | |
| Bromomethane | BDL | ug/L | 60 | |
| Carbon Tetrachloride | BDL | ug/L | 20 | |
| Chlorobenzene | BDL | ug/L | 20 | |
| Chloroethane | BDL | ug/L | 20 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 20 | |
| Chloroform | BDL | ug/L | 20 | |
| Chloromethane | BDL | ug/L | 20 | |
| Dibromochloromethane | BDL | ug/L | 20 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 20 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 20 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 20 | |
| Dichlorodiflouromethane | BDL | ug/L | 20 | |
| 1,1-Dichloroethane | BDL | ug/L | 20 | |
| 1,2-Dichloroethane | BDL | ug/L | 20 | |
| 1,1-Dichloroethene | BDL | ug/L | 20 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 20 | |
| 1,2-Dichloropropane | BDL | ug/L | 20 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 20 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 20 | |
| Ethylbenzene | 300 | ug/L | 20 | |
| Methylene Chloride | BDL | ug/L | 100 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 100 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 20 | |
| Tetrachloroethene | BDL | ug/L | 20 | |
| Toluene | 2400 | ug/L | 20 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 20 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 20 | |
| Trichloroethene | BDL | ug/L | 20 | |
| Trichloroflouromethane | BDL | ug/L | 20 | |
| Vinyl Chloride | BDL | ug/L | 20 | |
| Xylenes (Total) | 1700 | ug/L | 20 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 113 |
| Toluene-d8 | 86-119 | 101 |
| Bromoflourobenzene | 85-116 | 100 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

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Date: 8/29/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 63551
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- **63551** |
| Sample Name / Location | MW - 28<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 1115 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 08/20/96 JJ |
| Date of Analysis | 08/22/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1.14 |

| Compound Name | 1- 63551 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 6 | |
| Acenaphthylene | BDL | ug/L | 6 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 3 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)flouranthene | BDL | ug/L | 5 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 3 | |
| Benzo(k)flouranthene | BDL | ug/L | 5 | |
| Chrysene | BDL | ug/L | 3 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 3 | |
| Flouranthene | BDL | ug/L | 2 | |
| Flourene | BDL | ug/L | 5 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 6 | |
| 2-Methylnaphthalene | BDL | ug/L | 8 | |
| Naphthalene | BDL | ug/L | 8 | |
| Phenanthrene | BDL | ug/L | 3 | |
| Pyrene | BDL | ug/L | 3 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 53 |
| 2-Flourobiphenyl | 43-116 | 55 |
| Terphenyl -d14 | 33-141 | 90 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 8/29/96
Report Generated
Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 63551
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 63551 | | | |
| Sample Name / Location | MW - 28<br>BF 1159 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 08/14/96 @ 1115 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 08/16/96 BJ | | | |
| Date of Analysis | 08/16/96 | | | |
| Sample Matrix | Groundwater | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 63551 | units | Det. Limit | Flags |
| Ethylene Dibromide (EDB) | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 120 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : J W Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/9/96
Report Generated
Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Lab Report Number:** 63551
**Sample Date:** 08/14/96
**Received Date:** 08/15/96
**Sample Site:** BF 1159
**Job Order No.:** 1305002

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- 63551 | | |
| Sample Name / Location | MW - 28<br>BF 1159 | | |
| Collector's Name | PJB | | |
| Date & Time Collected | 08/14/96 @ 1115 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | B. Jacquart | | |
| Date of extraction / Initials | 08/20/96 JJ | | |
| Date of Analysis | 09/04/96 | | |
| Sample Matrix | Groundwater | | |
| Dilution | x 1 | | |
| **Parameter** | **1- 63551** | **units** | **Det. Limit** |
| Petroleum Range Organics by FLPRO | 6.0 | mg/L | 0.25 |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 107 |
| Nonatriacontane (C-39) | 42-193 * | 102 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Millgram per liter. mg/Kg = Milligram per kilogram.

Approved by : for J. Moore, Chemist
Jerry Dees, Laboratory Director

Date: 9/11/96

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### 601/602 Volatiles by Method 8260

Lab Report Number: 63552
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 63552 | | | |
| Sample Name / Location | Duplicate BF 1159 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 08/14/96 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 08/17/96; JM | | | |
| Date of Analysis | 08/17/96 | | | |
| Sample Matrix | Groundwater | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 63552 | units | Det. Limit | Flags |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 3 | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 35 | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 104 |
| Toluene-d8 | 86-119 | 100 |
| Bromoflourobenzene | 85-116 | 99 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-151

Date: 8/29/96
Report Generated

# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### 610 PAH's by Method 8270

Lab Report Number: 63552
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63552 |
| Sample Name / Location | Duplicate BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 08/22/96 JJ |
| Date of Analysis | 08/22/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1 |

| Compound Name | 1- 63552 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 5 | |
| Acenaphthylene | BDL | ug/L | 5 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 3 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)flouranthene | BDL | ug/L | 4 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 3 | |
| Benzo(k)flouranthene | BDL | ug/L | 4 | |
| Chrysene | BDL | ug/L | 3 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 3 | |
| Flouranthene | BDL | ug/L | 2 | |
| Flourene | BDL | ug/L | 4 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 5 | |
| 2-Methylnaphthalene | BDL | ug/L | 7 | |
| Naphthalene | BDL | ug/L | 7 | |
| Phenanthrene | BDL | ug/L | 3 | |
| Pyrene | BDL | ug/L | 3 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 54 |
| 2-Flourobiphenyl | 43-116 | 60 |
| Terphenyl -d14 | 33-141 | 96 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 8/29/96
Report Generated



D-152

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 63552
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 63552 | | | |
| Sample Name / Location | Duplicate BF 1159 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 08/14/96 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 08/16/96 BJ | | | |
| Date of Analysis | 08/16/96 | | | |
| Sample Matrix | Groundwater | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 63552 | units | Det. Limit | Flags |
| Ethylene Dibromide (EDB) | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 102 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : JW Moore, chemist for Jerry Dees, Laboratory Director

Date: 9/9/96
Report Generated
Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 63552
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- 63552 | | |
| Sample Name / Location | Duplicate BF 1159 | | |
| Collector's Name | PJB | | |
| Date & Time Collected | 08/14/96 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | B. Jacquart | | |
| Date of extraction / Initials | 08/20/96 JJ | | |
| Date of Analysis | 09/04/96 | | |
| Sample Matrix | Groundwater | | |
| Dilution | x 1 | | |
| Parameter | 1- 63552 | units | Det. Limit |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 115 |
| Nonatriacontane (C-39) | 42-193 * | 102 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Millgram per liter. mg/Kg = Milligram per kilogram.

Approved by : J W Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/11/96

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### 601/602 Volatiles by Method 8260

Lab Report Number: 63553
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- **63553** |
| Sample Name / Location | Trip Blank<br>BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ AM |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 08/18/96; JM |
| Date of Analysis | 08/18/96 |
| Sample Matrix | Distilled Water |
| Dilution | X 1 |

| Compound Name | 1- 63553 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 92 |
| Toluene-d8 | 86-119 | 96 |
| Bromoflourobenzene | 85-116 | 93 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-155

Date: 8/29/96
Report Generated

 End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 63541
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63541 |
| Sample Name / Location | Equipment Blank BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 0915 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 08/18/96; JM |
| Date of Analysis | 08/18/96 |
| Sample Matrix | Distilled Water |
| Dilution | X 1 |

| Compound Name | 1- 63541 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 95 |
| Toluene-d8 | 86-119 | 97 |
| Bromoflourobenzene | 85-116 | 93 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Does, Laboratory Director

D - 156

Date: 8/29/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### 610 PAH's by Method 8270

Lab Report Number: 63541
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | |
|---|---|
| LAB Sample ID# | 1- 63541 |
| Sample Name / Location | Equipment Blank BF 1159 |
| Collector's Name | PJB |
| Date & Time Collected | 08/14/96 @ 0915 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 08/20/96 JJ |
| Date of Analysis | 08/21/96 |
| Sample Matrix | Distilled Water |
| Dilution | X 1 |

| Compound Name | 1- 63541 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 5 | |
| Acenaphthylene | BDL | ug/L | 5 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 3 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)flouranthene | BDL | ug/L | 4 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 3 | |
| Benzo(k)flouranthene | BDL | ug/L | 4 | |
| Chrysene | BDL | ug/L | 3 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 3 | |
| Flouranthene | BDL | ug/L | 2 | |
| Flourene | BDL | ug/L | 4 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 5 | |
| 2-Methylnaphthalene | BDL | ug/L | 7 | |
| Naphthalene | BDL | ug/L | 7 | |
| Phenanthrene | BDL | ug/L | 3 | |
| Pyrene | BDL | ug/L | 3 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 61 |
| 2-Flourobiphenyl | 43-116 | 66 |
| Terphenyl -d14 | 33-141 | 107 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 8/29/96
Report Generated



D-157

# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

**Lab Report Number:** 63541
**Sample Date:** 08/14/96
**Received Date:** 08/15/96
**Sample Site:** BF 1159
**Job Order No.:** 1305002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 63541 | | | |
| Sample Name / Location | Equipment Blank BF 1159 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 08/14/96 @ 0915 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 08/16/96 BJ | | | |
| Date of Analysis | 08/16/96 | | | |
| Sample Matrix | Distilled Water | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 63541 | units | Det. Limit | Flags |
| Ethylene Dibromide (EDB) | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 110 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : A W Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/9/96
Report Generated
Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 63541
Sample Date: 08/14/96
Received Date: 08/15/96
Sample Site: BF 1159
Job Order No.: 1305002

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- 63541 | | |
| Sample Name / Location | Equipment Blank BF 1159 | | |
| Collector's Name | PJB | | |
| Date & Time Collected | 08/14/96 @ 0915 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | B. Jacquart | | |
| Date of extraction / Initials | 08/20/96 JJ | | |
| Date of Analysis | 09/04/96 | | |
| Sample Matrix | Distilled Water | | |
| Dilution | | x | 1 |
| Parameter | 1- 63541 | units | Det. Limit |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 113 |
| Nonatriacontane (C-39) | 42-193 * | 93 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Milligram per liter. mg/Kg = Milligram per kilogram.

Approved by : J. W. Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/10/96

1.4

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, FL 32508-6500

Ph#-(904)452-4726
Autovon-922-4726

Report Required? Yes No DEP? Yes No

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 130500Z

Lab ID Number:
Sample Date: 8.14.96
Received Date: 8-15-96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1-6-3541 | #2-6-3542 | #3-6-3543 | #4-6-3544 |
|---|---|---|---|---|---|
| Sample Name or Location | ---------- | EQ. BLANK | MW-19 | MW-20 | MW-21 |
| Sampled by | ---------- | PJB | PJB | PJB | PJB |
| Composite Date/Time Collected | Begin | | | | |
| | Frequency | | | | |
| | End | | | | |
| Grab Time | ---------- | 0915 | 0945 | 1000 | 1015 |
| Sample Matrix | ---------- | DI | GW | GW | GW |

Notes: K.A.6. (Less $)

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 2 EDB | X | 2 EDB | X | 2 EDB | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | X | 4 VOA | X | 4 VOA | X | 4 VOA | X | 4 VOA | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | X | 2 PAH | X | 2 PAH | | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | X | 2 TPH | X | 2 TPH | X | 2 TPH | X | 2 TPH | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: [signature] WES, Inc.
Date/Time: 8-15-96 / 0830

Received by: [signature]
Date/Time: 8/15/96 830

PWC 9510/6

D-160

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

2.4

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500

Ph#-(904)452-4726
Autovon-922-4726

Report Required? (Yes) No DEP? Yes (No)

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305002

Lab ID Number:
Sample Date: 8-14-96
Received Date: 8-15-96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1 6-3545 | #2 6-3546 | #3 6-3547 | #4 6-3548 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name or Location | ---------- | MW-22 | MW-23 | MW-24 | MW-25 | K.A.G. (Less Pb) |
| Sampled by | ---------- | PJB | PJB | PJB | PJB | |
| Composite Date/Time Collected | Begin | | | | | |
| | Frequency | | | | | |
| | End | | | | | |
| Grab Time | ---------- | 1030 | 1045 | 0930 | 1145 | |
| Sample Matrix | ---------- | GW | GW | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 2 EDB | X | 2 EDB | X | 2 EDB | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | X | 4 VOA | X | 4 VOA | X | 4 VOA | X | 4 VOA | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAHs) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | X | 2 PAH | X | 2 PAH | | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | X | 2 TPH | X | 2 TPH | X | 2 TPH | X | 2 TPH | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: Peter J. Tom WES, Inc.
Date/Time: 8-15-96 / 0830

Received by: [illegible]
Date/Time: 8/15/96 0830

PWC 9510/8

J.4

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500
Ph#-(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305002

Report Required? (Yes) No DEP? Yes (No)
Lab ID Number:
Sample Date: 8.14.96
Received Date: 8-15-96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1-6-3549 | | #2-6-3550 | | #3-6-3551 | | #4-6-3552 | | Notes: | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Name or Location | ---------- | MW-26 | | MW-27 | | MW-28 | | Duplicate | | K.P.G. (Less QD) | | |
| Sampled by | ---------- | PJB | | PJB | | PJB | | PJB | | | | |
| Composite Date/Time Collected | Begin | | | | | | | | | | | |
| | Frequency | | | | | | | | | | | |
| | End | | | | | | | | | | | |
| Grab Time | ---------- | 1130 | | 1100 | | 1115 | | — | | | | |
| Sample Matrix | ---------- | GW | | GW | | GW | | GW | | | | |
| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 2 EDB | X | 2 EDB | X | 2 EDB | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | X | 4 VOA | X | 4 VOA | X | 4 VOA | X | 4 VOA | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | X | 2 PAH | X | 2 PAH | | 1Lx3/4 oz. | 4° C/None |
| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | X | 2 TPH | X | 2 TPH | X | 2 TPH | X | 2 TPH | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250ml/4 oz. | HNO3/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: Peter J. [illegible] WES, Inc.
Date/Time: 8.15.96 / 0830

Received by: [illegible]
Date/Time: 8/15/96 0830

PWC 9510/8

4.4

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500

Ph#-(904)452-4728
Autovon-922-4728

Report Required? Yes No DEP? Yes No

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305002

Lab ID Number:
Sample Date: 8-14-96
Received Date: 8-15-96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1- G-3553 | #2- | #3- | #4- | Notes: |
|---|---|---|---|---|---|---|
| Sample Name or Location | ---------- | TRIP BLANK | | | | |
| Sampled by | ---------- | AJB | | | | |
| Composite Date/Time Collected | Begin / Frequency / End | | | | | |
| Grab Time | ---------- | AM | | | | |
| Sample Matrix | ---------- | DI | | | | |

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | X | 4 VOA | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: [signature] WES, Inc.
Date/Time: 8-15-96 / 0830

Received by: [signature]
Date/Time: 8/15/96 0830

PWC 9510/6

P-163

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 63663
Sample Date: 08/22/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 63663 |
| Sample Name / Location | MW-29<br>BF-1159 |
| Collector's Name | P. Brown |
| Date & Time Collected | 08/22/96 @ 1515 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 08/28/96 JM |
| Date of Analysis | 08/28/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1 |

| Compound Name | 1- 63663 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 3.8 | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 1.3 | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 20 | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 113 |
| Toluene-d8 | 86-119 | 102 |
| Bromoflourobenzene | 85-116 | 101 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 9/17/96
Report Generated



D-164

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 63663
Sample Date: 08/22/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 63663 | | | |
| Sample Name / Location | MW-29<br>BF-1159 | | | |
| Collector's Name | P. Brown | | | |
| Date & Time Collected | 08/22/96 @ 1515 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 08/26/96 JJ | | | |
| Date of Analysis | 08/27/96 | | | |
| Sample Matrix | Groundwater | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 63663 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)flouranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)flouranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Flouranthene | BDL | ug/L | 2 | |
| Flourene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 78 |
| 2-Flourobiphenyl | 43-116 | 79 |
| Terphenyl -d14 | 33-141 | 88 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 9/17/96
Report Generated



D-165

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 63663
Sample Date: 08/22/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 63663 | | | |
| Sample Name / Location | MW-29<br>BF-1159 | | | |
| Collector's Name | P. Brown | | | |
| Date & Time Collected | 08/22/96 @ 1515 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 08/24/96 BJ | | | |
| Date of Analysis | 08/24/96 | | | |
| Sample Matrix | Groundwater | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 63663 | units | Det. Limit | Flags |
| Ethylene Dibromide (EDB) | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 100 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 9/17/96
Report Generated



D-166

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### Petroleum Range Organics by FLPRO

Lab Report Number: 63663
Sample Date: 08/22/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- 63663 | | |
| Sample Name / Location | MW-29<br>BF-1159 | | |
| Collector's Name | P. Brown | | |
| Date & Time Collected | 08/22/96 @ 1515 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | B. Jacquart | | |
| Date of extraction / Initials | 08/27/96 JJ | | |
| Date of Analysis | 09/04/96 | | |
| Sample Matrix | Groundwater | | |
| Dilution | | x | 1 |
| Parameter | 1- 63663 | units | Det. Limit |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 108 |
| Nonatriacontane (C-39) | 42-193 * | ** |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.
** = The C-39 surrogate was not added to samples in this batch.

BDL = Below Detection Limit. mg/L = Millgram per liter. mg/Kg = Milligram per kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 9/17/96

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 63664
Sample Date: 08/22/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 63664 | | | |
| Sample Name / Location | MW-30 BF-1159 | | | |
| Collector's Name | P. Brown | | | |
| Date & Time Collected | 08/22/96 @ 1530 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 08/28/96 JM | | | |
| Date of Analysis | 08/28/96 | | | |
| Sample Matrix | Groundwater | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 63664 | units | Det. Limit | Flags |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 1.6 | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 1.5 | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 6 | ug/L | 1 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 115 |
| Toluene-d8 | 86-119 | 100 |
| Bromoflourobenzene | 85-116 | 98 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 9/17/96
Report Generated

D-168

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### 610 PAH's by Method 8270

Lab Report Number: 63664
Sample Date: 08/22/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 63664 |
| Sample Name / Location | MW-30<br>BF-1159 |
| Collector's Name | P. Brown |
| Date & Time Collected | 08/22/96 @ 1530 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 08/26/96 JJ |
| Date of Analysis | 08/27/96 |
| Sample Matrix | Groundwater |
| Dilution | X 1 |

| Compound Name | 1- 63664 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)flouranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)flouranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Flouranthene | BDL | ug/L | 2 | |
| Flourene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 69 |
| 2-Flourobiphenyl | 43-116 | 69 |
| Terphenyl -d14 | 33-141 | 96 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 9/17/96
Report Generated

# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 63664
Sample Date: 08/22/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 63664 | | | |
| Sample Name / Location | MW-30<br>BF-1159 | | | |
| Collector's Name | P. Brown | | | |
| Date & Time Collected | 08/22/96 @ 1530 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 08/24/96 BJ | | | |
| Date of Analysis | 08/24/96 | | | |
| Sample Matrix | Groundwater | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 63664 | units | Det. Limit | Flags |
| Ethylene Dibromide (EDB) | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 81 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 9/17/96
Report Generated



D-170

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### Petroleum Range Organics by FLPRO

Lab Report Number: 63664
Sample Date: 08/22/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- 63664 | | |
| Sample Name / Location | MW-30<br>BF-1159 | | |
| Collector's Name | P. Brown | | |
| Date & Time Collected | 08/22/96 @ 1530 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | B. Jacquart | | |
| Date of extraction / Initials | 08/27/96 JJ | | |
| Date of Analysis | 09/05/96 | | |
| Sample Matrix | Groundwater | | |
| Dilution | | x | 1 |
| Parameter | 1- 63664 | units | Det. Limit |
| Petroleum Range Organics by FLPRO | 0.23 | mg/L | 0.2 |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 114 |
| Nonatriacontane (C-39) | 42-193 * | ** |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.
** = The C-39 surrogate was not added to samples in this batch.

BDL = Below Detection Limit. mg/L = Millgram per liter. mg/Kg = Milligram per kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 9/17/96

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### 601/602 Volatiles by Method 8260

Lab Report Number: 63665
Sample Date: 08/22/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 63665 |
| Sample Name / Location | Trip Blank BF-1159 |
| Collector's Name | P. Brown |
| Date & Time Collected | 08/22/96 @ PM |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 08/28/96 JM |
| Date of Analysis | 08/28/96 |
| Sample Matrix | Deionized Water |
| Dilution | X 1 |

| Compound Name | 1- 63665 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 108 |
| Toluene-d8 | 86-119 | 98 |
| Bromoflourobenzene | 85-116 | 97 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

D-172

Approved by : Jerry Dees, Laboratory Director

Date: 9/17/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report

### 601/602 Volatiles by Method 8260

Lab Report Number: 63662
Sample Date: 08/22/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 63662 |
| Sample Name / Location | Equipment Blank BF-1159 |
| Collector's Name | P. Brown |
| Date & Time Collected | 08/22/96 @ 1500 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 08/28/96 JM |
| Date of Analysis | 08/28/96 |
| Sample Matrix | Deionized Water |
| Dilution | X 1 |

| Compound Name | 1- 63662 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodiflouromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 4.4 | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichloroflouromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 1.1 | ug/L | 1 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 107 |
| Toluene-d8 | 86-119 | 101 |
| Bromoflourobenzene | 85-116 | 98 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

D-X73

Approved by : Jerry Dees, Laboratory Director

Date: 9/17/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 63662
Sample Date: 08/22/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 63662 |
| Sample Name / Location | Equipment Blank<br>BF-1159 |
| Collector's Name | P. Brown |
| Date & Time Collected | 08/22/96 @ 1500 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 08/26/96 JJ |
| Date of Analysis | 08/27/96 |
| Sample Matrix | Deionized Water |
| Dilution | X 1 |

| Compound Name | 1- 63662 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)flouranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)flouranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Flouranthene | BDL | ug/L | 2 | |
| Flourene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 76 |
| 2-Flourobiphenyl | 43-116 | 75 |
| Terphenyl -d14 | 33-141 | 105 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 9/17/96
Report Generated

Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

## Analytical Report
### Ethylene Dibromide by Method 504

Lab Report Number: 63662
Sample Date: 08/22/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 63662 | | | |
| Sample Name / Location | Equipment Blank BF-1159 | | | |
| Collector's Name | P. Brown | | | |
| Date & Time Collected | 08/22/96 @ 1500 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | B. Jacquart | | | |
| Date of Extraction / Initials | 08/24/96 BJ | | | |
| Date of Analysis | 08/24/96 | | | |
| Sample Matrix | Deionized Water | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 63662 | units | Det. Limit | Flags |
| Ethylene Dibromide (EDB) | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 96 |

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 9/17/96
Report Generated
Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

| | |
|---|---|
| Client: | NPWC Environmental |
| Address: | Bldg 3887 |
| | NAS Pensacola, Fl 32508 |
| Phone #: | 452-4728 |
| Contact: | Greg Campbell |

| | |
|---|---|
| Lab Report Number: | 63662 |
| Sample Date: | 08/22/96 |
| Received Date: | 08/23/96 |
| Sample Site: | Bronson Field |
| Job Order No.: | 130 5001 |

| | | | |
|---|---|---|---|
| LAB Sample ID# | 1- 63662 | | |
| Sample Name / Location | Equipment Blank BF-1159 | | |
| Collector's Name | P. Brown | | |
| Date & Time Collected | 08/22/96 @ 1500 | | |
| Sample Type (composite or grab) | Grab | | |
| Analyst | B. Jacquart | | |
| Date of extraction / Initials | 08/27/96 JJ | | |
| Date of Analysis | 09/04/96 | | |
| Sample Matrix | Deionized Water | | |
| Dilution | | x | 1 |
| Parameter | 1- 63662 | units | Det. Limit |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 97 |
| Nonatriacontane (C-39) | 42-193 * | ** |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.
** = The C-39 surrogate was not added to samples in this batch.

BDL = Below Detection Limit. mg/L = Millgram per liter. mg/Kg = Milligram per kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 9/17/96

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500

Ph#-(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305 00 R1

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 8·22·96
Received Date: 8·23·96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1- 636662 | #2- 636663 | #3- 636664 | #4- 636665 |
|---|---|---|---|---|---|
| Sample Name or Location | ---------- | EQ. BLANK | MW-29 | MW-30 | Trip BLANK |
| Sampled by | ---------- | PJB | PJB | PJB | PJB |
| Composite Date/Time Collected | Begin | | | | |
| | Frequency | | | | |
| | End | | | | |
| Grab Time | ---------- | 1500 | 1515 | 1530 | PM |
| Sample Matrix | ---------- | DI | GW | GW | DI |

Notes: K.A.O. (less Pb)

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 2 EDB | X | 2 EDB | | | 3 | 120ml A VOA/4 oz | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 4 VOA | X | 4 VOA | X | 4 VOA | X | 3 VOA | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | X | 2 PAH | | | | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | X | 2 TPH | X | 2 TPH | X | 2 TPH | | | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: Peter J. Kon / WES, Inc.
Date/Time: 8·23·96 / 0945

Received by: Kathy Burrell
Date/Time: 8/23/96 0945

PWC 951Q6

# Navy Public Works Center
## Environmental Laboratory

Bldg 3887, Code 920
NAS Pensacola, FL 32508-5303
Phone (904) 452-4728
DSN 922-4728
FAX (904) 452-2387/2799

# Laboratory Report
Total Lead

Requester: NPWC Environmental
Address: Bldg. 3887
NAS Pensacola, FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Report Number: 9609041
Sample Date: 18 Sep 96
Received Date: 18 Sep 96
Sample Site: Bronson Field, Site 1159
Job Order #: 130 5001

| Sample ID# | Lab | 1- 63984 | 2- 63985 | 3- 63986 | 4- 63987 | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | MW-20, Site 1159 | MW-21, Site 1159 | MW-22, Site 1159 | MW-23, Site 1159 | ICP - Brian Nelson |
| Collector Name | | P. Keane | P. Keane | P. Keane | P. Keane | |
| Date/Time | Comp start | | | | | |
| Collected | Comp stop | | | | | Date(s) of analysis: |
| (Military) | Grab | 18 Sep 96 @ 1015 | 18 Sep 96 @ 1112 | 18 Sep 96 @ 1158 | 18 Sep 96 @ 1255 | 26 Sep 96 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | Grab | |
| Sample Matrix | | Groundwater | Groundwater | Groundwater | Groundwater | |

| PARAMETER | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metals: | METHOD # | 1- 63984 | units | Limit | 2- 63985 | units | Limit | 3- 63986 | units | Limit | 4- 63987 | units | Limit | Preservative(s) |
| Lead(Pb) | EPA 239.2 | x 0.013 | mg/l | 0.003 | x 0.020 | mg/l | 0.003 | x 0.085 | mg/l | 0.003 | x 0.140 | mg/l | 0.006 | $HNO_3$ to pH <2 |

Comments: mg/kg=milligrams per kilogram. mg/l=milligrams per liter. BDL=Below Detection Limit.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 01-Oct-96 11:14

End of Report

PWC 5090/14

D-178

# Navy Public Works Center
## Environmental Laboratory

Bldg 3887, Code 920
NAS Pensacola, FL 32508-5303
Phone (904) 452-4728
DSN 922-4728
FAX (904) 452-2387/2799

# Laboratory Report
Total Lead

| | | | |
|---|---|---|---|
| Requester: | NPWC Environmental | Report Number: | 9609042 |
| Address: | Bldg. 3887 | Sample Date: | 18 Sep 96 |
| | NAS Pensacola, FL 32508 | Received Date: | 18 Sep 96 |
| Phone #: | 452-4728 | Sample Site: | Bronson Field, Site 1159 |
| Contact: | Greg Campbell | Job Order #: | 130 5001 |

| Sample ID# | Lab | 1- 63988 | 2- 63989 | 3- 63990 | 4- 63991 | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | MW-27, Site 1159 | Duplicate, Site 1159 | Eq. Blank, Site 1159 | MW-28, Site 1159 | ICP -- Brian Nelson |
| Collector Name | | P. Keane | P. Keane | P. Keane | P. Keane | |
| Date/Time Collected (Military) | Comp start | | | | | |
| | Comp stop | | | | | Date(s) of analysis: |
| | Grab | 18 Sep 96 @ 1410 | 18 Sep 96 @ N/S | 18 Sep 96 @ 1400 | 18 Sep 96 @ 1446 | 26 Sep 96 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | Grab | |
| Sample Matrix | | Groundwater | Groundwater | DI Water | Groundwater | |

| PARAMETER Metals: | METHOD # | ID# 1- 63988 | units | Det. Limit | ID# 2- 63989 | units | Det. Limit | ID# 3- 63990 | units | Det. Limit | ID# 4- 63991 | units | Det. Limit | Preservative(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead(Pb) | EPA 239.2 | X 0.114 | mg/l | 0.006 | X 0.128 | mg/l | 0.006 | X BDL | mg/l | 0.003 | X 0.200 | mg/l | 0.015 | $HNO_3$ to pH <2 |

Comments: mg/kg=milligrams per kilogram. mg/l=milligrams per liter. BDL=Below Detection Limit.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 01-Oct-96 11:13

End of Report

PWC 5090/14

D-179

# Navy Public Works Center
## Environmental Laboratory

Bldg 3887, Code 920
NAS Pensacola, FL 32508-5303
Phone (904) 452-4728
DSN 922-4728
FAX (904) 452-2387/2799

# Laboratory Report
Total Lead

| | | | |
|---|---|---|---|
| Requester: | NPWC Environmental | Report Number: | 9609043 |
| Address: | Bldg. 3887 | Sample Date: | 18 Sep 96 |
| | NAS Pensacola, FL 32508 | Received Date: | 18 Sep 96 |
| Phone #: | 452-4728 | Sample Site: | Bronson Field, Site 1159 |
| Contact: | Greg Campbell | Job Order #: | 130 5001 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID# | Lab | 1- 63992 | | | 2- | | | 3- | | | 4- | | | Analyst(s): |
| Sample Name | Requester | MW-26, Site 1159 | | | | | | | | | | | | ICP -- Brian Nelson |
| Collector Name | | P. Keane | | | | | | | | | | | | |
| Date/Time | Comp start | | | | | | | | | | | | | |
| Collected | Comp stop | | | | | | | | | | | | | Date(s) of analysis: |
| (Military) | Grab | 18 Sep 96 @ 1530 | | | | | | | | | | | | 26 Sep 96 |
| Sample Type | Comp/Grab | Grab | | | | | | | | | | | | |
| Sample Matrix | | Groundwater | | | | | | | | | | | | |
| PARAMETER | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. | |
| Metals: | METHOD # | 1- 63992 | units | Limit | 2- | units | Limit | 3- | units | Limit | 4- | units | Limit | Preservative(s) |
| Lead(Pb) | EPA 239.2 | X 0.114 | mg/l | 0.006 | | mg/l | 0.006 | | mg/l | 0.003 | | mg/l | 0.003 | $HNO_3$ to pH <2 |

Comments: mg/kg=milligrams per kilogram. mg/l=milligrams per liter. BDL=Below Detection Limit.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 01-Oct-96 11:22

End of Report

PWC 5090/14

D-180

# Navy Public Works Center
## Environmental Laboratory

Bldg 3887, Code 920
NAS Pensacola, FL 32508-5303
Phone (904) 452-4728
DSN 922-4728
FAX (904) 452-2387/2799

# Laboratory Report
Total Lead

| | | | |
|---|---|---|---|
| Requester: | NPWC Environmental | Report Number: | 9609044 |
| Address: | Bldg. 3887 | Sample Date: | 20 Sep 96 |
| | NAS Pensacola, FL 32508 | Received Date: | 20 Sep 96 |
| Phone #: | 452-4728 | Sample Site: | Bronson Field, Site 1159 |
| Contact: | Greg Campbell | Job Order #: | 130 5001 |

| Sample ID# | Lab | 1- 63993 | 2- 63994 | 3- 63995 | 4- 63996 | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | MW-25, Site 1159 | MW-24, Site 1159 | MW-30, Site 1159 | MW-29, Site 1159 | ICP - Brian Nelson |
| Collector Name | | P. Keane | P. Keane | P. Keane | P. Keane | |
| Date/Time | Comp start | | | | | |
| Collected | Comp stop | | | | | Date(s) of analysis: |
| (Military) | Grab | 20 Sep 96 @ 0942 | 20 Sep 96 @ 1046 | 20 Sep 96 @ 1210 | 20 Sep 96 @ 1250 | 26 Sep 96 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | Grab | |
| Sample Matrix | | Groundwater | Groundwater | Groundwater | Groundwater | |

| PARAMETER | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metals: | METHOD # | 1- 63993 | units | Limit | 2- 63994 | units | Limit | 3- 63995 | units | Limit | 4- 63996 | units | Limit | Preservative(s) |
| Lead(Pb) | EPA 239.2 | X 0.190 | mg/l | 0.006 | X 0.060 | mg/l | 0.003 | X 0.007 | mg/l | 0.003 | X 0.018 | mg/l | 0.003 | $HNO_3$ to pH <2 |

Comments: mg/kg=milligrams per kilogram. mg/l=milligrams per liter. BDL=Below Detection Limit.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 01-Oct-96 11:21

End of Report

PWC 5090/14

D-181

# HAZARDOUS WASTE CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Ph#: (904) 452-4728/3642
DSN: 922-4728/3642
FAX: (904) 452-2799/2387

Requester: NPWC ENVIRONMENTAL
Address: NAS PENSACOLA, FL B-3887
Phone #: 452-2120
Contact: GREGG CAMPBELL
Job Order #: 1305001

Report Required? (Yes) No DEP? Yes No
Lab ID Number:
Sample Date: 9/18/96
Received Date: 9/18/96
Sample Site: BRONSON SITE 1159
Lab Due Date:

| Sample ID # | Lab | #1-6-3984 | #2-6-3985 | #3-6-3986 | #4-6-3987 |
|---|---|---|---|---|---|
| Sample Name | ---------- | MW 20 | MW 21 | MW 22 | MW 23 |
| or Location | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | SITE 1159 |
| Sampled by | ---------- | PRaue | PRaue | PRaue | PRaue |
| Collection Date | | 9/18/96 | 9/18/96 | 9/18/96 | 9/18/96 |
| Date/Time Time | | 1015 | 1112 | 1158 | 1255 |
| Sample Matrix | ---------- | GW | GW | GW | GW |

Notes: SITE 1159 BRONSON FIELD QUIESCENT SAMPLES

| GROUP PARAMETERS by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required (L/S) | Preservative(s) Used (Liquids) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HW Charact. (complete) | EPA SW 846 | | | | | | | | | 60 | See below | See below |
| Ignitability (Flashpoint) | SW 846 1010 | | | | | | | | | 2 | 250ml/4 oz. | 4° C |
| Reactivity (Cyanide & Sulfide) | EPA SW-846 | | | | | | | | | 4 | 1L/4 oz. | 4° C |
| Corrosivity (pH) | SW 846 9040/9045 | | | | | | | | | 1 | 250ml/4 oz. | 4° C |
| Toxicity (TCLP) complete | EPA SW-846 | | | | | | | | | 55 | See below | See below |
| Toxicity (TCLP) complete | EPA SW-846 | | | | | | | | | 55 | See below | See below |
| TCLP Non Volatile Extraction | SW 846 1311 | | | | | | | | | 5 | 40 mlx3/4 oz. | 4° C |
| TCLP Volatile ZHE Extraction | SW 846 1311 | | | | | | | | | 5 | 1Lx4/32 oz. | HCl to pH<2/4° C |
| TCLP BNA Extractables | SW 846 8270 | | | | | | | | | 18 | 1Lx3/4 oz. | 4° C |
| TCLP Acid Extractables | SW 846 8270 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| TCLP B/N Extractables | SW 846 8270 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| TCLP Pesticides | SW 846 8080 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| TCLP Herbicides | SW 846 8150 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| TCLP Volatiles | SW 846 8260 | | | | | | | | | 9 | 40 ml x 3/4 oz. | HCl to pH<2/4° C |
| TCLP Metals (8) | EPA SW-846 | | | | | | | | | 7 | 500 ml/4 oz. | $HNO_3$ to pH<2 |
| Complete Priority Pollutants | EPA SW-846 | | | | | | | | | 42 | See below | See below |
| PP Acid Extractables | SW 846 8270 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| PP B/N Extractables | SW 846 8270 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| PP Pesticide/PCB's | SW 846 8080 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| PP Volatiles | SW 846 8260 | | | | | | | | | 9 | 40 ml x 3/4 oz. | HCl to pH<2/4° C |
| PP Metals (13) | EPA SW-846 | | | | | | | | | 9 | 500 ml/4 oz. | $HNO_3$ to pH<2 |
| PP Cyanide/Phenol | EPA SW-846 | | | | | | | | | 4 | 1L Plastic/1L Glass | NaOH/$H_2SO_4$ |
| Toxicity (TCLP) less Pest/Herb | EPA SW-846 | | | | | | | | | 40 | See below | See below |
| F001 - F005 Solvents | EPA SW-846 | | | | | | | | | 28 | 1Lx2&40mlx3/16 oz. | 4° C |
| Total Volatiles | SW 846 8260 | | | | | | | | | 9 | 40 mlx3/4 oz. | HCl to pH<2/4° C |
| Total BNA Extractables | SW 846 8270 | | | | | | | | | 18 | 1Lx2/16 oz. | 4° C |
| Total RCRA Metals (8) | EPA SW-846 | X | Pb only | X | Pb only | X | Pb only | X | Pb only | 7 | 500 ml/4 oz. | $HNO_3$ to pH<2 |
| PCB's in Oil | SW 846 8080 | | | | | | | | | 3 | 40 ml/4 oz. | None |
| PCB's in Water/Soil/Wipes | SW 846 8080 | | | | | | | | | 4 | 1L/4 oz. | None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: PRaue
Date/Time: 9/18/96 1550

Received by: PRaue
Date/Time: 9/18/96 1645

Time to LAB

2 of 4

# HAZARDOUS WASTE CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Ph#: (904) 452-4728/3642
DSN: 922-4728/3642
FAX: (904) 452-2799/2387

Requester: NPWC ENVIRONMENTAL
Address: NAS PENSACOLA, FL B-3887
Phone #: 452-2170
Contact: GREGG CAMPBELL
Job Order #: 1305001

Report Required? (Yes) No DEP? Yes No
Lab ID Number:
Sample Date: 9/18/96
Received Date: 9/18/96
Sample Site: BROWN FIELD SITE 1159
Lab Due Date:

| Sample ID # | Lab | #1-6-3988 | #2-6-3989 | #3-6-3990 | #4-6-3991 |
|---|---|---|---|---|---|
| Sample Name | ---------- | MW27 | DUPLICATE | EQ BLANK | MW28 |
| or Location | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | SITE 1159 |
| Sampled by | ---------- | [illegible] | [illegible] | [illegible] | [illegible] |
| Collection Date/Time | Date | 9/18/96 | — | 9/18/96 | 9/18/96 |
| | Time | 1410 | — | 1400 | 1446 |
| Sample Matrix | ---------- | GW | GW | DIST | GW |

Notes: SITE 1159 BROWN FIELD FLUORESCENT SAMPLES

| GROUP PARAMETERS by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required (L/S) | Preservative(s) Used (Liquids) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HW Charact. (complete) | EPA SW 846 | | | | | | | | | 60 | See below | See below |
| Ignitability (Flashpoint) | SW 846 1010 | | | | | | | | | 2 | 250ml/4 oz. | 4° C |
| Reactivity (Cyanide & Sulfide) | EPA SW-846 | | | | | | | | | 4 | 1L/4 oz. | 4° C |
| Corrosivity (pH) | SW 846 9040/9045 | | | | | | | | | 1 | 250ml/4 oz. | 4° C |
| Toxicity (TCLP) complete | EPA SW-846 | | | | | | | | | 55 | See below | See below |
| Toxicity (TCLP) complete | EPA SW-846 | | | | | | | | | 55 | See below | See below |
| TCLP Non Volatile Extraction | SW 846 1311 | | | | | | | | | 5 | 40 mlx3/4 oz. | 4° C |
| TCLP Volatile ZHE Extraction | SW 846 1311 | | | | | | | | | 5 | 1Lx4/32 oz. | HCl to pH<2/4° C |
| TCLP BNA Extractables | SW 846 8270 | | | | | | | | | 18 | 1Lx3/4 oz. | 4° C |
| TCLP Acid Extractables | SW 846 8270 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| TCLP B/N Extractables | SW 846 8270 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| TCLP Pesticides | SW 846 8080 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| TCLP Herbicides | SW 846 8150 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| TCLP Volatiles | SW 846 8260 | | | | | | | | | 9 | 40 ml x 3/4 oz. | HCl to pH<2/4° C |
| TCLP Metals (8) | EPA SW-846 | | | | | | | | | 7 | 500 ml/4 oz | HNO, to pH<2 |
| Complete Priority Pollutants | EPA SW-846 | | | | | | | | | 42 | See below | See below |
| PP Acid Extractables | SW 846 8270 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| PP B/N Extractables | SW 846 8270 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| PP Pesticide/PCB's | SW 846 8080 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| PP Volatiles | SW 846 8260 | | | | | | | | | 9 | 40 ml x 3/4 oz. | HCl to pH<2/4° C |
| PP Metals (13) | EPA SW-846 | | | | | | | | | 9 | 500 ml/4 oz | HNO, to pH<2 |
| PP Cyanide/Phenol | EPA SW-846 | | | | | | | | | 4 | 1L Plastic/1L Glass | NaOH/H,SO, |
| Toxicity (TCLP) less Pest/Herb | EPA SW-846 | | | | | | | | | 40 | See below | See below |
| F001 - F005 Solvents | EPA SW-846 | | | | | | | | | 28 | 1Lx2& 40mlx3/16 oz. | 4° C |
| Total Volatiles | SW 846 8260 | | | | | | | | | 9 | 40 mlx3/4 oz | HCl to pH<2/4° C |
| Total BNA Extractables | SW 846 8270 | | | | | | | | | 18 | 1Lx2/16 oz. | 4° C |
| Total RCRA Metals (8) | EPA SW-846 | | Pb only | X | Pb only | X | Pb only | X | Pb only | 7 | 500 ml/4 oz | HNO, to pH<2 |
| PCB's in Oil | SW 846 8080 | | | | | | | | | 3 | 40 ml/4 oz | None |
| PCB's in Water/Soil/Wipes | SW 846 8080 | | | | | | | | | 4 | 1L/4 oz | None |
| Other: | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Comments

Relinquished by: [illegible]
Date/Time: 9/18/96 1550

Received by: [illegible]
Date/Time: 9/18/96 1645
Time Stamp

123r24(forms-chain-of-custody-hazardous).wk1 rev 5/24/96

D-183

3 of 4

# HAZARDOUS WASTE CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Ph#: (904) 452-4728/3642
DSN: 922-4728/3642
FAX: (904) 452-2799/2387

Requester: NPWC ENVIRONMENTAL
Address: NAS PENSACOLA, FL 15-3887
Phone #: 452-2170
Contact: GREGG CHAMPBELL
Job Order #: 13050001

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 9/18/96
Received Date: 9/18/96
Sample Site: BROWSON FIELD SITE 1159
Lab Due Date:

| Sample ID # | Lab | #1 6-3992 | #2 | #3 | #4 |
|---|---|---|---|---|---|
| Sample Name | ---------- | MW26 | TRIP BLANK | MW25 | |
| or Location | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | |
| Sampled by | ---------- | [signature] | [signature] | [signature] | |
| Collection Date | | 9/18/96 | 9/18/96 | 9/18/96 | |
| Date/Time Time | | 1530 | AM | | |
| Sample Matrix | ---------- | GW | DI | GW | |

Notes: SITE 1159 QUIESCENT SAMPLES

| GROUP PARAMETERS by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required (L/S) | Preservative(s) Used (Liquids) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HW Charact. (complete) | EPA SW 846 | | | | | | | | | 60 | See below | See below |
| Ignitability (Flashpoint) | SW 846 1010 | | | | | | | | | 2 | 250ml/4 oz. | 4° C |
| Reactivity (Cyanide & Sulfide) | EPA SW-846 | | | | | | | | | 4 | 1L/4 oz. | 4° C |
| Corrosivity (pH) | SW 846 9040/9045 | | | | | | | | | 1 | 250ml/4 oz. | 4° C |
| Toxicity (TCLP) complete | EPA SW-846 | | | | | | | | | 55 | See below | See below |
| Toxicity (TCLP) complete | EPA SW-846 | | | | | | | | | 55 | See below | See below |
| TCLP Non Volatile Extraction | SW 846 1311 | | | | | | | | | 5 | 40 mlx3/4 oz. | 4° C |
| TCLP Volatile ZHE Extraction | SW 846 1311 | | | | | | | | | 5 | 1Lx4/32 oz. | HCl to pH<2/4° C |
| TCLP BNA Extractables | SW 846 8270 | | | | | | | | | 18 | 1Lx3/4 oz. | 4° C |
| TCLP Acid Extractables | SW 846 8270 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| TCLP B/N Extractables | SW 846 8270 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| TCLP Pesticides | SW 846 8080 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| TCLP Herbicides | SW 846 8150 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| TCLP Volatiles | SW 846 8260 | | | | | | | | | 9 | 40 ml x 3/4 oz. | HCl to pH<2/4° C |
| TCLP Metals (8) | EPA SW-846 | | | | | | | | | 7 | 500 ml/4 oz. | $HNO_3$ to pH<2 |
| Complete Priority Pollutants | EPA SW-846 | | | | | | | | | 42 | See below | See below |
| PP Acid Extractables | SW 846 8270 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| PP B/N Extractables | SW 846 8270 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| PP Pesticide/PCB's | SW 846 8080 | | | | | | | | | 10 | 1Lx3/4 oz. | 4° C |
| PP Volatiles | SW 846 8260 | | | | | | | | | 9 | 40 ml x 3/4 oz. | HCl to pH<2/4° C |
| PP Metals (13) | EPA SW-846 | | | | | | | | | 9 | 500 ml/4 oz. | $HNO_3$ to pH<2 |
| PP Cyanide/Phenol | EPA SW-846 | | | | | | | | | 4 | 1L Plastic/1L Glass | $NaOH/H_2SO_4$ |
| Toxicity (TCLP) less Pest/Herb | EPA SW-846 | | | | | | | | | 40 | See below | See below |
| F001 - F005 Solvents | EPA SW-846 | | | | | | | | | 28 | 1Lx2&40mlx3/16 oz. | 4° C |
| Total Volatiles | SW 846 8260 | | | | | | | | | 9 | 40 mlx3/4 oz. | HCl to pH<2/4° C |
| Total BNA Extractables | SW 846 8270 | | | | | | | | | 18 | 1Lx2/16 oz. | 4° C |
| Total RCRA Metals (8) | EPA SW-846 | X | Pbody | | | | | | | 7 | 500 ml/4 oz. | $HNO_3$ to pH<2 |
| PCB's in Oil | SW 846 8080 | | | | | | | | | 3 | 40 ml/4 oz. | None |
| PCB's in Water/Soil/Wipes | SW 846 8080 | | | | | | | | | 4 | 1L/4 oz. | None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: [signature]
Date/Time: 9/18/96 1550

Received by: [signature]
Date/Time: 9/18/96 1645
TURN TO LAB

12/3/24/forms/custody/chain/rev/5/24/96

D-184

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report

### 601/602 Volatiles by Method 8260

Lab Report Number: 64234
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 64234 |
| Sample Name / Location | BF 1159<br>Eq. Blank |
| Collector's Name | PJB |
| Date & Time Collected | 10/10/96 @ 1140 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 10/15/96 JM |
| Date of Analysis | 10/15/96 |
| Sample Matrix | DI |
| Dilution | X 1 |

| Compound Name | 1- 64234 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 1 | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 92 |
| Toluene-d8 | 86-119 | 112 |
| Bromofluorobenzene | 85-116 | 92 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

D-185

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Lab Report Number: 64234
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **64234** |
| Sample Name / Location | BF 1159<br>Eq. Blank |
| Collector's Name | PJB |
| Date & Time Collected | 10/10/96 @ 1140 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 10/15/96 JJ |
| Date of Analysis | 10/16/96 |
| Sample Matrix | DI |
| Dilution | X 1 |

| Compound Name | 1- 64234 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

## SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 46 |
| 2-Fluorobiphenyl | 43-116 | 51 |
| Terphenyl -d14 | 33-141 | 86 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated



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# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 64235
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 64235 |
| Sample Name / Location | BF 1159 MW-31 |
| Collector's Name | PJB |
| Date & Time Collected | 10/10/96 @ 1200 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 10/15/96, 10/17/96 JM |
| Date of Analysis | 10/15/96, 10/17/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64235 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 130 | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 6 | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 363 | ug/L | 2 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 91 |
| Toluene-d8 | 86-119 | 117 |
| Bromofluorobenzene | 85-116 | 89 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

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Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 64235
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64235 | | | |
| Sample Name / Location | BF 1159 MW-31 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1200 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 10/15/96 JJ | | | |
| Date of Analysis | 10/16/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64235 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 56 |
| 2-Fluorobiphenyl | 43-116 | 58 |
| Terphenyl -d14 | 33-141 | 80 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

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# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 64235
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64235 | | | |
| Sample Name / Location | BF 1159 MW-31 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1200 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/17/96 JM | | | |
| Date of Analysis | 10/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64235 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 81 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

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# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Lab Report Number: 64235
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64235 | | | |
| Sample Name / Location | BF 1159<br>MW-31 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1200 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/18/96 JM | | | |
| Date of Analysis | 10/18/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | | x | 1 | |
| Parameter | 1- 64235 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | 2 | mg/L | 0.25 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 106 |
| Nonatriacontane (C-39) | 42-193 * | 110 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96

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# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 64236
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **64236** |
| Sample Name / Location | BF 1159<br>MW-32 |
| Collector's Name | PJB |
| Date & Time Collected | 10/10/96 @ 1220 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 10/15/96, 10/17/96 JM |
| Date of Analysis | 10/15/96, 10/17/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64236 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 470 | ug/L | 10 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 670 | ug/L | 10 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 1600 | ug/L | 10 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 106 |
| Toluene-d8 | 86-119 | 109 |
| Bromofluorobenzene | 85-116 | 91 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

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Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
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# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report

### 610 PAH's by Method 8270

Lab Report Number: 64236
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64236 | | | |
| Sample Name / Location | BF 1159 MW-32 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1220 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 10/15/96 JJ | | | |
| Date of Analysis | 10/16/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64236 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 59 |
| 2-Fluorobiphenyl | 43-116 | 60 |
| Terphenyl -d14 | 33-141 | 75 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

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# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 64236
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64236 | | | |
| Sample Name / Location | BF 1159 MW-32 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1220 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/17/96 JM | | | |
| Date of Analysis | 10/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64236 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 64 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

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# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

| | |
|---|---|
| Client: | NPWC Environmental |
| Address: | Bldg. 3887, Code 910<br>NAS Pensacola,FL 32508 |
| Phone #: | (904) 452-3180 |
| Contact: | Greg Campbell |

| | |
|---|---|
| Lab Report Number: | 64236 |
| Sample Date: | 10/10/96 |
| Received Date: | 10/11/96 |
| Sample Site: | NAS Pensacola, FL |
| Job Order No.: | 130 5001 |

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64236 | | | |
| Sample Name / Location | BF 1159<br>MW-32 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1220 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/18/96 JM | | | |
| Date of Analysis | 10/18/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| **Parameter** | **1- 64236** | **units** | **Det. Limit** | **Flags** |
| Petroleum Range Organics by FLPRO | 4.7 | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 107 |
| Nonatriacontane (C-39) | 42-193 * | 96 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96

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# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 64237
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 64237 |
| Sample Name / Location | BF 1159 MW-33 |
| Collector's Name | PJB |
| Date & Time Collected | 10/10/96 @ 1240 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 10/17/96 JM |
| Date of Analysis | 10/17/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64237 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | 2 | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/L | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 102 |
| Toluene-d8 | 86-119 | 102 |
| Bromofluorobenzene | 85-116 | 99 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

D-195

Approved by : Jerry Does, Laboratory Director

Date: 10/22/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report

### 610 PAH's by Method 8270

Lab Report Number: 64237
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **64237** |
| Sample Name / Location | BF 1159<br>MW-33 |
| Collector's Name | PJB |
| Date & Time Collected | 10/10/96 @ 1240 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 10/15/96 JJ |
| Date of Analysis | 10/16/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64237 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 61 |
| 2-Fluorobiphenyl | 43-116 | 60 |
| Terphenyl -d14 | 33-141 | 67 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

D-196

# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 64237
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64237 | | | |
| Sample Name / Location | BF 1159 MW-33 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1240 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/17/96 JM | | | |
| Date of Analysis | 10/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64237 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 86 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

D-197

# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report

## Petroleum Range Organics by FLPRO

| | | | |
|---|---|---|---|
| Client: | NPWC Environmental | Lab Report Number: | 64237 |
| Address: | Bldg. 3887, Code 910 | Sample Date: | 10/10/96 |
| | NAS Pensacola,FL 32508 | Received Date: | 10/11/96 |
| Phone #: | (904) 452-3180 | Sample Site: | NAS Pensacola, FL |
| Contact: | Greg Campbell | Job Order No.: | 130 5001 |

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64237 | | | |
| Sample Name / Location | BF 1159<br>MW-33 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1240 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/18/96 JM | | | |
| Date of Analysis | 10/18/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 64237 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 104 |
| Nonatriacontane (C-39) | 42-193 * | 114 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96

D-198

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 64238
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **64238** |
| Sample Name / Location | BF 1159<br>MW-34 |
| Collector's Name | PJB |
| Date & Time Collected | 10/10/96 @ 1300 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 10/15/96 JM |
| Date of Analysis | 10/15/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64238 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | 4 | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/L | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 86 |
| Toluene-d8 | 86-119 | 114 |
| Bromofluorobenzene | 85-116 | 99 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

D - 199

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 64238
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64238 | | | |
| Sample Name / Location | BF 1159<br>MW-34 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1300 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 10/15/96 JJ | | | |
| Date of Analysis | 10/16/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | | X | 1 | |
| Compound Name | 1- 64238 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 58 |
| 2-Fluorobiphenyl | 43-116 | 60 |
| Terphenyl -d14 | 33-141 | 84 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Deas, Laboratory Director

Date: 10/22/96
Report Generated

D-200

# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** (904) 452-3180
**Contact:** Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

**Lab Report Number:** 64238
**Sample Date:** 10/10/96
**Received Date:** 10/11/96
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64238 | | | |
| Sample Name / Location | BF 1159<br>MW-34 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1300 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/17/96 JM | | | |
| Date of Analysis | 10/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64238 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 93 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

D-201

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Lab Report Number: 64238
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64238 | | | |
| Sample Name / Location | BF 1159<br>MW-34 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1300 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/18/96 JM | | | |
| Date of Analysis | 10/18/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 64238 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 96 |
| Nonatriacontane (C-39) | 42-193 * | 99 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96

D-202

# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report

### 601/602 Volatiles by Method 8260

Lab Report Number: 64239
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 64239 |
| Sample Name / Location | BF 1159<br>MW-35 |
| Collector's Name | PJB |
| Date & Time Collected | 10/10/96 @ 1320 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 10/15/96 JM |
| Date of Analysis | 10/15/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64239 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/L | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 92 |
| Toluene-d8 | 86-119 | 116 |
| Bromofluorobenzene | 85-116 | 95 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

D-203

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

# Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## 610 PAH's by Method 8270

Lab Report Number: 64239
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64239 | | | |
| Sample Name / Location | BF 1159<br>MW-35 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1320 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 10/15/96 JJ | | | |
| Date of Analysis | 10/16/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64239 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 60 |
| 2-Fluorobiphenyl | 43-116 | 58 |
| Terphenyl -d14 | 33-141 | 71 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

D-204



Page 1 of 1 End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 64239
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64239 | | | |
| Sample Name / Location | BF 1159 MW-35 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1320 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/17/96 JM | | | |
| Date of Analysis | 10/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64239 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 94 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

D-205

# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

## Analytical Report

### Petroleum Range Organics by FLPRO

| | |
|---|---|
| Client: | NPWC Environmental |
| Address: | Bldg. 3887, Code 910<br>NAS Pensacola,FL 32508 |
| Phone #: | (904) 452-3180 |
| Contact: | Greg Campbell |

| | |
|---|---|
| Lab Report Number: | 64239 |
| Sample Date: | 10/10/96 |
| Received Date: | 10/11/96 |
| Sample Site: | NAS Pensacola, FL |
| Job Order No.: | 130 5001 |

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64239 | | | |
| Sample Name / Location | BF 1159<br>MW-35 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1320 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/18/96 JM | | | |
| Date of Analysis | 10/18/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 64239 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 101 |
| Nonatriacontane (C-39) | 42-193 * | 120 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96

D-206

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 64240
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **64240** |
| Sample Name / Location | BF 1159<br>MW-36 |
| Collector's Name | PJB |
| Date & Time Collected | 10/10/96 @ 1340 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 10/15/96 JM |
| Date of Analysis | 10/15/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64240 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | 3 | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/L | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 77 |
| Toluene-d8 | 86-119 | 116 |
| Bromofluorobenzene | 85-116 | 93 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

D-207

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report

### 610 PAH's by Method 8270

Lab Report Number: 64240
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64240 | | | |
| Sample Name / Location | BF 1159<br>MW-36 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1340 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 10/15/96 JJ | | | |
| Date of Analysis | 10/16/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64240 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 55 |
| 2-Fluorobiphenyl | 43-116 | 58 |
| Terphenyl -d14 | 33-141 | 82 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

D-208

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 64240
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64240 | | | |
| Sample Name / Location | BF 1159 MW-36 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1340 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/17/96 JM | | | |
| Date of Analysis | 10/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64240 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 87 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

D-209

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

| | |
|---|---|
| Client: | NPWC Environmental |
| Address: | Bldg. 3887, Code 910 |
| | NAS Pensacola,FL 32508 |
| Phone #: | (904) 452-3180 |
| Contact: | Greg Campbell |

| | |
|---|---|
| Lab Report Number: | 64240 |
| Sample Date: | 10/10/96 |
| Received Date: | 10/11/96 |
| Sample Site: | NAS Pensacola, FL |
| Job Order No.: | 130 5001 |

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64240 | | | |
| Sample Name / Location | BF 1159 MW-36 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1340 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/18/96 JM | | | |
| Date of Analysis | 10/18/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 64240 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 102 |
| Nonatriacontane (C-39) | 42-193 * | 122 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96

D-210

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 64241
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **64241** |
| Sample Name / Location | BF 1159<br>MW-37 |
| Collector's Name | PJB |
| Date & Time Collected | 10/10/96 @ 1400 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 10/15/96 JM |
| Date of Analysis | 10/15/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64241 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | 4 | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/L | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 79 |
| Toluene-d8 | 86-119 | 116 |
| Bromofluorobenzene | 85-116 | 98 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

D-211

Approved by : Jerry Does, Laboratory Director

Date: 10/22/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 64241
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **64241** |
| Sample Name / Location | BF 1159<br>MW-37 |
| Collector's Name | PJB |
| Date & Time Collected | 10/10/96 @ 1400 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 10/15/96 JJ |
| Date of Analysis | 10/17/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64241 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 57 |
| 2-Fluorobiphenyl | 43-116 | 59 |
| Terphenyl -d14 | 33-141 | 85 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

D- 212

# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 64241
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64241 | | | |
| Sample Name / Location | BF 1159 MW-37 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1400 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/17/96 JM | | | |
| Date of Analysis | 10/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64241 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 88 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

D- 213

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

| | |
|---|---|
| Client: | NPWC Environmental |
| Address: | Bldg. 3887, Code 910 |
| | NAS Pensacola,FL 32508 |
| Phone #: | (904) 452-3180 |
| Contact: | Greg Campbell |

| | |
|---|---|
| Lab Report Number: | 64241 |
| Sample Date: | 10/10/96 |
| Received Date: | 10/11/96 |
| Sample Site: | NAS Pensacola, FL |
| Job Order No.: | 130 5001 |

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64241 | | | |
| Sample Name / Location | BF 1159<br>MW-37 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1400 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/18/96 JM | | | |
| Date of Analysis | 10/18/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 64241 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 110 |
| Nonatriacontane (C-39) | 42-193 * | 117 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96

D-214

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 64242
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64242 | | | |
| Sample Name / Location | BF 1159 MW-38 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1420 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/15/96 JM | | | |
| Date of Analysis | 10/15/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64242 | units | Det. Limit | Flags |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | 1 | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/L | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 78 |
| Toluene-d8 | 86-119 | 113 |
| Bromofluorobenzene | 85-116 | 94 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

D-215

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** (904) 452-3180
**Contact:** Greg Campbell

## Analytical Report

### 610 PAH's by Method 8270

**Lab Report Number:** 64242
**Sample Date:** 10/10/96
**Received Date:** 10/11/96
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64242 | | | |
| Sample Name / Location | BF 1159 MW-38 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1420 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 10/15/96 JJ | | | |
| Date of Analysis | 10/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64242 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 57 |
| 2-Fluorobiphenyl | 43-116 | 59 |
| Terphenyl -d14 | 33-141 | 74 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : _____
Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

D-216

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 64242
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64242 | | | |
| Sample Name / Location | BF 1159 MW-38 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1420 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/17/96 JM | | | |
| Date of Analysis | 10/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64242 | units | Det. Limit | Flags |
| Ethylene Dibromide | 0.16 | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 86 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

D-217

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** (904) 452-3180
**Contact:** Greg Campbell

**Lab Report Number:** 64242
**Sample Date:** 10/10/96
**Received Date:** 10/11/96
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64242 | | | |
| Sample Name / Location | BF 1159<br>MW-38 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ 1420 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/18/96 JM | | | |
| Date of Analysis | 10/18/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 64242 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 102 |
| Nonatriacontane (C-39) | 42-193 * | 98 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96

D-218

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 64243
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64243 | | | |
| Sample Name / Location | BF 1159 Duplicate | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ N/S | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/16/96, 10/17/96 JM | | | |
| Date of Analysis | 10/16/96, 10/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64243 | units | Det. Limit | Flags |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 470 | ug/L | 10 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/L | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 600 | ug/L | 10 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 1600 | ug/L | 10 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 92 |
| Toluene-d8 | 86-119 | 105 |
| Bromofluorobenzene | 85-116 | 93 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

D-219

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 64243
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **64243** |
| Sample Name / Location | BF 1159 Duplicate |
| Collector's Name | PJB |
| Date & Time Collected | 10/10/96 @ N/S |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 10/15/96 JJ |
| Date of Analysis | 10/17/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64243 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 55 |
| 2-Fluorobiphenyl | 43-116 | 56 |
| Terphenyl -d14 | 33-141 | 76 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

D-220

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** (904) 452-3180
**Contact:** Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

**Lab Report Number:** 64243
**Sample Date:** 10/10/96
**Received Date:** 10/11/96
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64243 | | | |
| Sample Name / Location | BF 1159 Duplicate | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ N/S | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/17/96 JM | | | |
| Date of Analysis | 10/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64243 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 74 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96
Report Generated

D-221

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Lab Report Number: 64243
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64243 | | | |
| Sample Name / Location | BF 1159 Duplicate | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ N/S | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/18/96 JM | | | |
| Date of Analysis | 10/18/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 64243 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | 4.1 | mg/L | 0.25 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 105 |
| Nonatriacontane (C-39) | 42-193 * | 118 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/22/96

D-222

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 64244
Sample Date: 10/10/96
Received Date: 10/11/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64244 | | | |
| Sample Name / Location | BF 1159<br>Trip Blank | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/10/96 @ N/S | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/15/96 JM | | | |
| Date of Analysis | 10/15/96 | | | |
| Sample Matrix | DI | | | |
| Dilution | | X | 1 | |
| Compound Name | 1- 64244 | units | Det. Limit | Flags |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 10 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/L | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 10 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 10 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 99 |
| Toluene-d8 | 86-119 | 110 |
| Bromofluorobenzene | 85-116 | 90 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

D-223

Approved by : Jerry Deas, Laboratory Director

Date: 10/22/96
Report Generated

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Yes No

Requester: NPWC Enviro. Dept.
Address: Greg Campbell, PE
NAS. Pensacola
Phone #: 452-3180
Contact: GREG CAMPBELL
Job Order #: 1305 001

Lab ID Number:
Sample Date: 10.10.96
Received Date: 10.11.96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1- 6-4234 | #2- 6-4235 | #3- 6-4236 | #4- 6-4237 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name or Location | ---------- | EQ. BLANK | MW-31 | MW-32 | MW-33 | K.A.G. (LESS PO) |
| Sampled by | ---------- | PJB | PJB | PJB | PJB | |
| Composite Date/Time Collected | Begin | | | | | |
| | Frequency | | | | | |
| | End | | | | | |
| Grab Time | ---------- | 1140 | 1200 | 1220 | 1240 | |
| Sample Matrix | ---------- | DF | GW | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 2 EDB | X | 2 EDB | X | 2 EDB | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 4 VOA | X | 4 VOA | X | 4 VOA | X | 4 VOA | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 5 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 5 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 5 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 5 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | X | 2 PAH | X | 2 PAH | 9 | 1Lx3/4 oz. | 4° C/None |
| **PARAMETER by Group Name** | **METHOD SOURCE** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **Billing Units** | **Containers Required** | **Preservative(s) Used** |
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | X | 2 TPH | X | 2 TPH | X | 2 TPH | X | 2 TPH | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 6 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | | | | | | | | | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: [signature] WES, Inc.
Date/Time: 10.11.96 / 1245

Received by: [signature]
Date/Time: 10/11/96 1250

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2 of 3

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Yes No

Requester: NPWC Enviro. Dept.
Address: Greg Campbell, PE
NAS · Pensacola
Phone #: 452-3180
Contact: Gregg Campbell
Job Order #: 730500 1

Lab ID Number:
Sample Date: 10·10·96
Received Date: 10·11·96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1-64238 | #2-64239 | #3-64240 | #4-64241 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name or Location | ---------- | MW-34 | MW-35 | MW-36 | MW-37 | X.A.6. (less Pb) |
| Sampled by | ---------- | POB | POB | POB | POB | |
| Composite | Begin | | | | | |
| Date/Time | Frequency | | | | | |
| Collected | End | | | | | |
| Grab Time | ---------- | 1300 | 1320 | 1340 | 1400 | |
| Sample Matrix | ---------- | GW | GW | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 2 EDB | X | 2 EDB | X | 2 EDB | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 4 VOA | X | 4 VOA | X | 4 VOA | X | 4 VOA | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Semivols/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 8 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | X | 2 PAH | X | 2 PAH | 9 | 1Lx3/4 oz. | 4° C/None |
| **PARAMETER by Group Name** | **METHOD SOURCE** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **Billing Units** | **Containers Required** | **Preservative(s) Used** |
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | X | 2 TPH | X | 2 TPH | X | 2 TPH | X | 2 TPH | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 6 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | | | | | | | | | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: [signature] WES, Inc.
Date/Time: 10·11·96 / 1245

Received by: [signature]
Date/Time: 10/11/96 1250

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3 of 3

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Yes No

Requester: NPWC Enviro. Dept.
Address: Greg Campbell, PE
NAS. Pensacola
Phone #: 452-3180
Contact: GREGG CAMPBELL
Job Order #: 1305001

Lab ID Number:
Sample Date: 10·10·96
Received Date: 10·11·96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1-6-4242 | #2-6-4243 | #3-6-4244 | #4- |
|---|---|---|---|---|---|
| Sample Name or Location | ---------- | MW-38 | Duplicate | TRIP BLANK | |
| Sampled by | ---------- | PJB | PJB | PJB | |
| Composite Date/Time Collected | Begin | | | | |
| | Frequency | | | | |
| | End | | | | |
| Grab Time | ---------- | 1420 | — | — | |
| Sample Matrix | ---------- | GW | GW | DI | |

Notes: K.A.G. (Less Pb) Duplicate (1) EDB Bottle Broken

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 1 EDB | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 4 VOA | X | 4 VOA | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 3 PAH | | | | | 9 | 1Lx3/4 oz. | 4° C/None |
| **PARAMETER by Group Name** | **METHOD SOURCE** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **Billing Units** | **Containers Required** | **Preservative(s) Used** |
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | X | 2 TPH | X | 3 TPH | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 6 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | | | | | | | | | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: [signature] WES, Inc.
Date/Time: 10·11·96 / 1245

Received by: [signature]
Date/Time: 10/11/96 1250

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# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## 601/602 Volatiles by Method 8260

**Lab Report Number:** 64362
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64362 | | | |
| Sample Name / Location | BF-1159 MW-39 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @1300 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/25/96 JM | | | |
| Date of Analysis | 10/25/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64362 | units | Det. Limit | Flags |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 1 | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 107 |
| Toluene-d8 | 86-119 | 101 |
| Bromofluorobenzene | 85-116 | 102 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-227

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

**Lab Report Number:** 64362
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64362 | | | |
| Sample Name / Location | BF-1159<br>MW-39 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @1300 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 10/24/96 JJ | | | |
| Date of Analysis | 10/25/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64362 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 84 |
| 2-Fluorobiphenyl | 43-116 | 87 |
| Terphenyl -d14 | 33-141 | 98 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-228

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report

## Ethylene Dibromide by Method 504

**Lab Report Number:** 64362
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64362 | | | |
| Sample Name / Location | BF-1159 MW-39 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @1300 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 11/06/96 MC | | | |
| Date of Analysis / Initials | 11/07/96 MC | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64362 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 94 |

**COMMENTS :**

**BDL = Below Detection Limit.** **ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.**

**Approved by :** Jerry Dees, Laboratory Director

**Date:** 11/12/96
Report Generated



**End of Report**

D-229

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## Petroleum Range Organics by FLPRO

**Lab Report Number:** 64362
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64362 | | | |
| Sample Name / Location | BF-1159<br>MW-39 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @1300 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/28/96 JJ | | | |
| Date of analysis / Initials | 11/04/96 JM | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 64362 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 90 |
| Nonatriacontane (C-39) | 42-193 * | 73 |

**COMMENTS :** * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

**BDL = Below Detection Limit.** **mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.**

**Approved by :** Jerry Dees, Laboratory Director

**Date:** 11/12/96



**End of Report**

D-230

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report

## 601/602 Volatiles by Method 8260

**Lab Report Number:** 64363
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 64363 |
| Sample Name / Location | BF-1159<br>MW-40 |
| Collector's Name | PJB |
| Date & Time Collected | 10/22/96 @ 1330 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 10/25/96 JM |
| Date of Analysis | 10/29/96 |
| Sample Matrix | GW |
| Dilution | X 5 |

| Compound Name | 1- 64363 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 5 | |
| Bromodichloromethane | BDL | ug/L | 5 | |
| Bromoform | BDL | ug/L | 10 | |
| Bromomethane | BDL | ug/L | 15 | |
| Carbon Tetrachloride | BDL | ug/L | 5 | |
| Chlorobenzene | BDL | ug/L | 5 | |
| Chloroethane | BDL | ug/L | 5 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 5 | |
| Chloroform | BDL | ug/L | 5 | |
| Chloromethane | BDL | ug/L | 5 | |
| Dibromochloromethane | BDL | ug/L | 5 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 5 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 5 | |
| Dichlorodifluoromethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethane | BDL | ug/L | 5 | |
| 1,2-Dichloroethane | BDL | ug/L | 5 | |
| 1,1-Dichloroethene | BDL | ug/L | 5 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 5 | |
| 1,2-Dichloropropane | BDL | ug/L | 5 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 5 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 5 | |
| Ethylbenzene | BDL | ug/L | 5 | |
| Methylene Chloride | BDL | ug/L | 5 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 5 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 5 | |
| Tetrachloroethene | BDL | ug/L | 5 | |
| Toluene | BDL | ug/L | 5 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 5 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 5 | |
| Trichloroethene | BDL | ug/L | 5 | |
| Trichlorofluoromethane | BDL | ug/L | 5 | |
| Vinyl Chloride | BDL | ug/L | 5 | |
| Xylenes (Total) | BDL | ug/L | 5 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 107 |
| Toluene-d8 | 86-119 | 105 |
| Bromofluorobenzene | 85-116 | 102 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated



End of Report

D-231

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

**Lab Report Number:** 64363
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| LAB Sample ID# | 1- 64363 | | | |
|---|---|---|---|---|
| Sample Name / Location | BF-1159 MW-40 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1330 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 10/24/96 JJ | | | |
| Date of Analysis | 10/25/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64363 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | 7 | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | 8 | ug/L | 2 | |
| Pyrene | 5 | ug/L | 2 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 83 |
| 2-Fluorobiphenyl | 43-116 | 91 |
| Terphenyl -d14 | 33-141 | 77 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated



End of Report

D-232

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report

## Ethylene Dibromide by Method 504

**Lab Report Number:** 64363
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64363 | | | |
| Sample Name / Location | BF-1159 MW-40 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1330 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 11/06/96 MC | | | |
| Date of Analysis / Initials | 11/07/96 MC | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64363 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 95 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-233

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

**Lab Report Number:** 64363
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64363 | | | |
| Sample Name / Location | BF-1159<br>MW-40 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1330 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/28/96 JJ | | | |
| Date of analysis / Initials | 11/04/96 JM | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 64363 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | 2.0 | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 92 |
| Nonatriacontane (C-39) | 42-193 * | 84 |

**COMMENTS :** * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

**BDL = Below Detection Limit.** **mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.**

**Approved by :** Jerry Deas, Laboratory Director

**Date:** 11/12/96



**End of Report**

P-234

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## 601/602 Volatiles by Method 8260

**Lab Report Number:** 64364
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 64364 |
| Sample Name / Location | BF-1159<br>MW-41 |
| Collector's Name | PJB |
| Date & Time Collected | 10/22/96 @ 1345 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 10/25/96 JM |
| Date of Analysis | 10/25/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64364 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 16 | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 50 | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 111 |
| Toluene-d8 | 86-119 | 101 |
| Bromofluorobenzene | 85-116 | 104 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-235

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

**Lab Report Number:** 64364
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64364 | | | |
| Sample Name / Location | BF-1159<br>MW-41 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1345 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 10/24/96 JJ | | | |
| Date of Analysis | 10/25/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64364 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 84 |
| 2-Fluorobiphenyl | 43-116 | 86 |
| Terphenyl -d14 | 33-141 | 94 |

**COMMENTS :**

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

**Approved by :** Jerry Dees/ Laboratory Director

**Date:** 11/12/96
Report Generated



End of Report

D-236

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report

## Ethylene Dibromide by Method 504

**Lab Report Number:** 64364
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64364 | | | |
| Sample Name / Location | BF-1159<br>MW-41 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1345 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 11/06/96 MC | | | |
| Date of Analysis / Initials | 11/07/96 MC | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64364 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 90 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-237

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## Petroleum Range Organics by FLPRO

**Lab Report Number:** 64364
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64364 | | | |
| Sample Name / Location | BF-1159<br>MW-41 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1345 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/28/96 JJ | | | |
| Date of analysis / Initials | 11/04/96 JM | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 64364 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | 0.44 | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 76 |
| Nonatriacontane (C-39) | 42-193 * | 53 |

**COMMENTS :** * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

**BDL = Below Detection Limit.** **mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.**

**Approved by :** Jerry Dees, Laboratory Director

**Date:** 11/12/96



**End of Report**

D-238

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report

## 601/602 Volatiles by Method 8260

**Lab Report Number:** 64365
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64365 | | | |
| Sample Name / Location | BF-1159 MW-42 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1400 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/25/96 JM | | | |
| Date of Analysis | 10/25/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64365 | units | Det. Limit | Flags |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 80 | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 2 | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 220 | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 116 |
| Toluene-d8 | 86-119 | 115 |
| Bromofluorobenzene | 85-116 | 103 |

**COMMENTS :**

**BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.**

**Approved by :** Jerry Dees, Laboratory Director

**Date:** 11/12/96
Report Generated



**End of Report**

D-239

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

**Lab Report Number:** 64365
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64365 | | | |
| Sample Name / Location | BF-1159 MW-42 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1400 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 10/24/96 JJ | | | |
| Date of Analysis | 10/25/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64365 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 78 |
| 2-Fluorobiphenyl | 43-116 | 83 |
| Terphenyl -d14 | 33-141 | 85 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-240

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report

## Ethylene Dibromide by Method 504

**Lab Report Number:** 64365
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64365 | | | |
| Sample Name / Location | BF-1159<br>MW-42 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1400 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 11/06/96 MC | | | |
| Date of Analysis / Initials | 11/07/96 MC | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64365 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 90 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-241

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

**Lab Report Number:** 64365
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64365 | | | |
| Sample Name / Location | BF-1159<br>MW-42 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1400 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/28/96 JJ | | | |
| Date of analysis / Initials | 11/04/96 JM | | | |
| Sample Matrix | GW | | | |
| Dilution | | x | 1 | |
| Parameter | 1- 64365 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | 0.57 | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 96 |
| Nonatriacontane (C-39) | 42-193 * | 77 |

**COMMENTS :** * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

**BDL = Below Detection Limit.** **mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.**

**Approved by :** Jerry Dees, Laboratory Director

**Date:** 11/13/96



End of Report

D-242

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## 601/602 Volatiles by Method 8260

**Lab Report Number:** 64366
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 64366 |
| Sample Name / Location | BF-1159<br>MW-43 |
| Collector's Name | PJB |
| Date & Time Collected | 10/22/96 @ 1415 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 10/25/96 JM |
| Date of Analysis | 10/25/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64366 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 46 | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 140 | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 111 |
| Toluene-d8 | 86-119 | 110 |
| Bromofluorobenzene | 85-116 | 103 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-243

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

**Lab Report Number:** 64366
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **64366** |
| Sample Name / Location | BF-1159<br>MW-43 |
| Collector's Name | PJB |
| Date & Time Collected | 10/22/96 @ 1415 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 10/24/96 JJ |
| Date of Analysis | 10/25/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64366 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 82 |
| 2-Fluorobiphenyl | 43-116 | 84 |
| Terphenyl -d14 | 33-141 | 81 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-244

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report

## Ethylene Dibromide by Method 504

**Lab Report Number:** 64366
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64366 | | | |
| Sample Name / Location | BF-1159 MW-43 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1415 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 11/06/96 MC | | | |
| Date of Analysis / Initials | 11/07/96 MC | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64366 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 103 |

**COMMENTS :**

**BDL = Below Detection Limit.** **ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.**

**Approved by :** Jerry Dees, Laboratory Director

**Date:** 11/12/96
Report Generated



**End of Report**

D-245

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

**Lab Report Number:** 64366
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64366 | | | |
| Sample Name / Location | BF-1159<br>MW-43 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1415 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/28/96 JJ | | | |
| Date of analysis / Initials | 11/04/96 JM | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 64366 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | 0.38 | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 128 |
| Nonatriacontane (C-39) | 42-193 * | 114 |

**COMMENTS :** * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

**BDL = Below Detection Limit.** **mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.**

**Approved by :** Jerry Dees, Laboratory Director

**Date:** 11/12/96



**End of Report**

D-246

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report
## 601/602 Volatiles by Method 8260

Lab Report Number: 64367
Sample Date: 10/22/96
Received Date: 10/22/96
Sample Site: Bronson Field Site 1159
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 64367 |
| Sample Name / Location | BF-1159<br>MW-44 |
| Collector's Name | PJB |
| Date & Time Collected | 10/22/96 @ 1430 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 10/25/96 JM |
| Date of Analysis | 10/25/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64367 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 111 |
| Toluene-d8 | 86-119 | 106 |
| Bromofluorobenzene | 85-116 | 102 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-247

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

**Lab Report Number:** 64367
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64367 | | | |
| Sample Name / Location | BF-1159<br>MW-44 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1430 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 10/24/96 JJ | | | |
| Date of Analysis | 10/25/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64367 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 79 |
| 2-Fluorobiphenyl | 43-116 | 87 |
| Terphenyl -d14 | 33-141 | 79 |

**COMMENTS :**

**BDL = Below Detection Limit.** **ug/L = microgram per Liter.** **ug/Kg = microgram per Kilogram.** *** = FL HRS certification pending.**

**Approved by :** Jerry Dees, Laboratory Director

**Date:** 11/12/96
Report Generated



**End of Report**

D-248

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report

## Ethylene Dibromide by Method 504

**Lab Report Number:** 64367
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64367 | | | |
| Sample Name / Location | BF-1159 MW-44 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1430 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 11/06/96 MC | | | |
| Date of Analysis / Initials | 11/07/96 MC | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64367 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 93 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-249

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

**Lab Report Number:** 64367
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64367 | | | |
| Sample Name / Location | BF-1159<br>MW-44 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1430 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/28/96 JJ | | | |
| Date of analysis / Initials | 11/04/96 JM | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 64367 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | 1.1 | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 100 |
| Nonatriacontane (C-39) | 42-193 * | 73 |

**COMMENTS :** * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

**BDL = Below Detection Limit.** **mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.**

**Approved by :** Jerry Dees, Laboratory Director

**Date:** 11/12/96



**End of Report**

D-250

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## 601/602 Volatiles by Method 8260

**Lab Report Number:** 64368
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 64368 |
| Sample Name / Location | BF-1159<br>MW-45 |
| Collector's Name | PJB |
| Date & Time Collected | 10/22/96 @ 1445 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 10/25/96 & 10/29/96 JM |
| Date of Analysis | 10/25/96 & 10/29/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64368 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 560 | ug/L | 10 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 1500 | ug/L | 10 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 2500 | ug/L | 10 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 119 |
| Toluene-d8 | 86-119 | 115 |
| Bromofluorobenzene | 85-116 | 101 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/19/96
Report Generated



End of Report

D-251

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 64368
Sample Date: 10/22/96
Received Date: 10/22/96
Sample Site: Bronson Field Site 1159
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64368 | | | |
| Sample Name / Location | BF-1159 MW-45 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1445 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/25/96 & 10/29/96 JM | | | |
| Date of Analysis | 10/25/96 & 10/29/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64368 | units | Det. Limit | Flags |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | 560 | ug/L | 10 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 1500 | ug/L | 10 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 2500 | ug/L | 10 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 119 |
| Toluene-d8 | 86-119 | 115 |
| Bromofluorobenzene | 85-116 | 101 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-252

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

**Lab Report Number:** 64368
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64368 | | | |
| Sample Name / Location | BF-1159<br>MW-45 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1445 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 10/24/96 JJ | | | |
| Date of Analysis | 10/25/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | | X | 1 | |
| Compound Name | 1- 64368 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 74 |
| 2-Fluorobiphenyl | 43-116 | 80 |
| Terphenyl -d14 | 33-141 | 89 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-253

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report

## Ethylene Dibromide by Method 504

**Lab Report Number:** 64368
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64368 | | | |
| Sample Name / Location | BF-1159 MW-45 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1445 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 11/06/96 MC | | | |
| Date of Analysis / Initials | 11/07/96 MC | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64368 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 91 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-254

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

**Lab Report Number:** 64368
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64368 | | | |
| Sample Name / Location | BF-1159<br>MW-45 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1445 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/28/96 JJ | | | |
| Date of analysis / Initials | 11/04/96 JM | | | |
| Sample Matrix | GW | | | |
| Dilution | | x | 1 | |
| Parameter | 1- 64368 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | 11 | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 102 |
| Nonatriacontane (C-39) | 42-193 * | 75 |

**COMMENTS :** * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

**BDL = Below Detection Limit.** **mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.**

**Approved by :** Jerry Dees, Laboratory Director

**Date:** 11/12/96



**End of Report**

D-255

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## 601/602 Volatiles by Method 8260

**Lab Report Number:** 64369
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64369 | | | |
| Sample Name / Location | BF-1159 MW-46 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1500 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/25/96 & 10/29/96 JM | | | |
| Date of Analysis | 10/25/96 & 10/29/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 10 | | | |
| Compound Name | 1- 64369 | units | Det. Limit | Flags |
| Benzene | BDL | ug/L | 10 | |
| Bromodichloromethane | BDL | ug/L | 10 | |
| Bromoform | BDL | ug/L | 20 | |
| Bromomethane | BDL | ug/L | 30 | |
| Carbon Tetrachloride | BDL | ug/L | 10 | |
| Chlorobenzene | BDL | ug/L | 10 | |
| Chloroethane | BDL | ug/L | 10 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 10 | |
| Chloroform | BDL | ug/L | 10 | |
| Chloromethane | BDL | ug/L | 10 | |
| Dibromochloromethane | BDL | ug/L | 10 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 10 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 10 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 10 | |
| Dichlorodifluoromethane | BDL | ug/L | 10 | |
| 1,1-Dichloroethane | BDL | ug/L | 10 | |
| 1,2-Dichloroethane | BDL | ug/L | 10 | |
| 1,1-Dichloroethene | BDL | ug/L | 10 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 10 | |
| 1,2-Dichloropropane | BDL | ug/L | 10 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 10 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 10 | |
| Ethylbenzene | 720 | ug/L | 10 | |
| Methylene Chloride | BDL | ug/L | 10 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 10 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 10 | |
| Tetrachloroethene | BDL | ug/L | 10 | |
| Toluene | 1000 | ug/L | 10 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 10 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 10 | |
| Trichloroethene | BDL | ug/L | 10 | |
| Trichlorofluoromethane | BDL | ug/L | 10 | |
| Vinyl Chloride | BDL | ug/L | 10 | |
| Xylenes (Total) | 3100 | ug/L | 10 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 102 |
| Toluene-d8 | 86-119 | 103 |
| Bromofluorobenzene | 85-116 | 100 |

**COMMENTS :**

**BDL = Below Detection Limit.** **ug/L = microgram per Liter.** **ug/Kg = microgram per Kilogram.** *** = FL HRS certification pending.**

**Approved by :** Jerry Dees, Laboratory Director

**Date:** 11/13/96
Report Generated



**End of Report**

D-256

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

**Lab Report Number:** 64369
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64369 | | | |
| Sample Name / Location | BF-1159<br>MW-46 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1500 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 10/24/96 JJ | | | |
| Date of Analysis | 10/25/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64369 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 67 |
| 2-Fluorobiphenyl | 43-116 | 72 |
| Terphenyl -d14 | 33-141 | 83 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-257

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## Ethylene Dibromide by Method 504

**Lab Report Number:** 64369
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64369 | | | |
| Sample Name / Location | BF-1159<br>MW-46 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1500 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 11/06/96 MC | | | |
| Date of Analysis / Initials | 11/07/96 & 11/9/96 MC | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64369 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 90 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated



End of Report

D-258

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

**Lab Report Number:** 64369
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64369 | | | |
| Sample Name / Location | BF-1159<br>MW-46 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1500 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/28/96 JJ | | | |
| Date of analysis / Initials | 11/04/96 JM | | | |
| Sample Matrix | GW | | | |
| Dilution | x 5 | | | |
| Parameter | 1- 64369 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | 65 | mg/L | 1.2 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 96 |
| Nonatriacontane (C-39) | 42-193 * | 73 |

**COMMENTS :** * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

**BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.**

**Approved by :** Jerry Dees/ Laboratory Director

**Date:** 11/13/96



End of Report

D-259

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report
## 601/602 Volatiles by Method 8260

Lab Report Number: 64370
Sample Date: 10/22/96
Received Date: 10/22/96
Sample Site: Bronson Field Site 1159
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 64370 |
| Sample Name / Location | BF-1159<br>MW-47 |
| Collector's Name | PJB |
| Date & Time Collected | 10/22/96 @ 1515 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 10/25/96 & 10/29/96 JM |
| Date of Analysis | 10/25/96 & 10/29/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64370 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | 320 | ug/L | 10 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 880 | ug/L | 10 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 1200 | ug/L | 50 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 4700 | ug/L | 10 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 114 |
| Toluene-d8 | 86-119 | 119 |
| Bromofluorobenzene | 85-116 | 102 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees/ Laboratory Director

Date: 11/13/96
Report Generated



End of Report

D-260

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

**Lab Report Number:** 64370
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| **LAB Sample ID#** | 1- **64370** | | | |
| **Sample Name / Location** | BF-1159<br>MW-47 | | | |
| **Collector's Name** | PJB | | | |
| **Date & Time Collected** | 10/22/96 @ 1515 | | | |
| **Sample Type (composite or grab)** | Grab | | | |
| **Analyst** | M. Chambers | | | |
| **Date of Extraction / Initials** | 10/24/96 JJ | | | |
| **Date of Analysis** | 10/25/96 | | | |
| **Sample Matrix** | GW | | | |
| **Dilution** | X 1 | | | |
| **Compound Name** | **1- 64370** | **units** | **Det. Limit** | **Flags** |
| **Acenaphthene** | BDL | ug/L | 2 | |
| **Acenaphthylene** | BDL | ug/L | 2 | |
| **Anthracene** | BDL | ug/L | 2 | |
| **Benzo(a)anthracene** | BDL | ug/L | 2 | |
| **Benzo(a)pyrene** | BDL | ug/L | 2 | |
| **Benzo(b)fluoranthene** | BDL | ug/L | 2 | |
| **Benzo(g,h,i)perylene** | BDL | ug/L | 2 | |
| **Benzo(k)fluoranthene** | BDL | ug/L | 3 | |
| **Chrysene** | BDL | ug/L | 2 | |
| **Dibenz(a,h)anthracene** | BDL | ug/L | 2 | |
| **Fluoranthene** | BDL | ug/L | 2 | |
| **Fluorene** | BDL | ug/L | 2 | |
| **Indeno(1,2,3-cd)pyrene** | BDL | ug/L | 2 | |
| **1-Methylnaphthalene *** | BDL | ug/L | 2 | |
| **2-Methylnaphthalene** | BDL | ug/L | 3 | |
| **Naphthalene** | BDL | ug/L | 2 | |
| **Phenanthrene** | BDL | ug/L | 2 | |
| **Pyrene** | BDL | ug/L | 2 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| **Nitrobenzene- d5** | **35-114** | 67 |
| **2-Fluorobiphenyl** | **43-116** | 72 |
| **Terphenyl -d14** | **33-141** | 90 |

**COMMENTS :**

**BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.**

**Approved by :** Jerry Dees, Laboratory Director

**Date:** 11/13/96
Report Generated



**End of Report**

D-261

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report

## Ethylene Dibromide by Method 504

**Lab Report Number:** 64370
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64370 | | | |
| Sample Name / Location | BF-1159 MW-47 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1515 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 11/06/96 MC | | | |
| Date of Analysis / Initials | 11/07/96 MC | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64370 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 93 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated



End of Report

D-262

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

**Lab Report Number:** 64370
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64370 | | | |
| Sample Name / Location | BF-1159<br>MW-47 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1515 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/28/96 JJ | | | |
| Date of analysis / Initials | 11/05/96 JM | | | |
| Sample Matrix | GW | | | |
| Dilution | x 5 | | | |
| Parameter | 1- 64370 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | 61 | mg/L | 1.2 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 99 |
| Nonatriacontane (C-39) | 42-193 * | 80 |

**COMMENTS :** * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

**BDL = Below Detection Limit.** **mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.**

**Approved by :** Jerry Dees/ Laboratory Director

**Date:** 11/13/96



**End of Report**

D-263

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report
## 601/602 Volatiles by Method 8260

Lab Report Number: 64371
Sample Date: 10/22/96
Received Date: 10/22/96
Sample Site: Bronson Field Site 1159
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64371 | | | |
| Sample Name / Location | BF-1159 MW-48 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1530 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/25/96 JM | | | |
| Date of Analysis | 10/28/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64371 | units | Det. Limit | Flags |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 32 | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 66 | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 106 |
| Toluene-d8 | 86-119 | 117 |
| Bromofluorobenzene | 85-116 | 102 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated



End of Report

D-264

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

## Analytical Report

### 610 PAH's by Method 8270

**Lab Report Number:** 64371
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 64371 |
| Sample Name / Location | BF-1159<br>MW-48 |
| Collector's Name | PJB |
| Date & Time Collected | 10/22/96 @ 1530 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 10/24/96 JJ |
| Date of Analysis | 10/25/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64371 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 74 |
| 2-Fluorobiphenyl | 43-116 | 77 |
| Terphenyl -d14 | 33-141 | 103 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter, ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

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# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

Analytical Report

### Ethylene Dibromide by Method 504

**Lab Report Number:** 64371
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64371 | | | |
| Sample Name / Location | BF-1159<br>MW-48 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1530 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 11/06/96 MC | | | |
| Date of Analysis / Initials | 11/07/96 MC | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64371 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 102 |

**COMMENTS :**

**BDL = Below Detection Limit.** **ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.**

**Approved by :** Jerry Dees, Laboratory Director

**Date:** 11/12/96
Report Generated



**End of Report**

D-266

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

## Analytical Report
## Petroleum Range Organics by FLPRO

**Lab Report Number:** 64371
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64371 | | | |
| Sample Name / Location | BF-1159 MW-48 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1530 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/28/96 JJ | | | |
| Date of analysis / Initials | 11/04/96 JM | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 64371 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | 1.0 | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 95 |
| Nonatriacontane (C-39) | 42-193 * | 65 |

**COMMENTS :** * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

**BDL = Below Detection Limit.** **mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.**

**Approved by :** Jerry Dees, Laboratory Director

**Date:** 11/12/96



**End of Report**

D-267

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

**Lab Report Number:** 64372
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64372 | | | |
| Sample Name / Location | BF-1159 Equipment Blank | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1250 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/25/96 JM | | | |
| Date of Analysis | 10/25/96 | | | |
| Sample Matrix | Deionized Water | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64372 | units | Det. Limit | Flags |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | 1 | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 104 |
| Toluene-d8 | 86-119 | 99 |
| Bromofluorobenzene | 85-116 | 101 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Deos, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-268

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

## Analytical Report

### 610 PAH's by Method 8270

**Lab Report Number:** 64372
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64372 | | | |
| Sample Name / Location | BF-1159 Equipment Blank | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1250 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 10/24/96 JJ | | | |
| Date of Analysis | 10/25/96 | | | |
| Sample Matrix | Deionized Water | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64372 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 67 |
| 2-Fluorobiphenyl | 43-116 | 77 |
| Terphenyl -d14 | 33-141 | 87 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

**Lab Report Number:** 64372
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64372 | | | |
| Sample Name / Location | BF-1159 Equipment Blank | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1250 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 11/06/96 MC | | | |
| Date of Analysis / Initials | 11/07/96 MC | | | |
| Sample Matrix | Deionized Water | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64372 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 97 |

**COMMENTS :**

**BDL = Below Detection Limit.** **ug/L = microgram per Liter.** **ug/Kg = microgram per Kilogram.**

**Approved by :** Jerry Deos, Laboratory Director

**Date:** 11/12/96
Report Generated



**End of Report**

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

## Analytical Report
### Petroleum Range Organics by FLPRO

**Lab Report Number:** 64372
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64372 | | | |
| Sample Name / Location | BF-1159 Equipment Blank | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ 1250 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/28/96 JJ | | | |
| Date of analysis / Initials | 11/04/96 JM | | | |
| Sample Matrix | Deionized Water | | | |
| Dilution | x 1 | | | |
| **Parameter** | **1- 64372** | **units** | **Det. Limit** | **Flags** |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 95 |
| Nonatriacontane (C-39) | 42-193 * | 69 |

**COMMENTS :** * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

**BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.**

**Approved by :** Jerry Does, Laboratory Director

**Date:** 11/12/96



End of Report

D-271

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

## Analytical Report

### 601/602 Volatiles by Method 8260

**Lab Report Number:** 64373
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **64373** |
| Sample Name / Location | BF-1159 Duplicate |
| Collector's Name | PJB |
| Date & Time Collected | 10/22/96 @ Not Submitted |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 10/26/96 & 10/29/96JM |
| Date of Analysis | 10/26/96 & 10/29/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 64373 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 650 | ug/L | 10 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 1200 | ug/L | 10 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 2700 | ug/L | 10 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 115 |
| Toluene-d8 | 86-119 | 117 |
| Bromofluorobenzene | 85-116 | 102 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-272

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

## Analytical Report

### 610 PAH's by Method 8270

**Lab Report Number:** 64373
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64373 | | | |
| Sample Name / Location | BF-1159 Duplicate | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ Not Submitted | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 10/24/96 JJ | | | |
| Date of Analysis | 10/26/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64373 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 66 |
| 2-Fluorobiphenyl | 43-116 | 74 |
| Terphenyl -d14 | 33-141 | 121 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated



End of Report

D-273

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

**Lab Report Number:** 64373
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64373 | | | |
| Sample Name / Location | BF-1159 Duplicate | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ Not Submitted | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 11/06/96 MC | | | |
| Date of Analysis / Initials | 11/07/96 MC | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64373 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

**SURROGATE SPIKE RECOVERIES**

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 103 |

**COMMENTS :**

**BDL = Below Detection Limit.** **ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.**

**Approved by :** Jerry Dees, Laboratory Director

**Date:** 11/12/96
Report Generated



**End of Report**

D-274

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

**Lab Report Number:** 64373
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64373 | | | |
| Sample Name / Location | BF-1159 Duplicate | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ Not Submitted | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 10/28/96 JJ | | | |
| Date of analysis / Initials | 11/04/96 JM | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 64373 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | 9.4 | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 107 |
| Nonatriacontane (C-39) | 42-193 * | 99 |

**COMMENTS :** * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

**BDL = Below Detection Limit.** **mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.**

**Approved by :** Jerry Dees, Laboratory Director

**Date:** 11/12/96



**End of Report**

D-275

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

**Lab Report Number:** 64374
**Sample Date:** 10/22/96
**Received Date:** 10/22/96
**Sample Site:** Bronson Field Site 1159
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 64374 | | | |
| Sample Name / Location | BF-1159 Trip Blank | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 10/22/96 @ AM | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 10/25/96 JM | | | |
| Date of Analysis | 10/25/96 | | | |
| Sample Matrix | Deionized Water | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 64374 | units | Det. Limit | Flags |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 105 |
| Toluene-d8 | 86-119 | 101 |
| Bromofluorobenzene | 85-116 | 101 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 11/12/96
Report Generated



End of Report

D-276

1.4

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS


NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500
Ph#-(904)452-4726
Autovon-922-4726


Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305 00

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 10.22.96
Received Date: 10.23.96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1-604362 | #2-604363 | #3-604364 | #4-604365 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name or Location | ---------- | MW-39 | MW-40 | MW-41 | MW-42 | V.A.O. (Less Pb) |
| Sampled by | ---------- | PJB | PJB | PJB | PJB | |
| Composite Date/Time Collected | Begin / Frequency / End | | | | | |
| Grab Time | ---------- | 1300 | 1330 | 1345 | 1400 | * QA/QC; (1) PAH or TPH Bottle Broke! |
| Sample Matrix | ---------- | GW | GW | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 2 EDB | X | 2 EDB | X | 2 EDB | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 4 VOA | X | 4 VOA | X | 4 VOA | X | 4 VOA | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | X | 3 PAH | X | 2 PAH | | 1Lx3/4 oz. | 4° C/None |
| **PARAMETER by Group Name** | **METHOD SOURCE** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **Billing Units** | **Containers Required** | **Preservative(s) Used** |
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL ~~EPA 418.1~~ PRO | X | 2 TPH | X | 2 TPH | X | 3 TPH | X | 2 TPH | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: Pat A. Bu / WES, Inc.
Date/Time: 10.23.96 / 0900

Received by: [signature]
Date/Time: 10/23/96 0915

PWC 9510/8

2.4

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg 3297, Code 920
NAS Pensacola, Fl. 32508-6500

Ph#-(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305 001

Report Required? (Yes) No DEP? Yes No
Lab ID Number:
Sample Date: 10.22.96
Received Date: 10.23.96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1-6-43366 | #2-6-43367 | #3-6-43368 | #4-6-43369 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name or Location | ---------- | MW-43 | MW-44 | MW-45 | MW-46 | K.A.G. (Less Pb) |
| Sampled by | ---------- | PJB | PJB | PJB | PJB | |
| Composite Date/Time Collected | Begin | | | | | |
| | Frequency | | | | | |
| | End | | | | | |
| Grab Time | ---------- | 1415 | 1430 | 1445 | 1500 | |
| Sample Matrix | ---------- | GW | GW | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 2 EDB | X | 2 EDB | X | 2 EDB | 3 | 120ml A VOA/4 oz. | None/4°C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4°C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4°C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 4 VOA | X | 4 VOA | X | 4 VOA | X | 4 VOA | 6 | 40 ml VOA Vial x 2 | HCl/4°C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4°C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4°C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4°C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4°C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4°C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4°C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4°C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4°C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4°C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4°C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4°C/None |
| Semivol. Org./GCMS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4°C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | X | 2 PAH | X | 2 PAH | | 1Lx3/4 oz. | 4°C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL ~~EPA 418.1~~ PRO | X | 2 TPH | X | 2 TPH | X | 2 TPH | X | 2 TPH | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: [signature] / WES, Inc.
Date/Time: 10.23.96 / 0900

Received by: [signature]
Date/Time: 10/23/96 0915

PWC 9510/6

3.4

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, FL 32508-6500

Ph#-(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305 00

Report Required? (Yes) No DEP? Yes No
Lab ID Number:
Sample Date: 10.22.96
Received Date: 10.23.96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1-6-4370 | #2-6-4371 | #3-6-4372 | #4-6-4373 |
|---|---|---|---|---|---|
| Sample Name or Location | ---------- | MW-47 | MW-48 | EQ. BLANK | Duplicate |
| Sampled by | ---------- | PJB | PJB | PJB | PJB |
| Composite Date/Time Collected | Begin | | | | |
| | Frequency | | | | |
| | End | | | | |
| Grab Time | ---------- | 1515 | 1530 | 1250 | — |
| Sample Matrix | ---------- | GW | GW | DI | GW |

Notes: K.A.G. (Less Pb)

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 2 EDB | X | 2 EDB | X | 2 EDB | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCV4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCV4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 4 VOA | X | 4 VOA | X | 4 VOA | X | 4 VOA | 6 | 40 ml VOA Vial x 2 | HCV4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCV4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCV4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCV4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCV4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCV4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCV4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCV4° C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCV4° C/None |
| Semivol. Org./GCMS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | X | 2 PAH | X | 2 PAH | | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL ~~EPA 418.1~~ PRO | X | 2 TPH | X | 2 TPH | X | 2 TPH | X | 2 TPH | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250mlV4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: Patti A. Yon / WES, Inc.
Date/Time: 10.23.96 / 0900

Received by: [signature]
Date/Time: 10/23/96 0915

PWC 9510/8

4.4

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS


PWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500

Ph#-(904)452-4726
Autovon-922-4726


Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305 001

Report Required? (Yes) No DEP? Yes No
Lab ID Number:
Sample Date: 10.22.96
Received Date: 10.23.96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1- 6-4374 ✓ | #2- | #3- | #4- |
|---|---|---|---|---|---|
| Sample Name or Location | ---------- | Trip BLANK | | | |
| Sampled by | ---------- | PJB | | | |
| Composite Date/Time Collected | Begin | | | | |
| | Frequency | | | | |
| | End | | | | |
| Grab Time | ---------- | AM | | | |
| Sample Matrix | ---------- | DI | | | |

Notes: K.A.G. pb) (less

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCV4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCV4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 3 VOA | | | | | | | 6 | 40 ml VOA Vial x 2 | HCV4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCV4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCV4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCV4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCV4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCV4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCV4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCV4° C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCV4° C/None |
| Semivol. Org./GCMS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | | 1Lx3/4 oz. | 4° C/None |
| **PARAMETER by Group Name** | **METHOD SOURCE** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **Billing Units** | **Containers Required** | **Preservative(s) Used** |
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: Peter L. Ber / WES, Inc.
Date/Time: 10.23.96 / 0900

Received by: [signature]
Date/Time: 10/23/96

PWC 9510/6

D-280

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 65047
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 65047 |
| Sample Name / Location | BF-1159 Eq. Blank |
| Collector's Name | PJB |
| Date & Time Collected | 12/13/96 @ 0700 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 12/16/96 JM |
| Date of Analysis | 12/16/96 |
| Sample Matrix | DI |
| Dilution | X 1 |

| Compound Name | 1- 65047 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 101 |
| Toluene-d8 | 86-119 | 103 |
| Bromofluorobenzene | 85-116 | 101 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-281

Date: 1/3/97
Report Generated



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 65047
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65047 | | | |
| Sample Name / Location | BF-1159 Eq. Blank | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0700 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/21/96 | | | |
| Sample Matrix | DI | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65047 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 55 |
| 2-Fluorobiphenyl | 43-116 | 59 |
| Terphenyl -d14 | 33-141 | 62 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 1/3/97
Report Generated

D-282



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report
## Ethylene Dibromide by Method 504

Lab Report Number: 65047
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65047 | | | |
| Sample Name / Location | BF-1159<br>Eq. Blank | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0700 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/17/96 JM | | | |
| Date of Analysis | 12/17/96 | | | |
| Sample Matrix | DI | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65047 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 77 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/3/97
Report Generated

D-283



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

| | |
|---|---|
| Client: | NPWC Environmental |
| Address: | Bldg. 3887, Code 910<br>NAS Pensacola,FL 32508 |
| Phone #: | 452-3180 |
| Contact: | Greg Campbell |

| | |
|---|---|
| Lab Report Number: | 65047 |
| Sample Date: | 12/13/96 |
| Received Date: | 12/13/96 |
| Sample Site: | NAS Pensacola, FL |
| Job Order No.: | 130 5001 |

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65047 | | | |
| Sample Name / Location | BF-1159<br>Eq. Blank | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0700 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/31/96 | | | |
| Sample Matrix | DI | | | |
| Dilution | | x | 1 | |
| Parameter | 1- 65047 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 127 |
| Nonatriacontane (C-39) | 42-193 * | 146 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97

D-284



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 65048
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65048 | | | |
| Sample Name / Location | BF-1159<br>MW-49 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0730 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/16/96 JM | | | |
| Date of Analysis | 12/16/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65048 | units | Det. Limit | Flags |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 101 |
| Toluene-d8 | 86-119 | 101 |
| Bromofluorobenzene | 85-116 | 100 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-285

Date: 1/3/97
Report Generated



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

Lab Report Number: 65048
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65048 | | | |
| Sample Name / Location | BF-1159 MW-49 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0730 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/21/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65048 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 53 |
| 2-Fluorobiphenyl | 43-116 | 59 |
| Terphenyl -d14 | 33-141 | 50 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 1/3/97
Report Generated

D-286



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### Ethylene Dibromide by Method 504

Lab Report Number: 65048
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65048 | | | |
| Sample Name / Location | BF-1159<br>MW-49 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0730 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/17/96 JM | | | |
| Date of Analysis | 12/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65048 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 79 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Does, Laboratory Director

Date: 1/3/97
Report Generated

D-287



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

| | |
|---|---|
| Client: | NPWC Environmental |
| Address: | Bldg. 3887, Code 910<br>NAS Pensacola,FL 32508 |
| Phone #: | 452-3180 |
| Contact: | Greg Campbell |

| | |
|---|---|
| Lab Report Number: | 65048 |
| Sample Date: | 12/13/96 |
| Received Date: | 12/13/96 |
| Sample Site: | NAS Pensacola, FL |
| Job Order No.: | 130 5001 |

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65048 | | | |
| Sample Name / Location | BF-1159<br>MW-49 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0730 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/31/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 65048 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 116 |
| Nonatriacontane (C-39) | 42-193 * | 123 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees/ Laboratory Director

Date: 1/6/97

D-288



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 65049
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **65049** |
| Sample Name / Location | BF-1159<br>MW-50 |
| Collector's Name | PJB |
| Date & Time Collected | 12/13/96 @ 0800 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 12/16/96 JM |
| Date of Analysis | 12/16/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 65049 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 100 |
| Toluene-d8 | 86-119 | 102 |
| Bromofluorobenzene | 85-116 | 104 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-289

Date: 1/3/97
Report Generated



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 65049
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65049 | | | |
| Sample Name / Location | BF-1159<br>MW-50 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0800 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/21/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65049 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 58 |
| 2-Fluorobiphenyl | 43-116 | 62 |
| Terphenyl -d14 | 33-141 | 52 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Bees, Laboratory Director

Date: 1/3/97
Report Generated

D-290



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 65049
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65049 | | | |
| Sample Name / Location | BF-1159<br>MW-50 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0800 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/17/96 JM | | | |
| Date of Analysis | 12/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65049 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 79 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/3/97
Report Generated

D-291



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

Lab Report Number: 65049
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65049 | | | |
| Sample Name / Location | BF-1159<br>MW-50 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0800 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/31/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 65049 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 97 |
| Nonatriacontane (C-39) | 42-193 * | 101 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97

D-292



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report
## 601/602 Volatiles by Method 8260

Lab Report Number: 65050
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 65050 |
| Sample Name / Location | BF-1159<br>MW-51 |
| Collector's Name | PJB |
| Date & Time Collected | 12/13/96 @ 0830 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 12/16/96 JM |
| Date of Analysis | 12/16/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 65050 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 101 |
| Toluene-d8 | 86-119 | 103 |
| Bromofluorobenzene | 85-116 | 99 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director
D-293

Date: 1/3/97
Report Generated



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 65050
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65050 | | | |
| Sample Name / Location | BF-1159 MW-51 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0830 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/21/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65050 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 58 |
| 2-Fluorobiphenyl | 43-116 | 59 |
| Terphenyl -d14 | 33-141 | 57 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 1/3/97
Report Generated

D-294



End of Report

# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 65050
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65050 | | | |
| Sample Name / Location | BF-1159 MW-51 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0830 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/17/96 JM | | | |
| Date of Analysis | 12/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65050 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 67 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/3/97
Report Generated

D-295



End of Report

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

Lab Report Number: 65050
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65050 | | | |
| Sample Name / Location | BF-1159<br>MW-51 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0830 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/31/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | | x | 1 | |
| Parameter | 1- 65050 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 102 |
| Nonatriacontane (C-39) | 42-193 * | 100 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97

D-296



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report
## 601/602 Volatiles by Method 8260

Lab Report Number: 65051
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **65051** |
| Sample Name / Location | BF-1159<br>MW-52 |
| Collector's Name | PJB |
| Date & Time Collected | 12/13/96 @ 0900 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 12/16/96 JM |
| Date of Analysis | 12/16/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 65051 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 100 |
| Toluene-d8 | 86-119 | 102 |
| Bromofluorobenzene | 85-116 | 99 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-297

Date: 1/3/97
Report Generated



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

**Lab Report Number:** 65051
**Sample Date:** 12/13/96
**Received Date:** 12/13/96
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65051 | | | |
| Sample Name / Location | BF-1159<br>MW-52 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0900 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/21/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65051 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 57 |
| 2-Fluorobiphenyl | 43-116 | 61 |
| Terphenyl -d14 | 33-141 | 51 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 1/3/97
Report Generated

D-298



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report

## Ethylene Dibromide by Method 504

Lab Report Number: 65051
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65051 | | | |
| Sample Name / Location | BF-1159<br>MW-52 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0900 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/17/96 JM | | | |
| Date of Analysis | 12/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65051 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 70 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/3/97
Report Generated

D-299



End of Report

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

Lab Report Number: 65051
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65051 | | | |
| Sample Name / Location | BF-1159<br>MW-52 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0900 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/31/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | | x | 1 | |
| Parameter | 1- 65051 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 116 |
| Nonatriacontane (C-39) | 42-193 * | 124 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97

D - 300



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report
## 601/602 Volatiles by Method 8260

Lab Report Number: 65052
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **65052** |
| Sample Name / Location | BF-1159<br>MW-53 |
| Collector's Name | PJB |
| Date & Time Collected | 12/13/96 @ 0930 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 12/17/96 JM |
| Date of Analysis | 12/17/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 65052 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | 1 | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 100 |
| Toluene-d8 | 86-119 | 98 |
| Bromofluorobenzene | 85-116 | 100 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director
D-301

Date: 1/3/97
Report Generated



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 65052
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65052 | | | |
| Sample Name / Location | BF-1159 MW-53 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0930 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/21/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65052 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 58 |
| 2-Fluorobiphenyl | 43-116 | 63 |
| Terphenyl -d14 | 33-141 | 53 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 1/3/97
Report Generated

D-302



End of Report

# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 65052
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65052 | | | |
| Sample Name / Location | BF-1159<br>MW-53 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0930 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/17/96 JM | | | |
| Date of Analysis | 12/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65052 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 79 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/3/97
Report Generated

D-303



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

| | |
|---|---|
| Client: | NPWC Environmental |
| Address: | Bldg. 3887, Code 910<br>NAS Pensacola,FL 32508 |
| Phone #: | 452-3180 |
| Contact: | Greg Campbell |

| | |
|---|---|
| Lab Report Number: | 65052 |
| Sample Date: | 12/13/96 |
| Received Date: | 12/13/96 |
| Sample Site: | NAS Pensacola, FL |
| Job Order No.: | 130 5001 |

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65052 | | | |
| Sample Name / Location | BF-1159<br>MW-53 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 0930 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/31/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | | x | 1 | |
| Parameter | 1- 65052 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 85 |
| Nonatriacontane (C-39) | 42-193 * | 92 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97

D-304



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 65053
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **65053** |
| Sample Name / Location | BF-1159<br>MW-54 |
| Collector's Name | PJB |
| Date & Time Collected | 12/13/96 @ 1000 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 12/17/96 JM |
| Date of Analysis | 12/17/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 65053 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | 1 | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 100 |
| Toluene-d8 | 86-119 | 102 |
| Bromofluorobenzene | 85-116 | 100 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director
D-305

Date: 1/3/97
Report Generated



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

Lab Report Number: 65053
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65053 | | | |
| Sample Name / Location | BF-1159<br>MW-54 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1000 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/21/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65053 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 53 |
| 2-Fluorobiphenyl | 43-116 | 60 |
| Terphenyl -d14 | 33-141 | 47 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 1/3/97
Report Generated

D-306



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 65053
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65053 | | | |
| Sample Name / Location | BF-1159<br>MW-54 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1000 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/17/96 JM | | | |
| Date of Analysis | 12/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65053 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 77 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/3/97
Report Generated

D-307



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

Lab Report Number: 65053
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65053 | | | |
| Sample Name / Location | BF-1159<br>MW-54 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1000 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/31/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| **Parameter** | **1- 65053** | **units** | **Det. Limit** | **Flags** |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 85 |
| Nonatriacontane (C-39) | 42-193 * | 78 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97

D-308



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 65054
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65054 | | | |
| Sample Name / Location | BF-1159<br>MW-55 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1030 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/17/96 JM | | | |
| Date of Analysis | 12/17/96, 12/19/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65054 | units | Det. Limit | Flags |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 310 | ug/L | 10 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 55 | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 1040 | ug/L | 10 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 108 |
| Toluene-d8 | 86-119 | 109 |
| Bromofluorobenzene | 85-116 | 99 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97
Report Generated

D-309



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 65054
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65054 | | | |
| Sample Name / Location | BF-1159<br>MW-55 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1030 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/21/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65054 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 59 |
| 2-Fluorobiphenyl | 43-116 | 63 |
| Terphenyl -d14 | 33-141 | 53 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97
Report Generated

D -310



End of Report

# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report

## Ethylene Dibromide by Method 504

Lab Report Number: 65054
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65054 | | | |
| Sample Name / Location | BF-1159<br>MW-55 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1030 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/17/96 JM | | | |
| Date of Analysis | 12/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65054 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 116 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97
Report Generated

D-31



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

| | |
|---|---|
| Client: | NPWC Environmental |
| Address: | Bldg. 3887, Code 910 NAS Pensacola,FL 32508 |
| Phone #: | 452-3180 |
| Contact: | Greg Campbell |

| | |
|---|---|
| Lab Report Number: | 65054 |
| Sample Date: | 12/13/96 |
| Received Date: | 12/13/96 |
| Sample Site: | NAS Pensacola, FL |
| Job Order No.: | 130 5001 |

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65054 | | | |
| Sample Name / Location | BF-1159 MW-55 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1030 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/31/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 65054 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | 2 | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 119 |
| Nonatriacontane (C-39) | 42-193 * | 116 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97

D-312



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 65055
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **65055** |
| Sample Name / Location | BF-1159<br>MW-56 |
| Collector's Name | PJB |
| Date & Time Collected | 12/13/96 @ 1100 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 12/19/96 JM |
| Date of Analysis | 12/19/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 65055 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 98 |
| Toluene-d8 | 86-119 | 102 |
| Bromofluorobenzene | 85-116 | 101 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-313

Date: 1/6/97
Report Generated



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 65055
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65055 | | | |
| Sample Name / Location | BF-1159<br>MW-56 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1100 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/21/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65055 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 62 |
| 2-Fluorobiphenyl | 43-116 | 67 |
| Terphenyl -d14 | 33-141 | 54 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97
Report Generated

D-314



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report
## Ethylene Dibromide by Method 504

**Lab Report Number:** 65055
**Sample Date:** 12/13/96
**Received Date:** 12/13/96
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65055 | | | |
| Sample Name / Location | BF-1159<br>MW-56 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1100 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/17/96 JM | | | |
| Date of Analysis | 12/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65055 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 65 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Does, Laboratory Director

Date: 1/6/97
Report Generated

D-315



End of Report

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

**Lab Report Number:** 65055
**Sample Date:** 12/13/96
**Received Date:** 12/13/96
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65055 | | | |
| Sample Name / Location | BF-1159<br>MW-56 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1100 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 01/01/97 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 65055 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 101 |
| Nonatriacontane (C-39) | 42-193 * | 123 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97

D-316



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 65056
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65056 | | | |
| Sample Name / Location | BF-1159<br>MW-57 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1130 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/17/96 JM | | | |
| Date of Analysis | 12/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65056 | units | Det. Limit | Flags |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 101 |
| Toluene-d8 | 86-119 | 100 |
| Bromofluorobenzene | 85-116 | 100 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-317

Date: 1/6/97
Report Generated



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 65056
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65056 | | | |
| Sample Name / Location | BF-1159<br>MW-57 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1130 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/21/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65056 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 54 |
| 2-Fluorobiphenyl | 43-116 | 58 |
| Terphenyl -d14 | 33-141 | 60 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97
Report Generated

D-318



End of Report

# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 65056
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65056 | | | |
| Sample Name / Location | BF-1159<br>MW-57 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1130 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/17/96 JM | | | |
| Date of Analysis | 12/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65056 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 85 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97
Report Generated

D-319



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

| | |
|---|---|
| Client: | NPWC Environmental |
| Address: | Bldg. 3887, Code 910<br>NAS Pensacola,FL 32508 |
| Phone #: | 452-3180 |
| Contact: | Greg Campbell |

| | |
|---|---|
| Lab Report Number: | 65056 |
| Sample Date: | 12/13/96 |
| Received Date: | 12/13/96 |
| Sample Site: | NAS Pensacola, FL |
| Job Order No.: | 130 5001 |

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65056 | | | |
| Sample Name / Location | BF-1159<br>MW-57 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1130 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 01/01/97 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 65056 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 124 |
| Nonatriacontane (C-39) | 42-193 * | 93 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97

D-320



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report
## 601/602 Volatiles by Method 8260

Lab Report Number: 65057
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65057 | | | |
| Sample Name / Location | BF-1159<br>MW-58 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1200 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/17/96 JM | | | |
| Date of Analysis | 12/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | | X | 1 | |
| Compound Name | 1- 65057 | units | Det. Limit | Flags |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 100 |
| Toluene-d8 | 86-119 | 100 |
| Bromofluorobenzene | 85-116 | 99 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-321

Date: 1/6/97
Report Generated



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

Lab Report Number: 65057
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65057 | | | |
| Sample Name / Location | BF-1159 MW-58 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1200 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/21/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65057 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 58 |
| 2-Fluorobiphenyl | 43-116 | 62 |
| Terphenyl -d14 | 33-141 | 56 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97
Report Generated

D-322



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report

## Ethylene Dibromide by Method 504

Lab Report Number: 65057
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65057 | | | |
| Sample Name / Location | BF-1159<br>MW-58 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1200 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/17/96 JM | | | |
| Date of Analysis | 12/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65057 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 82 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97
Report Generated

D-323



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

| | |
|---|---|
| Client: | NPWC Environmental |
| Address: | Bldg. 3887, Code 910 NAS Pensacola,FL 32508 |
| Phone #: | 452-3180 |
| Contact: | Greg Campbell |

| | |
|---|---|
| Lab Report Number: | 65057 |
| Sample Date: | 12/13/96 |
| Received Date: | 12/13/96 |
| Sample Site: | NAS Pensacola, FL |
| Job Order No.: | 130 5001 |

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65057 | | | |
| Sample Name / Location | BF-1159 MW-58 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1200 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 01/01/97 | | | |
| Sample Matrix | GW | | | |
| Dilution | | x | 1 | |
| Parameter | 1- 65057 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 100 |
| Nonatriacontane (C-39) | 42-193 * | 87 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97

D-324



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 65058
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65058 | | | |
| Sample Name / Location | BF-1159<br>MW-59 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1230 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/18/96 JM | | | |
| Date of Analysis | 12/18/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65058 | units | Det. Limit | Flags |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 99 |
| Toluene-d8 | 86-119 | 101 |
| Bromofluorobenzene | 85-116 | 99 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-325

Date: 1/6/97
Report Generated



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

Lab Report Number: 65058
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65058 | | | |
| Sample Name / Location | BF-1159<br>MW-59 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1230 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/21/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65058 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 54 |
| 2-Fluorobiphenyl | 43-116 | 58 |
| Terphenyl -d14 | 33-141 | 59 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97
Report Generated

D-326



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report
## Ethylene Dibromide by Method 504

Lab Report Number: 65058
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65058 | | | |
| Sample Name / Location | BF-1159<br>MW-59 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1230 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/17/96 JM | | | |
| Date of Analysis | 12/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65058 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 78 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97
Report Generated

D-327



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

| | |
|---|---|
| Client: | NPWC Environmental |
| Address: | Bldg. 3887, Code 910 NAS Pensacola,FL 32508 |
| Phone #: | 452-3180 |
| Contact: | Greg Campbell |

| | |
|---|---|
| Lab Report Number: | 65058 |
| Sample Date: | 12/13/96 |
| Received Date: | 12/13/96 |
| Sample Site: | NAS Pensacola, FL |
| Job Order No.: | 130 5001 |

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65058 | | | |
| Sample Name / Location | BF-1159 MW-59 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ 1230 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/31/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | | x | 1 | |
| Parameter | 1- 65058 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 104 |
| Nonatriacontane (C-39) | 42-193 * | 94 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97

D-328



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 65059
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **65059** |
| Sample Name / Location | BF-1159 Duplicate |
| Collector's Name | PJB |
| Date & Time Collected | 12/13/96 @ N/S |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 12/18/96 JM |
| Date of Analysis | 12/18/96, 12/19/96 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 65059 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | 310 | ug/L | 10 | |
| Chloroethane | 4 | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 1100 | ug/L | 10 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 107 |
| Toluene-d8 | 86-119 | 104 |
| Bromofluorobenzene | 85-116 | 99 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director
D-329

Date: 1/6/97
Report Generated



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report

### 610 PAH's by Method 8270

Lab Report Number: 65059
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65059 | | | |
| Sample Name / Location | BF-1159 Duplicate | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ N/S | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 12/21/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65059 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 61 |
| 2-Fluorobiphenyl | 43-116 | 67 |
| Terphenyl -d14 | 33-141 | 54 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97
Report Generated

D-330



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 65059
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65059 | | | |
| Sample Name / Location | BF-1159 Duplicate | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ N/S | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 12/17/96 JM | | | |
| Date of Analysis | 12/17/96 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 65059 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 71 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97
Report Generated

D-331



End of Report

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

**Lab Report Number:** 65059
**Sample Date:** 12/13/96
**Received Date:** 12/13/96
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 65059 | | | |
| Sample Name / Location | BF-1159 Duplicate | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 12/13/96 @ N/S | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 12/16/96 JJ | | | |
| Date of Analysis | 01/01/97 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 65059 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | 1.2 | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 107 |
| Nonatriacontane (C-39) | 42-193 * | 101 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/6/97

D-332



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 65060
Sample Date: 12/13/96
Received Date: 12/13/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **65060** |
| Sample Name / Location | BF-1159<br>Trip Blank |
| Collector's Name | PJB |
| Date & Time Collected | 12/13/96 @ AM |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 12/16/96 JM |
| Date of Analysis | 12/16/96 |
| Sample Matrix | DI |
| Dilution | X 1 |

| Compound Name | 1- 65060 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 102 |
| Toluene-d8 | 86-119 | 100 |
| Bromofluorobenzene | 85-116 | 100 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director D-333

Date: 1/6/97
Report Generated



End of Report

1·4

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500

Ph# -(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305001

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 12·13·96
Received Date: 12·13·96
Sample Site: BSF 1159
Lab Due Date: Y

| Sample ID # | Lab | #1- 65047 | #2- 65048 | #3- 65049 | #4- 65050 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name or Location | ---------- | EQ. Blank | MW-49 | MW-50 | MW-51 | K.A.O. (Less Pb) |
| Sampled by | ---------- | PJB | PJB | PJB | PJB | |
| Composite Date/Time Collected | Begin | | | | | |
| | Frequency | | | | | |
| | End | | | | | |
| Grab Time | ---------- | 0700 | 0730 | 0800 | 0830 | |
| Sample Matrix | ---------- | DF | GW | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 2 EDB | X | 2 EDB | X | 2 EDB | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCV/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCV/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 4 VOA | X | 4 VOA | X | 4 VOA | X | 4 VOA | 8 | 40 ml VOA Vial x 2 | HCV/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Volatiles/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCV/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCV/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCV/4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCV/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCV/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCV/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCV/4° C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCV/4° C/None |
| Semivol. Org./GCMS-Cap. | EPA SW 8270A | | | | | | | | | 18 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | X | 2 PAH | X | 3 PAH | | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | ~~EPA 418.1~~ PRO | X | 2 TPH | X | 2 TPH | X | 2 TPH | / | 3 TPH | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: Paul L. Tish / LES, Inc.
Date/Time: 12·13·96 / 1500

Received by: Kathey Reeves
Date/Time: 12/13/96 1500

PWC 9510/6

D-334

2.4

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500

Ph#-(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305001

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 12·13·96
Received Date: 12·13·96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1- 65051 | | #2- 65052 | | #3- 65053 | | #4- 65054 | | Notes: | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Name or Location | ---------- | MW-52 | | MW-53 | | MW-54 | | MW-55 | | K.A.G. (Less Pb) | | |
| Sampled by | ---------- | PTB | | PTB | | PTB | | PTB | | | | |
| Composite Date/Time Collected | Begin / Frequency / End | | | | | | | | | | | |
| Grab Time | ---------- | 0900 | | 0930 | | 1000 | | 1030 | | | | |
| Sample Matrix | ---------- | GW | | GW | | GW | | GW | | | | |
| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 2 EDB | X | 2 EDB | X | 2 EDB | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCV4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCV4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 4 VOA | X | 4 VOA | X | 4 VOA | X | 4 VOA | 6 | 40 ml VOA Vial x 2 | HCV4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCV4° C |
| /Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCV4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCV4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCV4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCV4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCV4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCV4° C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCV4° C/None |
| Semivol. Org./GCMS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | X | 2 PAH | X | 2 PAH | | 1Lx3/4 oz. | 4° C/None |
| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL ~~EPA 418.1~~ PRO | X | 2 TPH | X | 2 TPH | X | 2 TPH | X | 2 TPH | | Consult Lab | Consult Lab |
| RCRA Metals (5) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250mlV/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: Paul D. Brown / WES, Inc.
Date/Time: 12·13·96 / 1500

Received by: Kathy Brewer
Date/Time: 12/13/96 1500

PWC 9510/6

3·4

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500

Ph#-(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305001

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 12·13·96
Received Date: 12·13·96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1- 650055 | | #2- 650056 | | 650057 | | #4- 650058 | | Notes: | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Name or Location | ---------- | MW-56 | | MW-57 | | MW-58 | | MW-59 | | K.A.G. (LCSS #0) | | |
| Sampled by | ---------- | PJB | | PJB | | PJB | | PJB | | | | |
| Composite Date/Time Collected | Begin | | | | | | | | | | | |
| | Frequency | | | | | | | | | | | |
| | End | | | | | | | | | | | |
| Grab Time | ---------- | 1100 | | 1130 | | 1200 | | 1230 | | | | |
| Sample Matrix | ---------- | GW | | GW | | GW | | GW | | | | |
| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 2 EDB | X | 2 EDB | X | 2 EDB | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 4 VOA | X | 4 VOA | X | 4 VOA | X | 4 VOA | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| F[illegible]ler/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Ba[illegible]neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | X | 2 PAH | X | 2 PAH | | 1Lx3/4 oz. | 4° C/None |
| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL ~~EPA 418.1~~ Pro | X | 2 TPH | X | 2 TPH | X | 2 TPH | X | 2 TPH | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: [illegible] / WES, Inc.
Date/Time: 12·13·96 / 1500

Received by: Kathy Bowles
Date/Time: 12/13/96 1500

PWC 9510/8

D-336

4.4

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500

Ph# -(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305 00

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 12.13.96
Received Date: 12.13.96
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1- 650519 | #2- 650601 | #3- | #4- |
|---|---|---|---|---|---|
| Sample Name or Location | ---------- | Duplicate | Trip Blank | | |
| Sampled by | ---------- | PJB | PJB | | |
| Composite Date/Time Collected | Begin | | | | |
| | Frequency | | | | |
| | End | | | | |
| Grab Time | ---------- | — | AM | | |
| Sample Matrix | ---------- | GW | DI | | |

Notes: K.A.G. (Less Pb)

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCV/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCV/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 4 VOA | X | 3 VOA | | | | | 6 | 40 ml VOA Vial x 2 | HCV/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCV/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCV/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCV/4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCV/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCV/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCV/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCV/4° C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCV/4° C/None |
| Semivol. Org./GCMS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | | | | | | | | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL ~~EPA 418.1~~ PRO | X | 2 TPH | | | | | | | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: Patti L. Tr / LWES, Inc.
Date/Time: 12.13.96 / 1500

Received by: Kathy Brooks
Date/Time: 12/13/96 / 1500

PWC 9510/6

D-337.

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report
## 601/602 Volatiles by Method 8260

Lab Report Number: 70491
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **70491** |
| Sample Name / Location | BF-1159<br>Eq. Blank |
| Collector's Name | PJB |
| Date & Time Collected | 01/31/97 @ 0630 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 02/04/97 JM |
| Date of Analysis | 02/04/97 |
| Sample Matrix | DI |
| Dilution | X 1 |

| Compound Name | 1- 70491 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 116 |
| Toluene-d8 | 86-119 | 101 |
| Bromofluorobenzene | 85-116 | 105 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-338

Date: 2/21/97
Report Generated



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

# Analytical Report
## 610 PAH's by Method 8270

Lab Report Number: 70491
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 70491 | | | |
| Sample Name / Location | BF-1159 Eq. Blank | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 01/31/97 @ 0630 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 02/10/97 JJ | | | |
| Date of Analysis | 02/12/97 | | | |
| Sample Matrix | DI | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 70491 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 71 |
| 2-Fluorobiphenyl | 43-116 | 94 |
| Terphenyl -d14 | 33-141 | 98 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 2/21/97
Report Generated

D-339



End of Report

# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 70491
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 70491 | | | |
| Sample Name / Location | BF-1159<br>Eq. Blank | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 01/31/97 @ 0630 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 02/12/97 MC | | | |
| Date of Analysis | 02/12/97 | | | |
| Sample Matrix | DI | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 70491 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 104 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 2/24/97
Report Generated

D-340



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

Lab Report Number: 70491
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 70491 | | | |
| Sample Name / Location | BF-1159 Eq. Blank | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 01/31/97 @ 0630 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 02/11/97 JJ | | | |
| Date of Analysis | 02/16/97 | | | |
| Sample Matrix | DI | | | |
| Dilution | x 1 | | | |
| Parameter | 1- 70491 | units | Det. Limit | Flags |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 75 |
| Nonatriacontane (C-39) | 42-193 * | 96 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Deos, Laboratory Director

Date: 2/21/97

D-341



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 70492
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 70492 |
| Sample Name / Location | BF-1159<br>DMW-60 |
| Collector's Name | PJB |
| Date & Time Collected | 01/31/97 @ 0645 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 02/05/97 JM |
| Date of Analysis | 02/05/97 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 70492 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | 24 | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | 12 | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | 130 | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | 64 | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 124 |
| Toluene-d8 | 86-119 | 105 |
| Bromofluorobenzene | 85-116 | 110 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-342

Date: 2/24/97
Report Generated



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 70492
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 70492 | | | |
| Sample Name / Location | BF-1159 DMW-60 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 01/31/97 @ 0645 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 02/10/97 JJ | | | |
| Date of Analysis | 02/12/97 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 70492 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 68 |
| 2-Fluorobiphenyl | 43-116 | 93 |
| Terphenyl -d14 | 33-141 | 96 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 2/21/97
Report Generated

D-343



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 70492
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 70492 | | | |
| Sample Name / Location | BF-1159<br>DMW-60 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 01/31/97 @ 0645 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 02/10/97 JJ | | | |
| Date of Analysis | 02/12/97 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 70492 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 68 |
| 2-Fluorobiphenyl | 43-116 | 93 |
| Terphenyl -d14 | 33-141 | 96 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 2/24/97
Report Generated

D-344



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

Lab Report Number: 70492
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 70492 | | | |
| Sample Name / Location | BF-1159<br>DMW-60 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 01/31/97 @ 0645 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 02/12/97 MC | | | |
| Date of Analysis | 02/12/97 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 70492 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 82 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 2/24/97
Report Generated

D-345



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

## Analytical Report
### Petroleum Range Organics by FLPRO

**Lab Report Number:** 70492
**Sample Date:** 01/31/97
**Received Date:** 01/31/97
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 70492 | | | |
| Sample Name / Location | BF-1159<br>DMW-60 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 01/31/97 @ 0645 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 02/11/97 JJ | | | |
| Date of Analysis | 02/16/97 | | | |
| Sample Matrix | GW | | | |
| Dilution | | x | 1 | |
| **Parameter** | **1- 70492** | **units** | **Det. Limit** | **Flags** |
| Petroleum Range Organics by FLPRO | 0.29 | mg/L | 0.25 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 64 |
| Nonatriacontane (C-39) | 42-193 * | 81 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 2/21/97

D-346



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 70493
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **70493** |
| Sample Name / Location | BF-1159<br>Trip Blank |
| Collector's Name | PJB |
| Date & Time Collected | 01/31/97 @ AM |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 02/04/97 JM |
| Date of Analysis | 02/04/97 |
| Sample Matrix | DI |
| Dilution | X 1 |

| Compound Name | 1- 70493 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 119 |
| Toluene-d8 | 86-119 | 101 |
| Bromofluorobenzene | 85-116 | 106 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director D-347

Date: 2/21/97
Report Generated



End of Report

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500

Ph#-(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305 001

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 01.31.97
Received Date: 01.31.97
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1- 7-0491 | | #2- 7-0492 | | #3- 7-0493 | | #4- | | Notes: |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Name or Location | ---------- | EQ. Blank | | DMW-60 | | Trip Blank | | | | K.A.G. (Less Pb) |
| Sampled by | ---------- | DJB | | RJB | | RJB | | | | |
| Composite Date/Time Collected | Begin | | | | | | | | | |
| | Frequency | | | | | | | | | |
| | End | | | | | | | | | |
| Grab Time | ---------- | 0630 | | 0645 | | AM | | | | |
| Sample Matrix | ---------- | DI | | GW | | DI | | | | |

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 2 EDB | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCV/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCV/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 4 VOA | X | 4 VOA | X | 2 VOA | | | 6 | 40 ml VOA Vial x 2 | HCV/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCV/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40m.x2/1Lx2/4 oz. | HCV/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCV/4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCV/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCV/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCV/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCV/4° C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCV/4° C/None |
| Semivol. Org./GCMS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | | | | | | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL ~~EPA 418.1~~ PRO | X | 2 TRPH | X | 2 TRPH | | | | | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: [signature] / WES, Inc.
Date/Time: 1.31.97 / 0750

Received by: [signature]
Date/Time: 1/31/97 0750

PWC 9510/6

D-348

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

**Lab Report Number:** 70856
**Sample Date:** 02/26/97
**Received Date:** 02/27/97
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 70856 | | | |
| Sample Name / Location | BF-1159 Eq. Blank | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 02/26/97 @ 1400 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 02/27/97 JM | | | |
| Date of Analysis | 02/27/97 | | | |
| Sample Matrix | DI | | | |
| Dilution | X 1 | | | |
| **Compound Name** | **1- 70856** | **units** | **Det. Limit** | **Flags** |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 101 |
| Toluene-d8 | 86-119 | 100 |
| Bromofluorobenzene | 85-116 | 101 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-349

Date: 3/12/97
Report Generated



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

**Lab Report Number:** 70856
**Sample Date:** 02/26/97
**Received Date:** 02/27/97
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 70856 | | | |
| Sample Name / Location | BF-1159 Eq. Blank | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 02/26/97 @ 1400 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 02/28/97 JJ | | | |
| Date of Analysis | 03/01/97 | | | |
| Sample Matrix | DI | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 70856 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 78 |
| 2-Fluorobiphenyl | 43-116 | 91 |
| Terphenyl -d14 | 33-141 | 111 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 3/12/97
Report Generated

D-350



End of Report

# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

## Analytical Report

### Ethylene Dibromide by Method 504

**Lab Report Number:** 70856
**Sample Date:** 02/26/97
**Received Date:** 02/27/97
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 70856 | | | |
| Sample Name / Location | BF-1159 Eq. Blank | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 02/26/97 @ 1400 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 03/04/97 MC | | | |
| Date of Analysis | 03/04/97 | | | |
| Sample Matrix | DI | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 70856 | units | Det. Limit | Flags |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 110 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 3/12/97
Report Generated

D-351



End of Report

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

**Lab Report Number:** 70856
**Sample Date:** 02/26/97
**Received Date:** 02/27/97
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 70856 | | | |
| Sample Name / Location | BF-1159 Eq. Blank | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 02/26/97 @ 1400 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 03/06/97 JJ | | | |
| Date of Analysis | 03/08/97 | | | |
| Sample Matrix | DI | | | |
| Dilution | x 1 | | | |
| **Parameter** | **1- 70856** | **units** | **Det. Limit** | **Flags** |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 98 |
| Nonatriacontane (C-39) | 42-193 * | 108 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 3/12/97

D-352



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report
## 601/602 Volatiles by Method 8260

**Lab Report Number:** 70857
**Sample Date:** 02/26/97
**Received Date:** 02/27/97
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 70857 | | | |
| Sample Name / Location | BF-1159<br>DMW-61 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 02/26/97 @ 1430 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of Extraction / Initials | 02/27/97 JM | | | |
| Date of Analysis | 02/27/97 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| **Compound Name** | **1- 70857** | **units** | **Det. Limit** | **Flags** |
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | 1 | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 102 |
| Toluene-d8 | 86-119 | 101 |
| Bromofluorobenzene | 85-116 | 101 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 3/12/97
Report Generated

D-353



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

**Lab Report Number:** 70857
**Sample Date:** 02/26/97
**Received Date:** 02/27/97
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 70857 | | | |
| Sample Name / Location | BF-1159 DMW-61 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 02/26/97 @ 1430 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 02/28/97 JJ | | | |
| Date of Analysis | 03/01/97 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| **Compound Name** | **1- 70857** | **units** | **Det. Limit** | **Flags** |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 77 |
| 2-Fluorobiphenyl | 43-116 | 89 |
| Terphenyl -d14 | 33-141 | 95 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : _____
Jerry Dees, Laboratory Director

Date: 3/12/97
Report Generated

D-354



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

# Analytical Report

## Ethylene Dibromide by Method 504

**Lab Report Number:** 70857
**Sample Date:** 02/26/97
**Received Date:** 02/27/97
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5002

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 70857 | | | |
| Sample Name / Location | BF-1159<br>DMW-61 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 02/26/97 @ 1430 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 03/04/97 MC | | | |
| Date of Analysis | 03/04/97 | | | |
| Sample Matrix | GW | | | |
| Dilution | X 1 | | | |
| **Compound Name** | **1- 70857** | **units** | **Det. Limit** | **Flags** |
| Ethylene Dibromide | BDL | ug/L | 0.02 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Tetra-Chloro-m-Xylene | 54-140 | 106 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 3/12/97
Report Generated

D-355



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report
## Petroleum Range Organics by FLPRO

| | |
|---|---|
| Client: | NPWC Environmental |
| Address: | Bldg. 3887, Code 910<br>NAS Pensacola,FL 32508 |
| Phone #: | 452-3180 |
| Contact: | Greg Campbell |

| | |
|---|---|
| Lab Report Number: | 70857 |
| Sample Date: | 02/26/97 |
| Received Date: | 02/27/97 |
| Sample Site: | NAS Pensacola, FL |
| Job Order No.: | 130 5002 |

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 70857 | | | |
| Sample Name / Location | BF-1159<br>DMW-61 | | | |
| Collector's Name | PJB | | | |
| Date & Time Collected | 02/26/97 @ 1430 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 03/06/97 JJ | | | |
| Date of Analysis | 03/08/97 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| **Parameter** | **1- 70857** | **units** | **Det. Limit** | **Flags** |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 123 |
| Nonatriacontane (C-39) | 42-193 * | 105 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : _____ Date: 3/12/97
Jerry Dees, Laboratory Director

D-356



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-3180
**Contact:** Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

**Lab Report Number:** 70858
**Sample Date:** 02/26/97
**Received Date:** 02/27/97
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5002

| | |
|---|---|
| LAB Sample ID# | 1- **70858** |
| Sample Name / Location | BF-1159<br>Trip Blank |
| Collector's Name | PJB |
| Date & Time Collected | 02/26/97 @ AM |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 02/27/97 JM |
| Date of Analysis | 02/27/97 |
| Sample Matrix | DI |
| Dilution | X 1 |

| Compound Name | 1- 70858 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 101 |
| Toluene-d8 | 86-119 | 102 |
| Bromofluorobenzene | 85-116 | 99 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-357

Date: 3/12/97
Report Generated



End of Report

1·1

# UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

C Environmental Laboratory
Bldg 3297, Code 920
NAS Pensacola, FL 32508-6500

Ph# -(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305002

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 2·26·97
Received Date: 2·27·97
Sample Site: BF 1159
Lab Due Date:

| Sample ID # | Lab | #1- 7-0856 | #2- 7-0857 | #3- 7-0858 | #4- |
|---|---|---|---|---|---|
| Sample Name or Location | ---------- | EQ. Blank | DMW-61 | Trip Blank | |
| Sampled by | ---------- | PJB | PJB | PJB | |
| Composite Date/Time Collected | Begin | | | | |
| | Frequency | | | | |
| | End | | | | |
| Grab Time | ---------- | 1400 | 1430 | AM | |
| Sample Matrix | ---------- | DI | GW | DI | |

Notes: K.A.G. (Less Pb)

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 EDB | X | 2 EDB | | | | | 3 | 120ml A VOA/4 oz. | None/4°C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCV/4°C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCV/4°C |
| Purg. Halo. & Aro./GC | EPA 601/602 | X | 4 VOA | X | 4 VOA | X | 2 VOA | | | 6 | 40 ml VOA Vial x 2 | HCV/4°C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4°C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCV/4°C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4°C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCV/4°C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCV/4°C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCV/4°C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCV/4°C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCV/4°C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4°C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCV/4°C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCV/4°C/None |
| Semivol. Org./GCMS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4°C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 PAH | X | 2 PAH | | | | | | 1Lx3/4 oz. | 4°C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL ~~EPA 418.1~~ PRO. | X | 2 TRPH | X | 2 TRPH | | | | | | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | | Consult Lab | Consult Lab |
| Lead (Pb) | EPA 239.2 | | | | | | | | | | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: [signature] / WES, Inc.
Date/Time: 2·27·97 / 0815

Received by: [signature]
Date/Time: 2/27/97 0815

PWC 5310.8

D-358

# Navy Public Works Center
## Environmental Laboratory

Bldg.3887, Code 920
NAS Pensacola, FL 32508-5303
Phone 904-452-3642/4758
DSN 922-3642

# Laboratory Report

**Total Lead in Water by Method 239.2**

**Requester:** NPWC Environmental
**Address:** Bldg. 3887, NAS Pensacola, FL 32508
**Phone #:** 452-2107
**Contact:** Greg Campbell

**Report Number:** 9703003
**Sample Date:** 10 Mar 97
**Received Date:** 10 Mar 97
**Sample Site:** Bronson Field Site 1159
**Job Order #:** 130 5001

| | | | | | |
|---|---|---|---|---|---|
| **Sample ID#** | Lab | 1- 70979 | 2- | 3- | 4- | **Analyst(s):** |
| **Sample Name** | Requester | Site 1159, Eq. Blank | | | | Brian Nelson |
| **Collector Name** | | P. Keane | | | | |
| **Date/Time** | Comp start | | | | | |
| **Collected** | Comp stop | | | | | **Date(s) of analysis:** |
| **(Military)** | Grab | 10 Mar 97 @ 1310 | | | | 20 Mar 97 |
| **Sample Type** | Comp/Grab | Grab | | | | |
| **Sample Matrix** | | Deionized Water | | | | |

| PARAMETER | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Metals:** | **METHOD #** | 1- 70979 | units | Limit | 2- | units | Limit | 3- | units | Limit | 4- | units | Limit | **Preservative(s)** |
| Lead(Pb) | EPA 239.2 | x BDL | mg/l | 0.003 | | mg/l | 0.003 | | mg/l | 0.003 | | mg/l | 0.003 | None |

**Comments:** mg/l=milligrams per liter.

**Approved by:** Jerry Dees, Laboratory Director

**Date/Time:** 20-Mar-97 14:34

PWC 5090/14

**End of Report**

A-359

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-2107
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 70979
Sample Date: 03/10/97
Received Date: 03/10/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **70979** |
| Sample Name / Location | BF-1159<br>Eq. Blank |
| Collector's Name | P. Keane |
| Date & Time Collected | 03/10/97 @ 1310 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 03/15/97 JM |
| Date of Analysis | 03/15/97 |
| Sample Matrix | DI |
| Dilution | X 1 |

| Compound Name | 1- 70979 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 105 |
| Toluene-d8 | 86-119 | 99 |
| Bromofluorobenzene | 85-116 | 101 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 3/24/97
Report Generated

R-360



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-2107
Contact: Greg Campbell

## Analytical Report
### 610 PAH's by Method 8270

Lab Report Number: 70979
Sample Date: 03/10/97
Received Date: 03/10/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 70979 | | | |
| Sample Name / Location | BF-1159 Eq. Blank | | | |
| Collector's Name | P. Keane | | | |
| Date & Time Collected | 03/10/97 @ 1310 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | M. Chambers | | | |
| Date of Extraction / Initials | 03/12/97 JJ | | | |
| Date of Analysis | 03/14/97 | | | |
| Sample Matrix | DI | | | |
| Dilution | X 1 | | | |
| Compound Name | 1- 70979 | units | Det. Limit | Flags |
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 87 |
| 2-Fluorobiphenyl | 43-116 | 94 |
| Terphenyl -d14 | 33-141 | 104 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 3/24/97
Report Generated

D-361



End of Report

# Navy Public Works Center

## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Analytical Report

## Petroleum Range Organics by FLPRO

| | |
|---|---|
| Client: | NPWC Environmental |
| Address: | Bldg. 3887, Code 910 |
| | NAS Pensacola,FL 32508 |
| Phone #: | 452-2107 |
| Contact: | Greg Campbell |

| | |
|---|---|
| Lab Report Number: | 70979 |
| Sample Date: | 03/10/97 |
| Received Date: | 03/10/97 |
| Sample Site: | NAS Pensacola, FL |
| Job Order No.: | 130 5001 |

| LAB Sample ID# | 1- 70979 | | | |
|---|---|---|---|---|
| Sample Name / Location | BF-1159<br>Eq. Blank | | | |
| Collector's Name | P. Keane | | | |
| Date & Time Collected | 03/10/97 @ 1310 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 03/11/97 JJ | | | |
| Date of Analysis | 03/14/97 | | | |
| Sample Matrix | DI | | | |
| Dilution | x 1 | | | |
| **Parameter** | **1- 70979** | **units** | **Det. Limit** | **Flags** |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 110 |
| Nonatriacontane (C-39) | 42-193 * | 90 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 3/24/97

D-362



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg.3887, Code 920
NAS Pensacola, FL 32508–5303
Phone 904–452–3642/4758
DSN 922–3642

# Laboratory Report

**Total Lead in Water by Method 239.2**

**Requester:** NPWC Environmental
**Address:** Bldg. 3887, NAS Pensacola, FL 32508
**Phone #:** 452–2107
**Contact:** Greg Campbell

**Report Number:** 9703004
**Sample Date:** 10 Mar 97
**Received Date:** 10 Mar 97
**Sample Site:** Bronson Field Site 1159
**Job Order #:** 130 5001

| | | | | | | |
|---|---|---|---|---|---|---|
| **Sample ID#** | Lab | 1– 70980 | 2– | 3– | 4– | Analyst(s): |
| **Sample Name** | Requester | Site 1159, DMW 60 | | | | Brian Nelson |
| **Collector Name** | | P. Keane | | | | |
| **Date/Time** | Comp start | | | | | |
| **Collected** | Comp stop | | | | | Date(s) of analysis: |
| **(Military)** | Grab | 10 Mar 97 @ 1410 | | | | 20 Mar 97 |
| **Sample Type** | Comp/Grab | Grab | | | | |
| **Sample Matrix** | | Groundwater | | | | |

| PARAMETER | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Metals:** | **METHOD #** | 1– 70980 | units | Limit | 2– | units | Limit | 3– | units | Limit | 4– | units | Limit | **Preservative(s)** |
| Lead(Pb) | EPA 239.2 | X BDL | mg/l | 0.003 | | mg/l | 0.003 | | mg/l | 0.003 | | mg/l | 0.003 | None |

D-363

**Comments:** mg/l=milligrams per liter.

**Approved by:** Jerry Dees, Laboratory Director

**Date/Time:** 20–Mar–97 14:34

PWC 5090/14

**End of Report**

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-2107
**Contact:** Greg Campbell

## Analytical Report

### 601/602 Volatiles by Method 8260

**Lab Report Number:** 70980
**Sample Date:** 03/10/97
**Received Date:** 03/10/97
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **70980** |
| Sample Name / Location | BF-1159<br>DMW 60 |
| Collector's Name | P. Keane |
| Date & Time Collected | 03/10/97 @ 1410 |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 03/15/97 JM |
| Date of Analysis | 03/15/97 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 70980 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 104 |
| Toluene-d8 | 86-119 | 100 |
| Bromofluorobenzene | 85-116 | 103 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-364

Date: 3/24/97
Report Generated



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-2107
**Contact:** Greg Campbell

## Analytical Report

### 610 PAH's by Method 8270

**Lab Report Number:** 70980
**Sample Date:** 03/10/97
**Received Date:** 03/10/97
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- **70980** |
| Sample Name / Location | BF-1159<br>DMW 60 |
| Collector's Name | P. Keane |
| Date & Time Collected | 03/10/97 @ 1410 |
| Sample Type (composite or grab) | Grab |
| Analyst | M. Chambers |
| Date of Extraction / Initials | 03/12/97 JJ |
| Date of Analysis | 03/14/97 |
| Sample Matrix | GW |
| Dilution | X 1 |

| Compound Name | 1- 70980 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Acenaphthene | BDL | ug/L | 2 | |
| Acenaphthylene | BDL | ug/L | 2 | |
| Anthracene | BDL | ug/L | 2 | |
| Benzo(a)anthracene | BDL | ug/L | 2 | |
| Benzo(a)pyrene | BDL | ug/L | 2 | |
| Benzo(b)fluoranthene | BDL | ug/L | 2 | |
| Benzo(g,h,i)perylene | BDL | ug/L | 2 | |
| Benzo(k)fluoranthene | BDL | ug/L | 3 | |
| Chrysene | BDL | ug/L | 2 | |
| Dibenz(a,h)anthracene | BDL | ug/L | 2 | |
| Fluoranthene | BDL | ug/L | 2 | |
| Fluorene | BDL | ug/L | 2 | |
| Indeno(1,2,3-cd)pyrene | BDL | ug/L | 2 | |
| 1-Methylnaphthalene * | BDL | ug/L | 2 | |
| 2-Methylnaphthalene | BDL | ug/L | 3 | |
| Naphthalene | BDL | ug/L | 2 | |
| Phenanthrene | BDL | ug/L | 2 | |
| Pyrene | BDL | ug/L | 2 | |

SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| Nitrobenzene- d5 | 35-114 | 85 |
| 2-Fluorobiphenyl | 43-116 | 94 |
| Terphenyl -d14 | 33-141 | 100 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

Date: 3/24/97
Report Generated

D-365



End of Report

# Navy Public Works Center
## Environmental Laboratory

# Analytical Report
## Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

**Client:** NPWC Environmental
**Address:** Bldg. 3887, Code 910
NAS Pensacola,FL 32508
**Phone #:** 452-2107
**Contact:** Greg Campbell

**Lab Report Number:** 70980
**Sample Date:** 03/10/97
**Received Date:** 03/10/97
**Sample Site:** NAS Pensacola, FL
**Job Order No.:** 130 5001

| | | | | |
|---|---|---|---|---|
| LAB Sample ID# | 1- 70980 | | | |
| Sample Name / Location | BF-1159<br>DMW 60 | | | |
| Collector's Name | P. Keane | | | |
| Date & Time Collected | 03/10/97 @ 1410 | | | |
| Sample Type (composite or grab) | Grab | | | |
| Analyst | J. Moore | | | |
| Date of extraction / Initials | 03/11/97 JJ | | | |
| Date of Analysis | 03/14/97 | | | |
| Sample Matrix | GW | | | |
| Dilution | x 1 | | | |
| **Parameter** | **1- 70980** | **units** | **Det. Limit** | **Flags** |
| Petroleum Range Organics by FLPRO | BDL | mg/L | 0.25 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| ortho-Terphenyl | 82-142 * | 110 |
| Nonatriacontane (C-39) | 42-193 * | 90 |

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 3/24/97

D-366



End of Report

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-2107
Contact: Greg Campbell

## Analytical Report
### 601/602 Volatiles by Method 8260

Lab Report Number: 70981
Sample Date: 03/10/97
Received Date: 03/10/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

| | |
|---|---|
| LAB Sample ID# | 1- 70981 |
| Sample Name / Location | BF-1159 Trip Blank |
| Collector's Name | P. Keane |
| Date & Time Collected | 03/10/97 @ AM |
| Sample Type (composite or grab) | Grab |
| Analyst | J. Moore |
| Date of Extraction / Initials | 03/15/97 JM |
| Date of Analysis | 03/15/97 |
| Sample Matrix | DI |
| Dilution | X 1 |

| Compound Name | 1- 70981 | units | Det. Limit | Flags |
|---|---|---|---|---|
| Benzene | BDL | ug/L | 1 | |
| Bromodichloromethane | BDL | ug/L | 1 | |
| Bromoform | BDL | ug/L | 2 | |
| Bromomethane | BDL | ug/L | 3 | |
| Carbon Tetrachloride | BDL | ug/L | 1 | |
| Chlorobenzene | BDL | ug/L | 1 | |
| Chloroethane | BDL | ug/L | 1 | |
| 2-Chloroethylvinyl ether | BDL | ug/L | 1 | |
| Chloroform | BDL | ug/L | 1 | |
| Chloromethane | BDL | ug/L | 1 | |
| Dibromochloromethane | BDL | ug/L | 1 | |
| 1,2-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,3-Dichlorobenzene | BDL | ug/L | 1 | |
| 1,4-Dichlorobenzene | BDL | ug/L | 1 | |
| Dichlorodifluoromethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethane | BDL | ug/L | 1 | |
| 1,2-Dichloroethane | BDL | ug/L | 1 | |
| 1,1-Dichloroethene | BDL | ug/L | 1 | |
| trans-1,2-Dichloroethene | BDL | ug/L | 1 | |
| 1,2-Dichloropropane | BDL | ug/L | 1 | |
| cis-1,3-Dichloropropene | BDL | ug/L | 1 | |
| trans-1,3-Dichloropropene | BDL | ug/L | 1 | |
| Ethylbenzene | BDL | ug/L | 1 | |
| Methylene Chloride | BDL | ug/L | 1 | |
| Methyl-tert-butyl ether (MTBE) * | BDL | ug/l | 1 | |
| 1,1,2,2-Tetrachloroethane | BDL | ug/L | 1 | |
| Tetrachloroethene | BDL | ug/L | 1 | |
| Toluene | BDL | ug/L | 1 | |
| 1,1,1-Trichloroethane | BDL | ug/L | 1 | |
| 1,1,2-Trichloroethane | BDL | ug/L | 1 | |
| Trichloroethene | BDL | ug/L | 1 | |
| Trichlorofluoromethane | BDL | ug/L | 1 | |
| Vinyl Chloride | BDL | ug/L | 1 | |
| Xylenes (Total) | BDL | ug/L | 1 | |

### SURROGATE SPIKE RECOVERIES

| | Acceptance Limits | Percent Recovery |
|---|---|---|
| 1,2-Dichloroethane-d4 | 75-133 | 103 |
| Toluene-d8 | 86-119 | 100 |
| Bromofluorobenzene | 85-116 | 104 |

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Dees, Laboratory Director

D-367

Date: 3/24/97
Report Generated



End of Report

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Requester: NPWC ENVIRONMENTAL
Address: NASP B-3887
Phone #: 452-2107
Contact: GREG CAMPBELL
Job Order #: 1305001

Report Required? Yes No QC Required? Yes No
Lab ID Number:
Sample Date: 3/10/97
Received Date: 3/10/97
Sample Site: BRONSON FIELD (1159)
Lab Due Date:

| Sample ID # | Lab | #1- 7-0979 | #2- 7-0980 | #3- 7-0981 | #4- | Notes: |
|---|---|---|---|---|---|---|
| Sample Name | ---------- | EQ BLANK | SITE 1159 | SITE 1159 | | KAG |
| or Location | ---------- | SITE 1159 | DMW 60 | TRIP BLANK | | QUIESCENT |
| Sampled by | ---------- | [illegible] | [illegible] | [illegible] | | |
| Composite | Begin | | | | | |
| Date/Time | Frequency | | | | | |
| Collected | End | | | | | |
| Grab Time | ---------- | 1310 | 1410 | AM | | |
| Sample Matrix | ---------- | DW | GW | DI | | |

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | X | 2 | X | 2 | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS-Cap. | EPA SW 8260 | X | 4 | X | 4 | X | 3 | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org. /GCMS-Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | X | 2 | X | 3 | | | | | 9 | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL-PRO | X | 2 | X | 3 | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 6 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 2 | X | 3 | | | | | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |
| | | | 28 | | 28 | | | | | | | |

Comments:

Relinquished by: [signature]
Date/Time: 3/10/97 1570

Received by: [signature]
Date/Time: 3/10/97 1570

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DEPARTED BRONSON 1440

D-368

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Laboratory Report
Total Lead

| | | | |
|---|---|---|---|
| **Requester:** | NPWC Environmental | **Report Number:** | 9706064 |
| **Address:** | Bldg. 3887 | **Sample Date:** | 13 Jun 97 |
| | NAS Pensacola, FL 32508 | **Received Date:** | 13 Jun 97 |
| **Phone #:** | 452-8587 | **Sample Site:** | Bronson Field Site 1159 |
| **Contact:** | Greg Campbell | **Job Order #:** | 130 5002 |

| **Sample ID#** | Lab | 1- **72734** | 2- **72735** | 3- **72736** | 4- **72737** | **Analyst(s):** |
|---|---|---|---|---|---|---|
| **Sample Name** | Requester | Site 1159 MW #1 | Site 1159 MW #2 | Site 1159 Equipment Blank | Site 1159 MW #3 | Brian Nelson |
| **Collector Name** | | P. Keane | P. Keane | P. Keane | P. Keane | |
| **Date/Time** | Comp start | | | | | |
| **Collected** | Comp stop | | | | | **Date(s) of analysis:** |
| **(Military)** | Grab | 13 Jun 97 @ 1205 | 13 Jun 97 @ 1245 | 13 Jun 97 @ 1300 | 13 Jun 97 @ 1320 | 19 Jun 97 |
| **Sample Type** | Comp/Grab | Grab | Grab | Grab | Grab | |
| **Sample Matrix** | | Groundwater | Groundwater | Deionized Water | Groundwater | |

| **PARAMETER** | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Metals:** | **METHOD #** | 1- **72734** | units | Limit | 2- **72735** | units | Limit | 3- **72736** | units | Limit | 4- **72737** | units | Limit | **Preservative(s)** |
| Lead(Pb) | EPA 239.2 | X 0.033 | mg/l | 0.003 | X 0.075 | mg/l | 0.003 | X BDL | mg/l | 0.003 | X 0.130 | mg/l | 0.006 | None |

**Comments:** **mg/kg=milligrams per kilogram. mg/l=milligrams per liter.**

D-369

**Approved by:** Jerry Dees, Laboratory Director

**Date/Time:** 19-Jun-97 10:06

**End of Report**

PWC 5090/14

# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Laboratory Report
Total Lead

| | | | |
|---|---|---|---|
| **Requester:** | NPWC Environmental | **Report Number:** | 9706065 |
| **Address:** | Bldg. 3887 | **Sample Date:** | 13 Jun 97 |
| | NAS Pensacola, FL 32508 | **Received Date:** | 13 Jun 97 |
| **Phone #:** | 452-8587 | **Sample Site:** | Bronson Field Site 1159 |
| **Contact:** | Greg Campbell | **Job Order #:** | 130 5002 |

| **Sample ID#** | Lab | 1- **72738** | 2- **72739** | 3- **72740** | 4- **72741** | **Analyst(s):** |
|---|---|---|---|---|---|---|
| **Sample Name** | Requester | Site 1159 Duplicate | Site 1159 MW #4 | Site 1159 MW #5 | Site 1159 MW #6 | Brian Nelson |
| **Collector Name** | | P. Keane | P. Keane | P. Keane | P. Keane | |
| **Date/Time** | Comp start | | | | | |
| **Collected** | Comp stop | | | | | **Date(s) of analysis:** |
| **(Military)** | Grab | 13 Jun 97 @ N/S | 13 Jun 97 @ 1330 | 13 Jun 97 @ 1340 | 13 Jun 97 @ 1350 | 19 Jun 97 |
| **Sample Type** | Comp/Grab | Grab | Grab | Grab | Grab | |
| **Sample Matrix** | | Groundwater | Groundwater | Groundwater | Groundwater | |

| PARAMETER | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Metals:** | **METHOD #** | 1- **72738** | units | Limit | 2- **72739** | units | Limit | 3- **72740** | units | Limit | 4- **72741** | units | Limit | **Preservative(s)** |
| Lead(Pb) | EPA 239.2 | X **0.08** | mg/l | 0.003 | X **0.055** | mg/l | 0.003 | X **0.064** | mg/l | 0.003 | X **0.079** | mg/l | 0.003 | None |

**Comments:** **mg/kg=milligrams per kilogram. mg/l=milligrams per liter. N/S=Not Submitted.**

D-370

**Approved by:** Jerry Dees, Laboratory Director

**Date/Time:** 19-Jun-97 10:09

**End of Report**

PWC 5090/14

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Yes N

Requester: NPWC ENVIRONMENTAL
Address: B-3887 NAS PENSACOLA FL
Phone #: 452-2170
Contact: GREG CAMBELL
Job Order #: 1305002

Lab ID Number:
Sample Date: 6/13/97
Received Date: 6/13/97
Sample Site: BRONSON FIELD
Lab Due Date: 1

| Sample ID # | Lab | #1-7-2934 | #2-7-2935 | #3-7-2936 | #4-7-2937 |
|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | SITE 1159 |
| or Location | ---------- | MW#1 | MW#2 | EQ BLANK | MW#3 |
| Sampled by | ---------- | P Reame | P Reame | P Reame | P Reame |
| Composite | Begin | | | | |
| Date/Time | Frequency | | | | |
| Collected | End | | | | |
| Grab Time | ---------- | 1205 | 1245 | 1300 | 1320 |
| Sample Matrix | ---------- | GW | GW | DI | GW |

Notes: BRONSON FIELD SITE 1159 QUIESCENT SAMPLING

| PARAMETER by Method Name | METHOD # | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mb2/1Lx2/4 oz. | HCl/4° |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mb2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |
| **PARAMETER by Group Name** | **METHOD SOURCE** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **Billing Units** | **Containers Required** | **Preservative(s) Used** |
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 6 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1-1 | X | 1-1 | X | 1-1 | X | 1-1 | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: P Reame
Date/Time: 6/13/97 1410
Departed Bronson

Received by: P Reame
Date/Time: 6/13/97 1440
RECEIVED AT LAB

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D-371

2 of 2

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Requester: NAVC ENVIRONMENTAL
Address: B-3887 NAS PENSACOLA FL
Phone #: 452-2470
Contact: GREG CAMPBELL
Job Order #: 1305002

Report Required? Yes No QC Required? Yes No
Lab ID Number:
Sample Date: 6/13/97
Received Date: 6/13/97
Sample Site: BRONSON FIELD
Lab Due Date:

| Sample ID # | Lab | #1-7-2738 | #2-7-2739 | #3-7-2740 | #4-7-2741 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | SITE 1159 | BRONSON FIELD |
| or Location | ---------- | DUPLICATE | MW#4 | MW#5 | MW#6 | SITE 1159 |
| Sampled by | ---------- | RReaue | RReaue | RReaue | RReaue | |
| Composite | Begin | | | | | QUIESCENT |
| Date/Time | Frequency | | | | | SAMPLING |
| Collected | End | | | | | |
| Grab Time | ---------- | — | 1330 | 1340 | 1350 | |
| Sample Matrix | ---------- | GW | GW | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| rgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| ase/Neutals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 6 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1-1 | X | 1-1 | X | 1-1 | X | 1-1 | 1 | 250ml/4 oz. | HNO3/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: RReaue
Date/Time: 6/13/97 1410
Departed Bronson
D-372

Received by: RReaue
Date/Time: 6/15/97 1445
ARRIVED AT LAB

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# Navy Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Laboratory Report
Total Lead

| | | | |
|---|---|---|---|
| **Requester:** | NPWC Environmental | **Report Number:** | 9706066 |
| **Address:** | Bldg. 3887 | **Sample Date:** | 16 Jun 97 |
| | NAS Pensacola, FL 32508 | **Received Date:** | 16 Jun 97 |
| **Phone #:** | 452-8587 | **Sample Site:** | Bronson Field Site 1159 |
| **Contact:** | Greg Campbell | **Job Order #:** | 130 5002 |

| **Sample ID#** | Lab | 1- 72749 | 2- 72750 | 3- 72751 | 4- 72752 | **Analyst(s):** |
|---|---|---|---|---|---|---|
| **Sample Name** | Requester | Site 1159 MW #7 | Site 1159 MW #8 | Site 1159 MW #9 | Site 1159 MW #10 | Brian Nelson |
| **Collector Name** | | P. Keane | P. Keane | P. Keane | P. Keane | |
| **Date/Time Collected (Military)** | Comp start | | | | | |
| | Comp stop | | | | | **Date(s) of analysis:** |
| | Grab | 16 Jun 97 @ 1040 | 16 Jun 97 @ 1055 | 16 Jun 97 @ 1235 | 16 Jun 97 @ 1250 | 19 Jun 97 |
| **Sample Type** | Comp/Grab | Grab | Grab | Grab | Grab | |
| **Sample Matrix** | | Groundwater | Groundwater | Groundwater | Groundwater | |

| PARAMETER | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Metals:** | **METHOD #** | 1- 72749 | units | Limit | 2- 72750 | units | Limit | 3- 72751 | units | Limit | 4- 72752 | units | Limit | **Preservative(s)** |
| Lead(Pb) | EPA 239.2 | X 0.016 | mg/l | 0.003 | X 0.020 | mg/l | 0.003 | X 0.034 | mg/l | 0.003 | X 0.033 | mg/l | 0.003 | None |

**Comments:** **mg/kg=milligrams per kilogram. mg/l=milligrams per liter.**

D-373

**Approved by:** Jerry Dees, Laboratory Director

**Date/Time:** 19-Jun-97 10:13

**End of Report**

PWC 5090/14

# Nav' Public Works Center
## Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508
Phone (904) 452-4728/3642
DSN 922-4728/3642

# Laboratory R( ort
Total Lead

| | | | |
|---|---|---|---|
| **Requester:** | NPWC Environmental | **Report Number:** | 9706067 |
| **Address:** | Bldg. 3887 | **Sample Date:** | 16 Jun 97 |
| | NAS Pensacola, FL 32508 | **Received Date:** | 16 Jun 97 |
| **Phone #:** | 452-8587 | **Sample Site:** | Bronson Field Site 1159 |
| **Contact:** | Greg Campbell | **Job Order #:** | 130 5002 |

| **Sample ID#** | Lab | 1- 72753 | 2- 72754 | 3- 72755 | 4- | **Analyst(s):** |
|---|---|---|---|---|---|---|
| **Sample Name** | Requester | Site 1159 MW #11 | Site 1159 Duplicate | Site 1159 MW #12 | | Brian Nelson |
| **Collector Name** | | P. Keane | P. Keane | P. Keane | | |
| **Date/Time** | Comp start | | | | | |
| **Collected** | Comp stop | | | | | **Date(s) of analysis:** |
| **(Military)** | Grab | 16 Jun 97 @ 1330 | 16 Jun 97 @ N/S | 16 Jun 97 @ 1410 | | 19 Jun 97 |
| **Sample Type** | Comp/Grab | Grab | Grab | Grab | | |
| **Sample Matrix** | | Groundwater | Groundwater | Groundwater | | |

| **PARAMETER** | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Metals:** | **METHOD #** | 1- 72753 | units | Limit | 2- 72754 | units | Limit | 3- 72755 | units | Limit | 4- | units | Limit | **Preservative(s)** |
| Lead(Pb) | EPA 239.2 | X 0.026 | mg/l | 0.003 | X 0.034 | mg/l | 0.003 | X 0.035 | mg/l | 0.003 | | mg/l | 0.003 | None |

**Comments:** **mg/kg=milligrams per kilogram. mg/l=milligrams per liter.**

D-374

**Approved by:** Jerry Dees, Laboratory Director

**Date/Time:** 19-Jun-97 10:17

**End of Report**

PWC 5090/14

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Yes

Requester: NPWC ENVIRONMENTAL
Address: NAS B-3887
NAS PENSACOLA, FL
Phone #: 452-8587
Contact: GREG CAMPBELL
Job Order #: 1305002

Lab ID Number:
Sample Date: 6/16/97
Received Date: 6/16/97
Sample Site: BRONSON FIELD, 115
Lab Due Date:

| Sample ID # | Lab | #1-7-2749 | #2-7-2750 | #3-7-2751 | #4-7-2752 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | SITE 1159 | QUIESCENT SAMPLES |
| or Location | ---------- | MW#7 | MW#8 | MW#9 | MW#10 | |
| Sampled by | ---------- | PKeane | PKeane | PKeane | PKeane | |
| Composite | Begin | | | | | |
| Date/Time | Frequency | | | | | |
| Collected | End | | | | | |
| Grab Time | ---------- | 1040 | 1055 | 1235 | 1250 | |
| Sample Matrix | ---------- | GW | GW | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° |
| alo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org. /GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |
| **PARAMETER by Group Name** | **METHOD SOURCE** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **Billing Units** | **Containers Required** | **Preservative(s) Used** |
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 6 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1-1 | X | 1-1 | X | 1-1 | X | 1-1 | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: PKeane
Date/Time: 6/16/97 1425
DEPARTED BRONSON

Received by: PKeane
Date/Time: 6/16/97 150:
Time to LAB

c:\123r24\forms\custody\ustR0.wk1 rev 0 8/28/96

# Navy ublic Works Center
## Environmental Laboratory

Bldg.3887, Code 920
NAS Pensacola, FL 32508-5303
Phone 904-452-4728/3642
DSN 922-3642

# Laboratory Rep

**Lead in Water by Method 239.2**

| | |
|---|---|
| **Requester:** | NPWC Environmental |
| **Address:** | Bldg. 3887 |
| | NAS Pensacola, FL 32508 |
| **Phone #:** | 452-4728 |
| **Contact:** | Greg Campbell |

| | |
|---|---|
| **Lab ID Number:** | 9706079 |
| **Sample Date:** | 17 Jun 97 |
| **Received Date:** | 17 Jun 97 |
| **Sample Site:** | Bronson Field Site 1159 |
| **Job Order #:** | 130 5002 |

| **Sample ID#** | Lab | 1- 72775 | 2- 72776 | 3- 72777 | 4- 72778 | Analyst(s): |
|---|---|---|---|---|---|---|
| **Sample Name** | Requester | Site 1159 MW #13 | Site 1159 MW #14 | Site 1159 Equipment Blank | Site 1159 MW #15 | Brian Nelson |
| **Collector Name** | | P. Keane | P. Keane | P. Keane | P. Keane | |
| **Date/Time** | Comp start | | | | | |
| **Collected** | Comp stop | | | | | Date(s) of analysis: |
| **(Military)** | Grab | 17 Jun 97 @ 1100 | 17 Jun 97 @ 1110 | 17 Jun 97 @ 1205 | 17 Jun 97 @ 1210 | 24 Jun 97 |
| **Sample Type** | Comp/Grab | Grab | Grab | Grab | Grab | |
| **Sample Matrix** | | Groundwater | Groundwater | Deionized Water | Groundwater | |

| **PARAMETER** | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Metals:** | **METHOD #** | 1- 72775 | units | Limit | 2- 72776 | units | Limit | 3- 72777 | units | Limit | 4- 72778 | units | Limit | **Preservative(s)** |
| Lead(Pb) | EPA 239.2 | X 0.015 | mg/l | 0.003 | X 0.063 | mg/l | 0.003 | X BDL | mg/l | 0.003 | X 0.062 | mg/l | 0.003 | None |

D-376

| **Sample ID#** | Lab | 5- 72779 | 6- 72780 | 7- 72781 | 8- 72782 | Analyst(s): |
|---|---|---|---|---|---|---|
| **Sample Name** | Requester | Site 1159 MW #16 | Site 1159 MW #17 | Site 1159 Duplicate | Site 1159 MW #18 | Brian Nelson |
| **Collector Name** | | P. Keane | P. Keane | P. Keane | P. Keane | |
| **Date/Time** | Comp start | | | | | |
| **Collected** | Comp stop | | | | | Date(s) of analysis: |
| **(Military)** | Grab | 17 Jun 97 @ 1245 | 17 Jun 97 @ 1300 | 17 Jun 97 @ N/S | 17 Jun 97 @ 1335 | 24 Jun 97 |
| **Sample Type** | Comp/Grab | Grab | Grab | Grab | Grab | |
| **Sample Matrix** | | Groundwater | Groundwater | Groundwater | Groundwater | |

| **PARAMETER** | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Metals:** | **METHOD #** | 5- 72779 | units | Limit | 6- 72780 | units | Limit | 7- 72781 | units | Limit | 8- 72782 | units | Limit | **Preservative(s)** |
| Lead(Pb) | EPA 239.2 | X 0.365 | mg/l | 0.015 | X 0.042 | mg/l | 0.003 | X 0.295 | mg/l | 0.015 | X 0.045 | mg/l | 0.003 | None |

**Comments:** **mg/l=milligrams per liter. N/S=Not Submitted**

**Approved by:** Jerry Dees, Laboratory Director

**Date/Time:** 25-Jun-97 14:06

PWC 5090/14

**End of Report**

2 of 2

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Requester: RUK ENVIRONMENTAL
Address: B-3887
NAS PENSACOLA FL
Phone #: 452-2170
Contact: GREG CAMBELL
Job Order #: 1305002

Report Required? (Yes) No  QC Required? Yes
Lab ID Number:
Sample Date: 6/17/97
Received Date: 6/17/97
Sample Site: BRONSON FIELD SITE 11
Lab Due Date:

| Sample ID # | Lab | #1-7-2779 | #2-7-2780 | #3-7-2781 | #4-7-2782 |
|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | SITE 1159 |
| or Location | ---------- | MW#16 | MW#17 | DUPLICATE | MW#18 |
| Sampled by | ---------- | PKeane | PKeane | PKeane | PKeane |
| Composite | Begin | | | | |
| Date/Time | Frequency | | | | |
| Collected | End | | | | |
| Grab Time | ---------- | 1245 | 1300 | — | 1335 |
| Sample Matrix | ---------- | GW | GW | GW | GW |

Notes: QUIESCENT SAMPLES

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mb2/1Lx2/4 oz. | HCl one |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mb2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 6 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1–1 | X | 1–1 | X | 1–1 | X | 1–1 | 1 | 250ml/4 oz. | HNO3/None |
| Other: | | | 0.365 + | | 0.042 | | 0.295 + | | 0.045 | | | |
| | | | D.L. 0.015 | | | | D.L. 0.015 | | | | | |

Comments:

Relinquished by: PKeane
Date/Time: 6/17/97 1405
Departed Bronson

Received by: PKeane
Date/Time: 6/17/97 1435
Arrived Lab

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+ OVER-CAL
D-377

PRODUCED AT GOVERNMENT

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Requester: PWC ENVIRONMENTAL
Address: B-3887
NAS PENSACOLA, FL
Phone #: 452-2170
Contact: GREG CAMPBELL
Job Order #: 1305 002

Report Required: Yes No QC Required: Yes No
Lab ID Number:
Sample Date: 6/17/97
Received Date: 6/17/97
Sample Site: BRONSON SITE 1159

| Sample ID # | Lab | #1-7-2775 | #2-7-2776 | #3-7-2777 | #4-7-2778 |
|---|---|---|---|---|---|
| Sample Name or Location | ---------- | SITE 1159 MW 13 | SITE 1159 MW 14 | SITE 1159 EQ BLANK | SITE 1159 MW 15 |
| Sampled by | ---------- | Pleane | Pleane | Pleane | Pleane |
| Composite Date/Time Collected | Begin / Frequency / End | | | | |
| Grab Time | ---------- | 1100 | 1110 | 1205 | 1210 |
| Sample Matrix | ---------- | GW | GW | DI | GW |

Notes: QUIESCENT SAMPLES

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | H None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 8 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1–1 | X | 1–1 | X | 1–1 | X | 1–1 | 1 | 250ml/4 oz. | HNO3/None |
| Other: | | | 0.015 | | 0.063 | | BDL | | 0.062 | | | |

Comments:

Relinquished by: Pleane
Date/Time: 6/17/97 1405
Departed Bronson

Received by: Pleane
Date/Time: 6/17/97 1430
arrived Lab

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# Navy ublic Works Center
## Environmental Laboratory

# Laboratory Rep

**Lead in Water by Method 239.2**


**Bldg.3887, Code 920**
**NAS Pensacola, FL 32508-5303**
**Phone 904-452-4728/3642**
**DSN 922-3642**


**Requester:** NPWC Environmental
**Address:** Bldg. 3887
NAS Pensacola, FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Lab ID Number:** 9706080
**Sample Date:** 19 Jun 97
**Received Date:** 19 Jun 97
**Sample Site:** Bronson Field Site 1159
**Job Order #:** 130 5002

| Sample ID# | Lab | 1- 72802 | 2- 72803 | 3- 72804 | 4- 72805 | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | Site 1159 MW #19 | Site 1159 MW #20 | Site 1159 MW #21 | Site 1159 MW #22 | Brian Nelson |
| Collector Name | | P. Keane | P. Keane | P. Keane | P. Keane | |
| Date/Time | Comp start | | | | | |
| Collected | Comp stop | | | | | Date(s) of analysis: |
| (Military) | Grab | 19 Jun 97 @ 1110 | 19 Jun 97 @ 1120 | 19 Jun 97 @ 1230 | 19 Jun 97 @ 1245 | 24 Jun 97 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | Grab | |
| Sample Matrix | | Groundwater | Groundwater | Groundwater | Groundwater | |

| PARAMETER Metals: | METHOD # | ID# 1- 72802 | units | Det. Limit | ID# 2- 72803 | units | Det. Limit | ID# 3- 72804 | units | Det. Limit | ID# 4- 72805 | units | Det. Limit | Preservative(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead(Pb) | EPA 239.2 | x BDL | mg/l | 0.003 | x BDL | mg/l | 0.003 | x BDL | mg/l | 0.003 | x 0.019 | mg/l | 0.003 | None |

D-379

| Sample ID# | Lab | 5- 72806 | 6- 72807 | 7- | 8- | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | Site 1159 MW #23 | Site 1159 MW #24 | | | Brian Nelson |
| Collector Name | | P. Keane | P. Keane | | | |
| Date/Time | Comp start | | | | | |
| Collected | Comp stop | | | | | Date(s) of analysis: |
| (Military) | Grab | 19 Jun 97 @ 1300 | 19 Jun 97 @ 1420 | | | 24 Jun 97 |
| Sample Type | Comp/Grab | Grab | Grab | | | |
| Sample Matrix | | Groundwater | Groundwater | | | |

| PARAMETER Metals: | METHOD # | ID# 5- 72806 | units | Det. Limit | ID# 6- 72807 | units | Det. Limit | ID# 7- | units | Det. Limit | ID# 8- | units | Det. Limit | Preservative(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead(Pb) | EPA 239.2 | x 0.136 | mg/l | 0.006 | x 0.024 | mg/l | 0.003 | | mg/l | 0.003 | | mg/l | 0.003 | None |

**Comments:** mg/l=milligrams per liter.

**Approved by:** Jerry Dees, Laboratory Director

**Date/Time:** 25-Jun-97 14:04

PWC 5090/14

**End of Report**

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes / No  QC Required? Yes

Requester: NPWC ENVIRONMENTAL
Address: B-3887 NAS PENSACOLA, FL
Phone #: 452-2107
Contact: GREG CAMPBELL
Job Order #: 13050002

Lab ID Number:
Sample Date: 6/19/97
Received Date: 6/19/97
Sample Site: BRONSON FIELD SITE 11
Lab Due Date:

| Sample ID # | Lab | #1-72802 | #2-72803 | #3-72804 | #4-72805 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | SITE 1159 | |
| or Location | ---------- | MW#19 | MW#20 | MW#21 | MW 22 | |
| Sampled by | ---------- | PKeane | PKeane | PKeane | PKeane | QUIESCENT SAMPLES |
| Composite | Begin | | | | | |
| Date/Time | Frequency | | | | | |
| Collected | End | | | | | |
| Grab Time | ---------- | 1110 | 1120 | 1230 | 1245 | |
| Sample Matrix | ---------- | GW | GW | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 6 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1-1 BDL | X | 1-1 BDL | X | 1-1 BDL | X | 1-1 0.019 | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: PKeane
Date/Time: 6/19/97 1435 Departed BRONSON

Received by: PKeane
Date/Time: 6/19/97 1505 Arrived LAB

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D-380

2 of 2

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Y No

Requester: NPWC ENVIRONMENTAL
Address: B-3887 NAS PENSACOLA, FL
Phone #: 452-2107
Contact: GREG CAMPBELL
Job Order #: 1305002

Lab ID Number:
Sample Date: 6/19/97
Received Date: 6/19/97
Sample Site: BRONSON SITE 1159
Lab Due Date:

| Sample ID # | Lab | #1- 7-2806 | #2- 7-2807 | #3- | #4- |
|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | | |
| or Location | ---------- | MW#23 | MW#24 | | |
| Sampled by | ---------- | PKeane | PKeane | | |
| Composite | Begin | | | | |
| Date/Time | Frequency | | | | |
| Collected | End | | | | |
| Grab Time | ---------- | 1300 | 1420 | | |
| Sample Matrix | ---------- | GW | GW | | |

Notes: QUIESCENT SAMPLES

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s 1-6 | X | Bottle ID #'s 1-7 | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservatives Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | [illegible] C/Nor |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/Nor |
| Non-Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/Nor |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/Nor |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/Nor |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/Nor |
| VOC/GCMS-Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/Nor |
| Semivol. Org./GCMS-Cap. | EPA SW 8270A | | | | | | | | | 18 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservatives Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW-846 | | | | | | | | | 47 | Consult Lab | Consult La |
| Kerosene Analytical Group | EPA SW-846 | | | | | | | | | 39 | Consult Lab | Consult La |
| Mixed Product Analytical Group | EPA SW-846 | | | | | | | | | 24 | Consult Lab | Consult La |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult La |
| Total Petroleum Hydrocarbons | FL-PRO | | | | | | | | | 7 | Consult Lab | Consult La |
| RCRA Metals (8) | EPA Various | | | | | | | | | 6 | Consult Lab | Consult La |
| TCLP Metals (8) w/extraction | EPA SW-846 | | | | | | | | | 10 | Consult Lab | Consult La |
| Lead (Pb) only | EPA 239.2 | X | 1-1 | X | 1-1 | | | | | 1 | 250ml/4 oz. | $HNO_3$/Nor |
| Other: | | | 0.136 + | | 0.024 | | | | | | | |
| | | | D.L. 0.006 | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Comments:

Relinquished by: PKeane
Date/Time: 6/19/97 1435 Departed BRONSON

Received by: PKeane
Date/Time: 6/19/97 1535 ARRIVED LAB

c:\123/24\forms\custody\ustR0.wk1 rev 0 8/28/96

+ OVER-CAL
D-381

PRODUCED AT GOD'S ETERNITY

# Navy Public Works Center
## Environmental Laboratory

Bldg.3887, Code 920
NAS Pensacola, FL 32508-5303
Phone 904-452-4728/3642
DSN 922-3642

# Laboratory Rep

**Lead in Water by Method 239.2**

| | |
|---|---|
| **Requester:** | NPWC Environmental |
| **Address:** | Bldg. 3887 |
| | NAS Pensacola, FL 32508 |
| **Phone #:** | 452-4728 |
| **Contact:** | Greg Campbell |

| | |
|---|---|
| **Lab ID Number:** | 9706076 |
| **Sample Date:** | 20, 23 Jun 97 |
| **Received Date:** | 20, 23 Jun 97 |
| **Sample Site:** | Bronson Field Site 1159 |
| **Job Order #:** | 130 5002 |

| **Sample ID#** | Lab | 1- 72820 | 2- 72821 | 3- 72822 | 4- 72823 | Analyst(s): |
|---|---|---|---|---|---|---|
| **Sample Name** | Requester | Site 1159 MW #25 | Site 1159 MW #26 | Site 1159 MW #27 | Site 1159 MW #28 | Brian Nelson |
| **Collector Name** | | P. Keane | P. Keane | P. Keane | P. Keane | |
| **Date/Time** | Comp start | | | | | |
| **Collected** | Comp stop | | | | | Date(s) of analysis: |
| **(Military)** | Grab | 20 Jun 97 @ 1100 | 20 Jun 97 @ 1115 | 20 Jun 97 @ 1130 | 20 Jun 97 @ 1240 | 24 Jun 97 |
| **Sample Type** | Comp/Grab | Grab | Grab | Grab | Grab | |
| **Sample Matrix** | | Groundwater | Groundwater | Groundwater | Groundwater | |

| **PARAMETER** | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Metals:** | **METHOD #** | 1- 72820 | units | Limit | 2- 72821 | units | Limit | 3- 72822 | units | Limit | 4- 72823 | units | Limit | **Preservative(s)** |
| Lead(Pb) | EPA 239.2 | X 0.040 | mg/l | 0.003 | X 0.103 | mg/l | 0.003 | X 0.079 | mg/l | 0.003 | X 0.345 | mg/l | 0.015 | None |

D-382

| **Sample ID#** | Lab | 5- 72824 | 6- 72825 | 7- 72831 | 8- 72832 | Analyst(s): |
|---|---|---|---|---|---|---|
| **Sample Name** | Requester | Site 1159 MW #29 | Site 1159 MW #30 | Site 1159 MW #31 | Site 1159 MW #52 | Brian Nelson |
| **Collector Name** | | P. Keane | P. Keane | P. Keane | P. Keane | |
| **Date/Time** | Comp start | | | | | |
| **Collected** | Comp stop | | | | | Date(s) of analysis: |
| **(Military)** | Grab | 20 Jun 97 @ 1335 | 20 Jun 97 @ 1440 | 23 Jun 97 @ 1120 | 23 Jun 97 @ 1130 | 24 Jun 97 |
| **Sample Type** | Comp/Grab | Grab | Grab | Grab | Grab | |
| **Sample Matrix** | | Groundwater | Groundwater | Groundwater | Groundwater | |

| **PARAMETER** | | ID# | | Det. | ID# | | Det. | ID# | | Det. | ID# | | Det. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Metals:** | **METHOD #** | 5- 72824 | units | Limit | 6- 72825 | units | Limit | 7- 72831 | units | Limit | 8- 72832 | units | Limit | **Preservative(s)** |
| Lead(Pb) | EPA 239.2 | X BDL | mg/l | 0.003 | X BDL | mg/l | 0.003 | X 0.006 | mg/l | 0.003 | X 0.004 | mg/l | 0.003 | None |

**Comments:** **mg/l=milligrams per liter.**

**Approved by:** Jerry Dees, Laboratory Director

**Date/Time:** 25-Jun-97 13:41

PWC 5090/14

**End of Report**

# Navy ublic Works Center
## Environmental Laboratory

Bldg.3887, Code 920
NAS Pensacola, FL 32508-5303
Phone 904-452-4728/3642
DSN 922-3642

# Laboratory Rep(

**Lead in Water by Method 239.2**

**Requester:** NPWC Environmental
**Address:** Bldg. 3887, NAS Pensacola, FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Lab ID Number:** 9706077
**Sample Date:** 23 Jun 97
**Received Date:** 23 Jun 97
**Sample Site:** Bronson Field Site 1159
**Job Order #:** 130 5002

| Sample ID# | Lab | 1- 72833 | 2- 72834 | 3- 72835 | 4- 72836 | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | Site 1159 Equipment Blank | Site 1159 MW #55 | Site 1159 Duplicate | Site 1159 MW #59 | Brian Nelson |
| Collector Name | | P. Keane | P. Keane | P. Keane | P. Keane | |
| Date/Time Collected (Military) | Comp start | | | | | |
| | Comp stop | | | | | Date(s) of analysis: |
| | Grab | 23 Jun 97 @ 1230 | 23 Jun 97 @ 1325 | 23 Jun 97 @ N/S | 23 Jun 97 @ 1345 | 24 Jun 97 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | Grab | |
| Sample Matrix | | Deionized Water | Groundwater | Groundwater | Groundwater | |

| PARAMETER Metals: | METHOD # | ID# 1- 72833 | units | Det. Limit | ID# 2- 72834 | units | Det. Limit | ID# 3- 72835 | units | Det. Limit | ID# 4- 72836 | units | Det. Limit | Preservative(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead(Pb) | EPA 239.2 | x BDL | mg/l | 0.003 | x 0.019 | mg/l | 0.003 | x 0.021 | mg/l | 0.003 | x BDL | mg/l | 0.003 | None |

D-383

| Sample ID# | Lab | 5- 72837 | 6- 72838 | 7- | 8- | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | Site 1159 MW #54 | Site 1159 MW #32 | | | Brian Nelson |
| Collector Name | | P. Keane | P. Keane | | | |
| Date/Time Collected (Military) | Comp start | | | | | |
| | Comp stop | | | | | Date(s) of analysis: |
| | Grab | 23 Jun 97 @ 1400 | 23 Jun 97 @ 1420 | | | 24 Jun 97 |
| Sample Type | Comp/Grab | Grab | Grab | | | |
| Sample Matrix | | Groundwater | Groundwater | | | |

| PARAMETER Metals: | METHOD # | ID# 5- 72837 | units | Det. Limit | ID# 6- 72838 | units | Det. Limit | ID# 7- | units | Det. Limit | ID# 8- | units | Det. Limit | Preservative(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead(Pb) | EPA 239.2 | x BDL | mg/l | 0.003 | x 0.061 | mg/l | 0.003 | | mg/l | 0.003 | | mg/l | 0.003 | None |

**Comments:** mg/l=milligrams per liter. N/S=Not Submitted.

**Approved by:** Jerry Dees, Laboratory Director

**Date/Time:** 25-Jun-97 14:07

PWC 5090/14

**End of Report**

Brenda
1 of 2

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Yes No

Requester: NPWC ENVIRONMENTAL
Address: B-3587, NAS PENSACOLA, FL
Phone #: 452-2107
Contact: GREG CAMBELL
Job Order #: 1305002

Lab ID Number:
Sample Date: 6/20/97
Received Date: 6/20/97
Sample Site: BRONSIN FIELD 1159
Lab Due Date:

| Sample ID # | Lab | #1-7.2820 | #2-7-2821 | #3-7.2822 | #4-7.2823 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | SITE 1159 | |
| or Location | ---------- | MW#25 | MW#26 | MW#27 | MW 28 | |
| Sampled by | ---------- | [illegible] | [illegible] | [illegible] | [illegible] | QUIESCENT |
| Composite | Begin | | | | | SAMPLES |
| Date/Time | Frequency | | | | | |
| Collected | End | | | | | |
| Grab Time | ---------- | 1100 | 1115 | 1130 | 1240 | |
| Sample Matrix | ---------- | GW | GW | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 8 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1-1 0.040 | X | 1-1 0.103 | X | 1-1 0.079 | X | 1-1 0.345 + D.L. 0.015 | 1 | 250ml/4 oz. | HNO3/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: [illegible]
Date/Time: 6/20/97 1455

Received by: [illegible]
Date/Time: 6/20/97 1520

c:\123/24\forms\custody\ustR0 wk1 rev 0 8/28/96

Departed Bronson

contacted hd-

D-384 +OVER-CAL

2 of 2

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)


NAVAL Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387


Report Required? Yes No QC Required? Yes No

Requester: NAVAL ENVIRONMENTAL
Address: B-3887 NAS PENSACOLA, FL
Phone #: 452-2107
Contact: GREG CROMPELL
Job Order #: 1305002

Lab ID Number:
Sample Date: 6/20/97
Received Date: 6/20/97
Sample Site: BROWNSVILLE SITE 1159
Lab Due Date:

| Sample ID # | Lab | #1- 7-2824 | #2- 7-2825 | #3- | #4- |
|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | | |
| or Location | ---------- | MW 29 | MW30 | | |
| Sampled by | ---------- | [illegible] | [illegible] | | |
| Composite | Begin | | | | |
| Date/Time | Frequency | | | | |
| Collected | End | | | | |
| Grab Time | ---------- | 1335 | 1440 | | |
| Sample Matrix | ---------- | GW | GW | | |

Notes: QUIESCENT SAMPLES

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-1 | | 1-1 | | | | | | | |
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| ia Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 6 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1-1 | X | 1-1 | | | | | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | BDL | | BDL | | | | | | | |

Comments:

Relinquished by: [illegible] Date/Time: 6/20/97 1445 Departed Brown

Received by: [illegible] Date/Time: 6/20/97 1520 arrived at Lab

c:\123/24\forms\custody\ustR0.wk1 rev 0 8/28/96

D-385

SAMPLES RUN 6/24/97
DET LIMIT 0.003 mg/l
UNLESS NOTED OTHERWISE.

Bruce
1 of 2

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Yes No

Requester: NPWC ENVIRONMENTAL
Address: NAS B-3887
NAS PENSACOLA, FL
Phone #: 452-2107
Contact: GREG CAMPBELL
Job Order #: 1305002

Lab ID Number:
Sample Date: 6/23/97
Received Date: 6/23/97
Sample Site: BRONSON SITE 1159
Lab Due Date:

| Sample ID # | Lab | #1-7-2831 | #2-7-2832 | #3-7-2833 | #4-7-2834 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | SITE 1159 | |
| or Location | ---------- | MW#31 | MW#52 | EQ BLANK | MW#55 | QUIESCENT SAMPLES |
| Sampled by | ---------- | PKeane | PKeane | PKeane | PKeane | |
| Composite | Begin | | | | | |
| Date/Time | Frequency | | | | | |
| Collected | End | | | | | |
| Grab Time | ---------- | 1120 | 1130 | 1230 | 1325 | |
| Sample Matrix | ---------- | GW | GW | DI | GW | |

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 6 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1–1 | X | 1–1 | X | 1–1 | X | 1–1 | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | 0.006 | | 0.004 | | BDL | | 0.019 | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Comments:

Relinquished by: PKeane
Date/Time: 6/23/97 1410
Departed Bronson

Received by: PKeane
Date/Time: 6/23/97 1520
arrived Lab

c:\123/24\forms\custody\ustR0.wk1 rev 0 8/28/96

D-386

2 of 2

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Yes No

Requester: PWC ENVIRONMENTAL
Address: B-3887 NAS PENSACOLA, FL
Phone #: 452-2107
Contact: CHEY CAMPBELL
Job Order #: 1305002

Lab ID Number:
Sample Date: 6/23/97
Received Date: 6/23/97
Sample Site: BRENTON SITE 1159
Lab Due Date:

| Sample ID # | Lab | #1-7-2835 | #2-7-2836 | #3-7-2837 | #4-7-2838 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | SITE 1159 | |
| or Location | ---------- | DUPLICATE | MW #59 | MW #54 | MW #32 | |
| Sampled by | ---------- | [illegible] | [illegible] | [illegible] | [illegible] | QUIESCENT SAMPLES |
| Composite | Begin | | | | | |
| Date/Time | Frequency | | | | | |
| Collected | End | | | | | |
| Grab Time | ---------- | — | 1345 | 1400 | 1420 | |
| Sample Matrix | ---------- | GW | GW | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | L-1 | | L-1 | | | | | | | |
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 8 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 8 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | L-1 | X | L-1 | X | L-1 | X | L-1 | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | 0.021 | | BDL | | BDL | | 0.061 | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Comments:

Relinquished by: [illegible]
Date/Time: 6/23/97 1500

Received by: [illegible]
Date/Time: 6/23/97 1520

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Departed Brenson

arrived [illegible]

D-387

# Navy ublic Works Center
## Environmental Laboratory

# Laboratory Rep .

**Lead in Water by Method 239.2**


**Bldg.3887, Code 920**
**NAS Pensacola, FL 32508-5303**
**Phone 904-452-4728/3642**
**DSN 922-3642**


**Requester:** NPWC Environmental
**Address:** Bldg. 3887
NAS Pensacola, FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Lab ID Number:** 9706081
**Sample Date:** 24, 25 Jun 97
**Received Date:** 24, 25 Jun 97
**Sample Site:** Bronson Field Site 1159
**Job Order #:** 130 5002

| Sample ID# | Lab | 1- 72859 | 2- 72860 | 3- 72861 | 4- 72862 | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | Site 1159 MW #53 | Site 1159 MW #48 | Site 1159 MW #33 | Site 1159 MW #46 | Brian Nelson |
| Collector Name | | P. Keane | P. Keane | P. Keane | P. Keane | |
| Date/Time | Comp start | | | | | |
| Collected | Comp stop | | | | | Date(s) of analysis: |
| (Military) | Grab | 24 Jun 97 @ 1130 | 24 Jun 97 @ 1140 | 24 Jun 97 @ 1330 | 24 Jun 97 @ 1445 | 26 Jun 97 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | Grab | |
| Sample Matrix | | Groundwater | Groundwater | Groundwater | Groundwater | |

| PARAMETER Metals: | METHOD # | ID# 1- 72859 | units | Det. Limit | ID# 2- 72860 | units | Det. Limit | ID# 3- 72861 | units | Det. Limit | ID# 4- 72862 | units | Det. Limit | Preservative(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead(Pb) | EPA 239.2 | x BDL | mg/l | 0.003 | x 0.007 | mg/l | 0.003 | x BDL | mg/l | 0.003 | x 0.106 | mg/l | 0.003 | None |

D-388

| Sample ID# | Lab | 5- 72863 | 6- 72864 | 7- 72872 | 8- 72873 | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | Site 1159 MW #47 | Site 1159 MW #45 | Site 1159 MW #44 | Site 1159 MW #34 | Brian Nelson |
| Collector Name | | P. Keane | P. Keane | P. Keane | P. Keane | |
| Date/Time | Comp start | | | | | |
| Collected | Comp stop | | | | | Date(s) of analysis: |
| (Military) | Grab | 24 Jun 97 @ 1455 | 24 Jun 97 @ 1525 | 25 Jun 97 @ 1120 | 25 Jun 97 @ 1135 | 26 Jun 97 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | Grab | |
| Sample Matrix | | Groundwater | Groundwater | Groundwater | Groundwater | |

| PARAMETER Metals: | METHOD # | ID# 5- 72863 | units | Det. Limit | ID# 6- 72864 | units | Det. Limit | ID# 7- 72872 | units | Det. Limit | ID# 8- 72873 | units | Det. Limit | Preservative(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead(Pb) | EPA 239.2 | x 0.056 | mg/l | 0.003 | x 0.039 | mg/l | 0.003 | x 0.003 | mg/l | 0.003 | x BDL | mg/l | 0.003 | None |

**Comments:** mg/l=milligrams per liter.

**Approved by:** Jerry Dees, Laboratory Director

**Date/Time:** 26-Jun-97 14:41

PWC 5090/14

**End of Report**

# Navy ublic Works Center
## Environmental Laboratory

# Laboratory Rep

**Lead in Water by Method 239.2**


**Bldg.3887, Code 920**
**NAS Pensacola, FL 32508-5303**
**Phone 904-452-4728/3642**
**DSN 922-3642**


**Requester:** NPWC Environmental
**Address:** Bldg. 3887
NAS Pensacola, FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Lab ID Number:** 9706082
**Sample Date:** 25 Jun 97
**Received Date:** 25 Jun 97
**Sample Site:** Bronson Field Site 1159
**Job Order #:** 130 5002

| Sample ID# | Lab | 1- 72874 | 2- 72875 | 3- 72876 | 4- 72877 | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | Site 1159 Equipment Blank | Site 1159 MW #35 | Site 1159 Duplicate | Site 1159 MW #36 | Brian Nelson |
| Collector Name | | P. Keane | P. Keane | P. Keane | P. Keane | |
| Date/Time Collected (Military) | Comp start | | | | | |
| | Comp stop | | | | | Date(s) of analysis: |
| | Grab | 25 Jun 97 @ 1350 | 25 Jun 97 @ 1400 | 25 Jun 97 @ N/S | 25 Jun 97 @ 1420 | 26 Jun 97 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | Grab | |
| Sample Matrix | | Deionized Water | Groundwater | Groundwater | Groundwater | |

| PARAMETER Metals: | METHOD # | ID# 1- 72874 | units | Det. Limit | ID# 2- 72875 | units | Det. Limit | ID# 3- 72876 | units | Det. Limit | ID# 4- 72877 | units | Det. Limit | Preservative(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead(Pb) | EPA 239.2 | x BDL | mg/l | 0.003 | x BDL | mg/l | 0.003 | x BDL | mg/l | 0.003 | x BDL | mg/l | 0.003 | None |

D-389

| Sample ID# | Lab | 5- 72878 | 6- 72879 | 7- | 8- | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | Site 1159 MW #37 | Site 1159 MW #40 | | | Brian Nelson |
| Collector Name | | P. Keane | P. Keane | | | |
| Date/Time Collected (Military) | Comp start | | | | | |
| | Comp stop | | | | | Date(s) of analysis: |
| | Grab | 25 Jun 97 @ 1430 | 25 Jun 97 @ 1445 | | | 26 Jun 97 |
| Sample Type | Comp/Grab | Grab | Grab | | | |
| Sample Matrix | | Groundwater | Groundwater | | | |

| PARAMETER Metals: | METHOD # | ID# 5- 72878 | units | Det. Limit | ID# 6- 72879 | units | Det. Limit | ID# 7- | units | Det. Limit | ID# 8- | units | Det. Limit | Preservative(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead(Pb) | EPA 239.2 | x BDL | mg/l | 0.003 | x 0.015 | mg/l | 0.003 | | mg/l | 0.003 | | mg/l | 0.003 | None |

**Comments:** **mg/l=milligrams per liter. N/S=Not Submitted.**

**Approved by:** Jerry Dees, Laboratory Director

**Date/Time:** 26-Jun-97 14:40

PWC 5090/14

**End of Report**

METHOD 239.2
RUN 6/26/97
DET LIMIT 0.003 mg/l

6/26/97

Brenda 1 of 2

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? (Yes) No  QC Required? Yes No

Requester: NAVY ENVIRONMENTAL
Address: B-3887
NAS PENSACOLA, FL
Phone #: 452-2107
Contact: GREG CAMBELL
Job Order #: 1305002

Lab ID Number:
Sample Date: 6/24/97
Received Date: 6/24/97
Sample Site: BRAGEN SITE 1159
Lab Due Date:

| Sample ID # | Lab | #1-7-2859 | #2-7-2860 | #3-7-2861 | #4-7-2862 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | SITE 1159 | |
| or Location | ---------- | MW#53 | MW 48 | MW 33 | MW 46 | |
| Sampled by | ---------- | PRiem | PRiem | PRiem | PRiem | QUIESCENT SAMPLES |
| Composite | Begin | | | | | |
| Date/Time | Frequency | | | | | |
| Collected | End | | | | | |
| Grab Time | ---------- | 1130 | 1140 | 1330 | 1445 | |
| Sample Matrix | ---------- | GW | GW | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | 1-L Bottle ID #'s | X | 1-L Bottle ID #'s | X | 1-L Bottle ID #'s | X | 1-L Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 8 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1-L BDL | X | 1-L 0.007 | X | 1-L BDL | X | 1-L 0.106 | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments: MONITOR WELLS 4:7,45. HAVE VERY STRONG FUEL ODOR

Relinquished by: PRiem
Date/Time: 6/24/97 1545
Departed Branson

Received by: PRiem
Date/Time: 6/24/97 1620
arrived lab

c:\123\24\forms\custody\ustR0.wk1 rev 0 8/28/96

2 of 2

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Yes No

Requester: NAVC ENVIRONMENTAL
Address: B-3887
NAS PENSACOLA, FL
Phone #: 452-3407
Contact: GREG CAMPBELL
Job Order #: 1305002

Lab ID Number:
Sample Date: 6/24/97
Received Date: 6/24/97
Sample Site: BELSON SITE 1159
Lab Due Date:

| Sample ID # | Lab | #1- 72863 | #2- 72864 | #3- | #4- |
|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | | |
| or Location | ---------- | MW 47 | MW 45 | | |
| Sampled by | ---------- | [illegible] | [illegible] | | |
| Composite | Begin | | | | |
| Date/Time | Frequency | | | | |
| Collected | End | | | | |
| Grab Time | ---------- | 1455 | 1525 | | |
| Sample Matrix | ---------- | GW | GW | | |

Notes: FLUORESCENT SAMPLES

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s (1-1) | X | Bottle ID #'s (1-1) | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 18 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/Non |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/Non |
| Non–Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/Non |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/Non |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/Non |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/Non |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/Non |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 6 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1-1 0.056 | X | 1-1 0.039 | | | | | 1 | 250ml/4 oz. | HNO3/Non |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: [illegible]
Date/Time: 6/24/97 1545
Departed Branson

Received by: [illegible]
Date/Time: 6/24/97 1620
arrived Lab

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Brenda
1 of 2

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? (Yes) No  QC Required? Yes No

Requester: NPWC ENVIRONMENTAL
Address: NAS B-3887
NAS PENSACOLA, FL
Phone #: 452-2107
Contact: GREG CAMPBELL
Job Order #: 1305002

Lab ID Number:
Sample Date: 6/25/97
Received Date: 6/25/97
Sample Site: BROWSON 1159
Lab Due Date:

| Sample ID # | Lab | #1-7-2872 | #2-7-2873 | #3-7-2874 | #4-7-2875 |
|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | SITE 1159 |
| or Location | ---------- | MW#44 | MW#34 | EQ BLANK | MW#35 |
| Sampled by | ---------- | P Keane | P Keane | P Keane | P Keane |
| Composite | Begin | | | | |
| Date/Time | Frequency | | | | |
| Collected | End | | | | |
| Grab Time | ---------- | 1120 | 1135 | 1350 | 1400 |
| Sample Matrix | ---------- | GW | GW | DI | GW |

Notes: QUIESCENT SAMPLES

| PARAMETER by Method Name | METHOD # | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |
| **PARAMETER by Group Name** | **METHOD SOURCE** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **Billing Units** | **Containers Required** | **Preservative(s) Used** |
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 6 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1-1 0.003 | X | 1-1 BDL | X | 1-1 BDL | X | 1-1 BDL | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: P Keane
Date/Time: 6/25/97 1505

Received by: P Keane
Date/Time: 6/25/97 1545

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Deputed Brenson 1505

arrived at lab

D-392

2 of 2

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Requester: NAVC ENVIRONMENTAL
Address: NAS B-3887
NAS PENSACOLA, FL
Phone #: 452-2107
Contact: GREG CAMPBELL
Job Order #:

Report Required? Yes No QC Required? Yes No
Lab ID Number:
Sample Date: 6/25/97
Received Date: 6/25/97
Sample Site: BRONSON SITE 1159
Lab Due Date:

| Sample ID # | Lab | #1-7-2876 | #2-7-2877 | #3-7-2878 | #4-7-2879 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | SITE 1159 | |
| or Location | ---------- | DUPLICATE | MW#36 | MW#37 | MW#40 | |
| Sampled by | ---------- | [illegible] | [illegible] | [illegible] | [illegible] | QUIESCENT SAMPLES |
| Composite | Begin | | | | | |
| Date/Time | Frequency | | | | | |
| Collected | End | | | | | |
| Grab Time | ---------- | — | 1420 | 1430 | 1445 | |
| Sample Matrix | ---------- | GW | GW | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Hals. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mls2/1Lx2/4 oz. | HCl/4° C/None |
| Hals. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Hals. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mls2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Hals./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 18 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |
| **PARAMETER by Group Name** | **METHOD SOURCE** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **X** | **Bottle ID #'s** | **Billing Units** | **Containers Required** | **Preservative(s) Used** |
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 6 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1–1 | X | 1–1 | X | 1–1 | X | 1–1 | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | BDL | | BDL | | BDL | | 0.015 | | | |

Comments:

Relinquished by: [illegible]
Date/Time: 6/25/97 1505
Departed Bronson

Received by: [illegible]
Date/Time: 6/25/97 1545
arrived at Lab

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D-393

# Navy Public Works Center
## Environmental Laboratory

# Laboratory Report
**Lead in Water by Method 239.2**


**Bldg.3887, Code 920**
**NAS Pensacola, FL 32508-5303**
**Phone 904-452-4728/3642**
**DSN 922-3642**


**Requester:** NPWC Environmental
**Address:** Bldg. 3887
NAS Pensacola, FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Lab ID Number:** 9706088
**Sample Date:** 26 Jun 97
**Received Date:** 26 Jun 97
**Sample Site:** Bronson Field Site 1159
**Job Order #:** 130 5002

| Sample ID# | Lab | 1- 72998 | 2- 72999 | 3- 73000 | 4- 73001 | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | Site 1159 MW #49 | Site 1159 MW #41 | Site 1159 MW #42 | Site 1159 MW #51 | Brian Nelson |
| Collector Name | | P. Keane | P. Keane | P. Keane | P. Keane | |
| Date/Time Collected (Military) | Comp start | | | | | |
| | Comp stop | | | | | Date(s) of analysis: |
| | Grab | 26 Jun 97 @ 1040 | 26 Jun 97 @ 1310 | 26 Jun 97 @ 1320 | 26 Jun 97 @ 1330 | 1 Jul 97 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | Grab | |
| Sample Matrix | | Groundwater | Groundwater | Groundwater | Groundwater | |

| PARAMETER Metals: | METHOD # | ID# 1- 72998 | units | Det. Limit | ID# 2- 72999 | units | Det. Limit | ID# 3- 73000 | units | Det. Limit | ID# 4- 73001 | units | Det. Limit | Preservative(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead(Pb) | EPA 239.2 | X BDL | mg/l | 0.003 | X 0.018 | mg/l | 0.003 | X 0.012 | mg/l | 0.003 | X BDL | mg/l | 0.003 | None |

| Sample ID# | Lab | 5- 73002 | 6- 73003 | 7- | 8- | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | Site 1159 MW #43 | Site 1159 MW #50 | | | Brian Nelson |
| Collector Name | | P. Keane | P. Keane | | | |
| Date/Time Collected (Military) | Comp start | | | | | |
| | Comp stop | | | | | Date(s) of analysis: |
| | Grab | 26 Jun 97 @ 1410 | 26 Jun 97 @ 1450 | | | 1 Jul 97 |
| Sample Type | Comp/Grab | Grab | Grab | | | |
| Sample Matrix | | Groundwater | Groundwater | | | |

| PARAMETER Metals: | METHOD # | ID# 5- 73002 | units | Det. Limit | ID# 6- 73003 | units | Det. Limit | ID# 7- | units | Det. Limit | ID# 8- | units | Det. Limit | Preservative(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead(Pb) | EPA 239.2 | X 0.011 | mg/l | 0.003 | X BDL | mg/l | 0.003 | | mg/l | 0.003 | | mg/l | 0.003 | None |

D-394

**Comments:** mg/l=milligrams per liter.

**Approved by:** Jerry Dees, Laboratory Director

**Date/Time:** 17-Jul-97 13:36

PWC 5090/14

**End of Report**

Brenda
1/2

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? (Yes) No QC Required? Yes No

Requester: NPWC ENVIRONMENTAL
Address: NAS B-3738
NAS PENSACOLA, FL
Phone #: 452-2107
Contact: GREG CAMBELL
Job Order #: 1305002

Lab ID Number:
Sample Date: 6/26/97
Received Date: 6/26/97
Sample Site: BRANSON SITE 1159
Lab Due Date:

| Sample ID # | Lab | #1-7-2998 | #2-7-2999 | #3-7-3000 | #4-7-3001 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | SITE 1159 | |
| or Location | ---------- | MW#49 | MW#41 | MW#42 | MW#57 | |
| Sampled by | ---------- | PKeane | PKeane | PKeane | PKeane | QUIESCENT SAMPLES |
| Composite | Begin | | | | | |
| Date/Time | Frequency | | | | | |
| Collected | End | | | | | |
| Grab Time | ---------- | 1040 | 1310 | 1320 | 1330 | |
| Sample Matrix | ---------- | GW | GW | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Hals. & Arc./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Hals. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Hals. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Hals./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 6 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1-1 | X | 1-1 | X | 1-1 | X | 1-1 | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | BDL | | 0.018 | | 0.012 | | BDL | | | |

Comments:

Relinquished by: PKeane
Date/Time: 6/26/97 1505
Departed Branson

Received by: PKeane
Date/Time: 6/26/97 1545
arrived lab

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2 of 2

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Yes No

Requester: NAVC ENVIRONMENTAL
Address: NAS Bldg 3738, NAS Pensacola, Fl
Phone #: 452-2107
Contact: GREG CAMPBELL
Job Order #: 1305002

Lab ID Number:
Sample Date: 6/26/97
Received Date: 6/26/97
Sample Site: BRONSON SITE 1159
Lab Due Date:

| Sample ID # | Lab | #1-7-3002 | #2-7-3003 | #3- | #4- |
|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | | |
| or Location | ---------- | MW 43 | MW 50 | | |
| Sampled by | ---------- | PReam | PReam | | |
| Composite | Begin | | | | |
| Date/Time | Frequency | | | | |
| Collected | End | | | | |
| Grab Time | ---------- | 1410 | 1450 | | |
| Sample Matrix | ---------- | GW | GW | | |

Notes: QUIESCENT SAMPLES

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Hals. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Hals. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Hals. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Hals./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 8 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1–1 0.011 | X | 1–1 BDL | | | | | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: PReam
Date/Time: Departed Bronson 1505 6/26/97

Received by: PReam
Date/Time: 6/26/97 1545 arrived Lab

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D-396

# Navy Public Works Center
## Environmental Laboratory

# Laboratory Report
### Lead in Water by Method 239.2


Bldg.3887, Code 920
NAS Pensacola, FL 32508-5303
Phone 904-452-4728/3642
DSN 922-3642


**Requester:** NPWC Environmental
**Address:** Bldg. 3887, NAS Pensacola, FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Lab ID Number:** 9707015
**Sample Date:** 27 Jun 97
**Received Date:** 27 Jun 97
**Sample Site:** Bronson Field Site 1159
**Job Order #:** 130 5002

| Sample ID# | Lab | 1- 73010 | 2- 73011 | 3- 73012 | 4- 73013 | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | Site 1159 MW #38 | Site 1159 MW #56 | Site 1159 Eq. Blank | Site 1159 MW #57 | Brian Nelson |
| Collector Name | | P. Keane | P. Keane | P. Keane | P. Keane | |
| Date/Time Collected (Military) | Comp start | | | | | |
| | Comp stop | | | | | Date(s) of analysis: |
| | Grab | 27 Jun 97 @ 1155 | 27 Jun 97 @ 1215 | 27 Jun 97 @ 1250 | 27 Jun 97 | 1 Jul 97 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | Grab | |
| Sample Matrix | | Groundwater | Groundwater | Deionized Water | Groundwater | |

| PARAMETER Metals: | METHOD # | ID# 1- 73010 | units | Det. Limit | ID# 2- 73011 | units | Det. Limit | ID# 3- 73012 | units | Det. Limit | ID# 4- 73013 | units | Det. Limit | Preservative(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead(Pb) | EPA 239.2 | x BDL | mg/l | 0.003 | x BDL | mg/l | 0.003 | x BDL | mg/l | 0.003 | x BDL | mg/l | 0.003 | None |

| Sample ID# | Lab | 5- 73014 | 6- 73015 | 7- 73016 | 8- | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | Site 1159 MW #39 | Site 1159 Duplicate | Site 1159 MW #58 | | Brian Nelson |
| Collector Name | | P. Keane | P. Keane | P. Keane | | |
| Date/Time Collected (Military) | Comp start | | | | | |
| | Comp stop | | | | | Date(s) of analysis: |
| | Grab | 27 Jun 97 @ 1405 | 27 Jun 97 @ NS | 27 Jun 97 @ 1440 | | 1 Jul 97 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | | |
| Sample Matrix | | Groundwater | Groundwater | Groundwater | | |

| PARAMETER Metals: | METHOD # | ID# 5- 73014 | units | Det. Limit | ID# 6- 73015 | units | Det. Limit | ID# 7- 73016 | units | Det. Limit | ID# 8- | units | Det. Limit | Preservative(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead(Pb) | EPA 239.2 | x BDL | mg/l | 0.003 | x BDL | mg/l | 0.003 | x BDL | mg/l | 0.003 | | mg/l | 0.003 | None |

D-397

**Comments:** mg/l=milligrams per liter. NS=Not Submitted.

**Approved by:** Jerry Dees, Laboratory Director

**Date/Time:** 17-Jul-97 13:52

PWC 5090/14

**End of Report**

RUN @ 7/1/97
DET. LIMIT 0.003 mg/kg/l

7/1/97 Belinda

1 of 2

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? (Yes) No QC Required? Yes No

Requester: NPWC ENVIRONMENTAL
Address: B-3887 NAS PENSACOLA, FL
Phone #: 452-2107
Contact: GREGG (AGUSE II)
Job Order #: 1305002

Lab ID Number:
Sample Date: 6/27/97
Received Date: 6/27/97
Sample Site: BROWSON SITE 1159
Lab Due Date:

| Sample ID # | Lab | #1-7-3010 | #2-7-3011 | #3-7-3012 | #4-7-3013 |
|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | SITE 1159 |
| or Location | ---------- | MW 38 | MW 56 | EQ BLANK | MW 57 |
| Sampled by | ---------- | P Reaux | P Reaux | P Reaux | P Reaux |
| Composite | Begin | | | | |
| Date/Time | Frequency | | | | |
| Collected | End | | | | |
| Grab Time | ---------- | 1155 | 1215 | 1250 | 1300 |
| Sample Matrix | ---------- | GW | GW | DI | GW |

Notes: QUIESCENT SAMPLES

| PARAMETER by Method Name | METHOD # | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Hals. & Arc./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Hals. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Hals. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Hals./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 38 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 8 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1-1 | X | 1-1 | X | 1-1 | X | 1-1 | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | BDL | | BDL | | BDL | | BDL | | | |

Comments:

Relinquished by: P Reaux
Date/Time: 6/27/97 1455

Received by: P Reaux
Date/Time: 6/27/97 1525

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Departed Branson

TO LAB

2 of 2

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Requester: NAVC ENVIRONMENTAL
Address: B-3887
NAS PENSACOLA, FL
Phone #: 452-2107
Contact: GREG CAMPBELL
Job Order #: 1305002

Report Required? Yes No QC Required? Yes No
Lab ID Number:
Sample Date: 6/27/97
Received Date: 6/27/97
Sample Site: BRONSON SITE 1159
Lab Due Date:

| Sample ID # | Lab | #1- 7-3014 | #2- 7-3015 | #3- 7-3016 | #4- |
|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | |
| or Location | ---------- | MW 39 | DUPLICATE | MW 58 | |
| Sampled by | ---------- | PKeane | PKeane | PKeane | |
| Composite | Begin | | | | |
| Date/Time | Frequency | | | | |
| Collected | End | | | | |
| Grab Time | ---------- | 1405 | — | 1440 | |
| Sample Matrix | ---------- | GW | GW | GW | |

Notes: QUIESCENT SAMPLES

| PARAMETER by Method Name | METHOD # | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-1 | | 1-1 | | 1-1 | | | | | |
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Hals. & Arc./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 16 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Hals. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Hals. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Hals./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 6 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 38 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 8 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1-1 | X | 1-1 | X | 1-1 | | | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | BDL | | BDL | | BDL | | | | | |

Comments:

Relinquished by: PKeane
Date/Time: 6/27/97 1455 Departed Bronson

Received by: PKeane
Date/Time: 6/27/97 1525 TO LAB

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D-399

# Navy Public Works Center
## Environmental Laboratory

Bldg.3887, Code 920
NAS Pensacola, FL 32508-5303
Phone 904-452-4728/3642
DSN 922-3642

# Laboratory Report
**Lead in Water by Method 239.2**

**Requester:** NPWC Environmental
**Address:** Bldg. 3887, NAS Pensacola, FL 32508
**Phone #:** 452-4728
**Contact:** Greg Campbell

**Lab ID Number:** 9707016
**Sample Date:** 30 Jun, 1 Jul 97
**Received Date:** 30 Jun, 1 Jul 97
**Sample Site:** Bronson Field Site 1159
**Job Order #:** 130 5002

| Sample ID# | Lab | 1- 73043 | 2- 73044 | 3- 73045 | 4- 73046 | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | Site 1159 DMW #61 | Site 1159 Eq. Blank | Site 1159 DWM #60 | Site 1159 Duplicate | Brian Nelson |
| Collector Name | | P. Keane | P. Keane | P. Keane | P. Keane | |
| Date/Time Collected (Military) | Comp start | | | | | |
| | Comp stop | | | | | Date(s) of analysis: |
| | Grab | 30 Jun 97 @ 1150 | 30 Jun 97 @ 1320 | 30 Jun 97 @ 1345 | 30 Jun 97 | 3 Jul 97 |
| Sample Type | Comp/Grab | Grab | Grab | Grab | Grab | |
| Sample Matrix | | Groundwater | Deionized Water | Groundwater | Groundwater | |

| PARAMETER Metals: | METHOD # | ID# 1- 73043 | units | Det. Limit | ID# 2- 73044 | units | Det. Limit | ID# 3- 73045 | units | Det. Limit | ID# 4- 73046 | units | Det. Limit | Preservative(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead(Pb) | EPA 239.2 | X BDL | mg/l | 0.003 | X BDL | mg/l | 0.003 | X BDL | mg/l | 0.003 | X BDL | mg/l | 0.003 | None |

| Sample ID# | Lab | 5- | 6- | 7- | 8- | Analyst(s): |
|---|---|---|---|---|---|---|
| Sample Name | Requester | | | | | |
| Collector Name | | | | | | |
| Date/Time Collected (Military) | Comp start | | | | | |
| | Comp stop | | | | | Date(s) of analysis: |
| | Grab | | | | | |
| Sample Type | Comp/Grab | | | | | |
| Sample Matrix | | | | | | |

| PARAMETER Metals: | METHOD # | ID# 5- | units | Det. Limit | ID# 6- | units | Det. Limit | ID# 7- | units | Det. Limit | ID# 8- | units | Det. Limit | Preservative(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead(Pb) | EPA 239.2 | | mg/l | 0.003 | | mg/l | 0.003 | | mg/l | 0.003 | | mg/l | 0.003 | None |

D-400

**Comments:** mg/l=milligrams per liter. NS=Not Submitted.

**Approved by:** Jerry Dees, Laboratory Director

**Date/Time:** 17-Jul-97 13:59

PWC 5090/14

**End of Report**

SAMPLES RUN 7/3/97
DET. LIMIT 0.003 mg/l

7/8 Brenda

# CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)


NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387


Report Required? Yes No QC Required? Yes No

Requester: NPWC ENVIRONMENTAL
Address: B-3887 NAS PENSACOLA, FL
Phone #: 452-2107
Contact: GREG CAMBELL
Job Order #: 1305002

Lab ID Number:
Sample Date: 6/30/97
Received Date: 6/30/97
Sample Site: BRONSON SITE 1159
Lab Due Date:

| Sample ID # | Lab | #1- 7-3043 | #2- 7-3044 | #3- 7-3045 | #4- 7-3046 | Notes: |
|---|---|---|---|---|---|---|
| Sample Name | ---------- | SITE 1159 | SITE 1159 | SITE 1159 | SITE 1159 | |
| or Location | ---------- | DMW 61 | EQUIPMAWK | DMW 60 | DUPLICATE | |
| Sampled by | ---------- | [illegible] | [illegible] | [illegible] | [illegible] | |
| Composite | Begin | | | | | QUIESCENT SAMPLES |
| Date/Time | Frequency | | | | | |
| Collected | End | | | | | |
| Grab Time | ---------- | 1150 | 1320 | 1345 | — | |
| Sample Matrix | ---------- | GW | DI | GW | GW | |

| PARAMETER by Method Name | METHOD # | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | X | 1-1 Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ethylene Dibromide (EDB) | EPA 504 | | | | | | | | | 3 | 120ml A VOA/4 oz. | None/4° C |
| Purg. Halocarbons/GC | EPA 601 | | | | | | | | | 4 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Aromatics/GC | EPA 602 | | | | | | | | | 3 | 40 ml VOA Vial x 2 | HCl/4° C |
| Purg. Halo. & Aro./GC | EPA 601/602 | | | | | | | | | 6 | 40 ml VOA Vial x 2 | HCl/4° C |
| Polynuclear Aromatics/HPLC | EPA 610 | | | | | | | | | 7 | 1L Amber x 2 | 4° C |
| Purgeables/GCMS | EPA 624 | | | | | | | | | 8 | 40 ml VOA Vial x 2 | HCl/4° C |
| Base/Neutrals & Acids/GCMS | EPA 625 | | | | | | | | | 15 | 1L Amber x 2 | 4° C |
| Gas Chromatography | EPA SW 8000 | | | | | | | | | 5 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Halo. Vol. Org./GC | EPA SW 8010 | | | | | | | | | 4 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Non–Halo. Vol. Org./GC | EPA SW 8015(MOD) | | | | | | | | | 4 | 40mlx2/1Lx2/4 oz. | HCl/4° C/None |
| Arom. Vol. Org./GC | EPA SW 8020 | | | | | | | | | 3 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Halo./Arom. Vol. Org./GC | EPA SW 8010/8020 | | | | | | | | | 6 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Polynuclear Aromatics/GC | EPA SW 8100 | | | | | | | | | 8 | 1Lx2/4 oz. | 4° C/None |
| VOC/GCMS | EPA SW 8240A | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| VOC/GCMS–Cap. | EPA SW 8260 | | | | | | | | | 8 | 40ml VOAx2/4 oz. | HCl/4° C/None |
| Semivol. Org./GCMS–Cap. | EPA SW 8270A | | | | | | | | | 16 | 1Lx3/4 oz. | 4° C/None |
| Polynuclear Aromatics (PAH's) | EPA SW 8310 | | | | | | | | | 9 | 1Lx3/4 oz. | 4° C/None |

| PARAMETER by Group Name | METHOD SOURCE | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | X | Bottle ID #'s | Billing Units | Containers Required | Preservative(s) Used |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Analytical Group | EPA SW–846 | | | | | | | | | 47 | Consult Lab | Consult Lab |
| Kerosene Analytical Group | EPA SW–846 | | | | | | | | | 39 | Consult Lab | Consult Lab |
| Mixed Product Analytical Group | EPA SW–846 | | | | | | | | | 24 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | EPA 418.1 | | | | | | | | | 2 | Consult Lab | Consult Lab |
| Total Petroleum Hydrocarbons | FL–PRO | | | | | | | | | 7 | Consult Lab | Consult Lab |
| RCRA Metals (8) | EPA Various | | | | | | | | | 8 | Consult Lab | Consult Lab |
| TCLP Metals (8) w/extraction | EPA SW–846 | | | | | | | | | 10 | Consult Lab | Consult Lab |
| Lead (Pb) only | EPA 239.2 | X | 1-1 BDL | X | 1-1 BDL | X | 1-1 BDL | X | 1-1 BDL | 1 | 250ml/4 oz. | $HNO_3$/None |
| Other: | | | | | | | | | | | | |

Comments:

Relinquished by: [signature]
Date/Time: 6/30/97 1405

Received by: Jim TAYLOR
Date/Time: 1440

c:\123/24\forms\custody\ustR0.wk1 rev 0 8/28/96

Departed Bronson D-401

Arrived Lab.