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CONTAMINATION ASSESSMENT REPORT WITH TRANSMITTAL FOR SITE 1122
OUTLYING LANDING FIELD BRONSON NAS PENSACOLA FL
10/22/1997
NAVY PUBLIC WORKS CENTER

CONTAMINATION ASSESSMENT REPORT
FDEP REGISTERED NUMBER 179300938

U.S. NAVY OUTLYING LANDING FIELD (OLF) BRONSON
SITE 1122
PENSACOLA, FLORIDA

PREPARED BY:

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

AUTHOR: GREG CAMPBELL, P.E.
OCTOBER 1997

PREPARED FOR:

SOUTHERN DIVISION NAVAL FACILITIES ENGINEERING COMMAND
2155 EAGLE DR., P.O. BOX 190010
NORTH CHARLESTON, SOUTH CAROLINA 29418

BYAS GLOVER, CODE 18410, ENGINEER-IN-CHARGE

DEPARTMENT OF THE NAVY
NAVY PUBLIC WORKS CENTER
310 JOHN TOWER ROAD
PENSACOLA, FLORIDA 32508-5303

IN REPLY REFER TO:

5090
Code 4231
22 October 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 1122, 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. GIESS
LT, CEC, USN
By direction of
the Commanding Officer

Enclosure: (2 copies)
(1) Contamination Assessment Report (CAR)
Site 1122, U.S. Navy Outlying Field (OLF)
Bronson, Pensacola, Florida

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

CORRESPONDENCE FILE COPY
NPWCEN 5216/1 (Rev. 10-93)

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Union Rep		

Originator (Signature)

5090
Code 4231
22 October 1997

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Florida Dept. Of Environmental Protection
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ORIGINATED BY:

DATE:

Initialing on ladder indicates: For originator - your best efforts and complete staff work.
For others - your concurrence in content; otherwise attach memo.

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FDEP REGISTERED NUMBER 179300938

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TABLE OF CONTENTS

Contamination Assessment Report
U.S. Navy Outlying Landing Field (OLF) Bronson
Site 1122
Pensacola, Florida

Section	Title	Page No.
1.0	**INTRODUCTION**	
	1.1 Purpose	1
	1.2 Site Location and Area of Investigation	1
	1.3 Site History and Operations	1
	1.4 Initial Remedial Action	9
	1.5 Results of Previous Investigations	9
	1.6 Regional Geology and Hydrogeology	10
	1.7 Well Survey	23
2.0	**SITE ASSESSMENT**	
	2.1 Soil Boring and Monitoring Well Construction Details	23
	2.2 Groundwater Flow Direction	28
	2.3 Groundwater Flow Rate	28
	2.4 Soil Assessment	28
	2.5 Site Specific Hydrogeology	28
	2.6 Surface Water Assessment	31
	2.7 Groundwater Quality Assessment	31
3.0	**CONCLUSIONS AND RECOMMENDATIONS**	
	3.1 Conclusions	35
	3.2 Recommendations	38
4.0	**PROFESSIONAL REVIEW CERTIFICATION**	40
5.0	**REFERENCES**	41

APPENDICES

LIST OF FIGURES

Contamination Assessment Report
U.S. Navy Outlying Landing Field (OLF) Bronson
Site 1122
Pensacola, Florida

Figure	Title	Page No.
1-1	OLF Bronson Vicinity Map	2
1-2	OLF Bronson Topographic Map	3
1-3	OLF Bronson Basin Map	4
1-4	OLF Bronson Approximate Average Annual Runoff	5
1-5	OLF Bronson Flood Plain Area	6
1-6	OLF Bronson Base Map	7
1-7	OLF Bronson Site 1122	8
1-8	OLF Bronson Soil Map	15
1-9	Cross Sections and Wells Used in Report	16
1-10	Geologic Cross Section B-B', Section Parallels the Regional Dip	17
1-11	Geologic Section Q-Q', Showing Formations along the Gulf Coast of Western Florida	18
1-12	Geologic Section C-C' Across Escambia & Santa Rosa Counties	19
1-13	Representative Geologic Sequence Based on Log of Oil Test Well Located Near Pensacola	21
1-14	Geologic Section Across Escambia & Santa Rosa Counties Showing Aquifers & Aquicludes Along Section B-B'	22

LIST OF FIGURES (CONT.)

Figure	Title	Page No.
2-1	Soil Boring Location Map	25
2-2	Monitoring Well Location Map	26
2-3	Groundwater Flow Direction Map	30
2-4	TPH Contamination Distribution Map	36
2-5	EDB Contamination Distribution Map	37

LIST OF TABLES

Contamination Assessment Report
U.S. Navy Outlying Landing Field (OLF) Bronson
Site 1122
Pensacola, Florida

Table	Title	Page No.
1-1	Summary of Volatile and Semi-Volatile Organic Analytical Results for Soil Sample B1122B Excavation Disposal Dirt	11
1-2	Summary of BNA Extractables Analytical Results for Soil Sample B1122B Excavation Disposal Dirt	12
1-3	Summary of Volatile and Semi-Volatile Organic Analytical Results for Water/Fuel Sample B1122B Tank	13
1-4	Summary of BNA Extractables Analytical Results for Water/Fuel Sample B1122B Tank	14
1-5	Construction Details of Water-Supply Wells	24
2-1	Top of Casing and Groundwater Elevations	29
2-2	Summary of Volatile Organic Monitoring Wells MW-1 thru MW-14	32
2-3	Summary of PAHs Monitoring Wells MW-1 thru MW-14	33
2-4	Summary of TPH, Lead, and EDB Analytical Results for Groundwater Samples Monitoring Wells MW-1 thru MW-14	34

LIST OF APPENDICES

Contamination Assessment Report
U.S. Navy Outlying Landing Field (OLF) Bronson
Site 1122
Pensacola, Florida

Appendices	Title
APPENDIX A:	Lithologic Logs FGS, Inc. W.E.S., Inc.
APPENDIX B:	Monitoring Well Construction Diagram - FSG, Inc., Monitoring Well MW-10
	Monitoring Well Construction Diagrams - W.E.S., Inc., Monitoring Wells MW-1 thru MW-14
APPENDIX C:	Slug Test Data, Graphs and Calculations
APPENDIX D:	Soil and Groundwater Analytical Results

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 1122, Pensacola Naval Air Station, Pensacola, Florida.

1.2 SITE LOCATION AND AREA OF INVESTIGATION

Site 1122 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. 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 1122 is located at latitude 30°23'12" N, longitude 87°25'43" W. The tanks removed from the site were located on the east side of the remains of building 1122. North of the site is a guard shack and flag pole; south is the MWR boat pier, MWR building, and Country Store; east is a main road running north to south and one of the base campgrounds; and Perdido Bay is located only a few yards to the west. Site location maps are included in Figures 1-6 and 1-7 to show locations of buildings, facility boundaries, and tanks.

1.3 SITE HISTORY AND OPERATIONS

Petroleum contamination was discovered at the site on July 24, 1994, during the removal of two (2) underground tanks. Below is a breakdown of the tanks' number, size, and use:

Number	Capacity (gal)	Use
1122-A	500	Heating Fuel Oil
1122-B	500	Gasoline

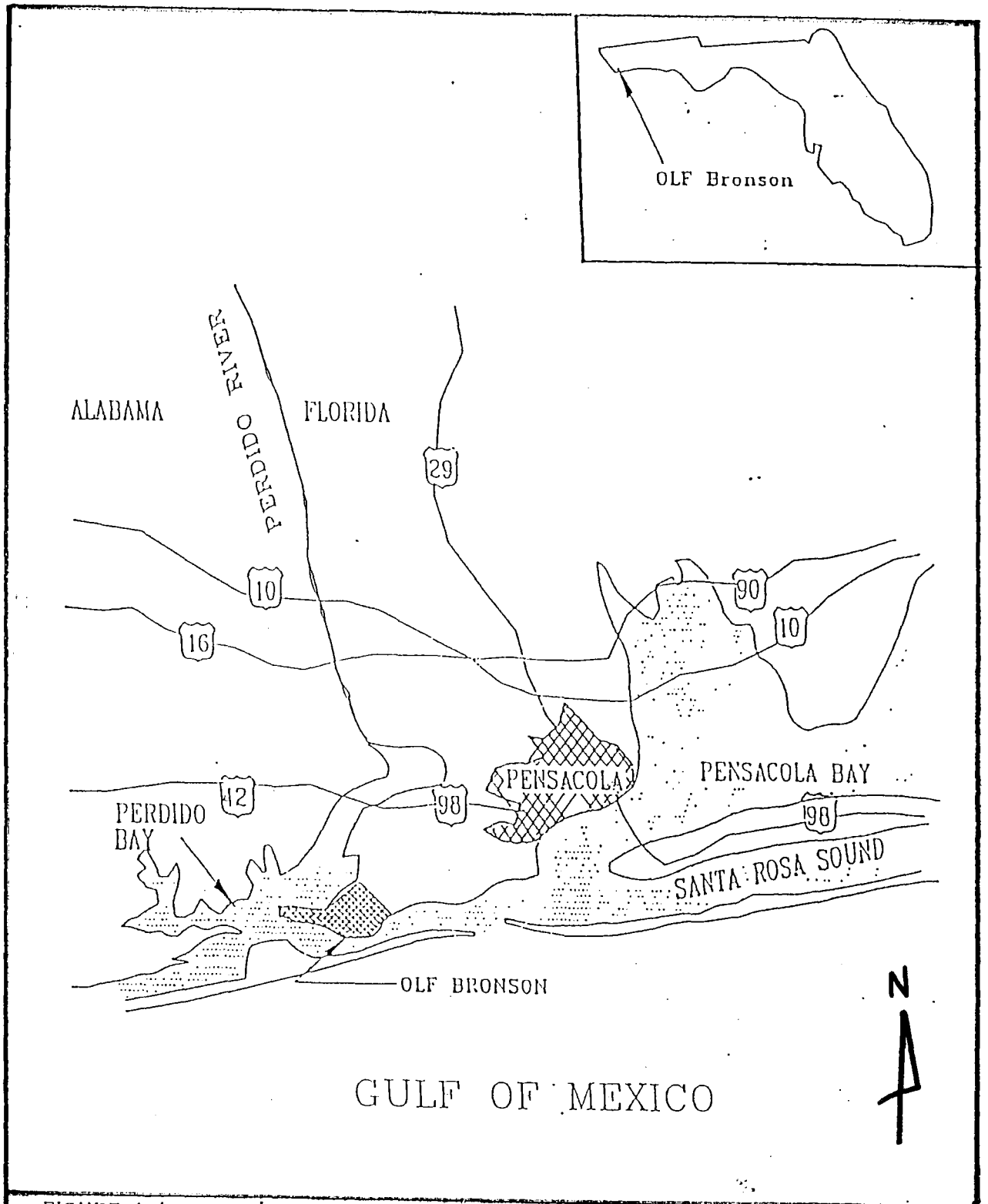

FIGURE 1-1.
OLF Bronson
VICINITY MAP

Key:

Highway

Water Way

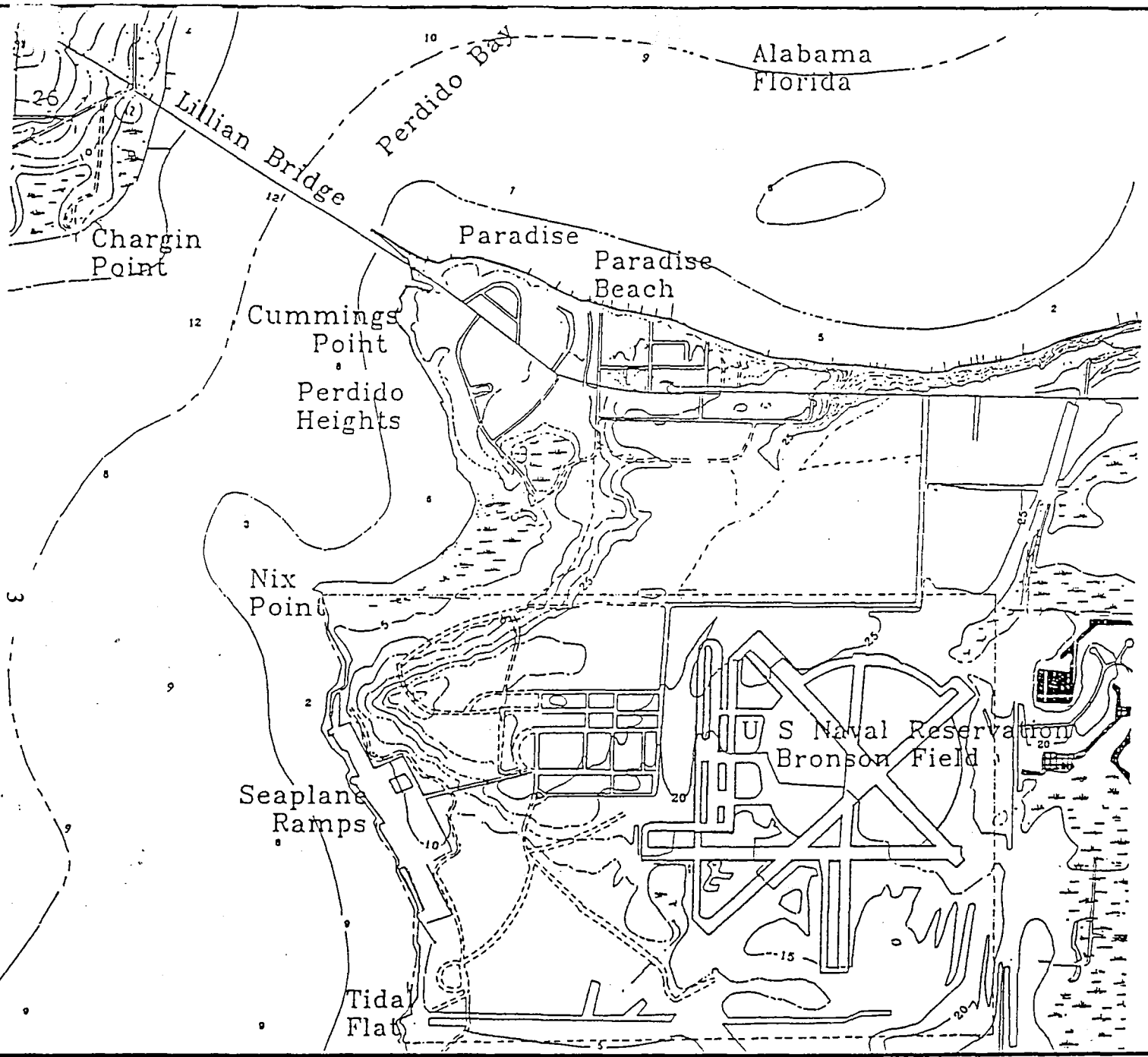

Figure 1-2
OLF Bronson
Topographic Map

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

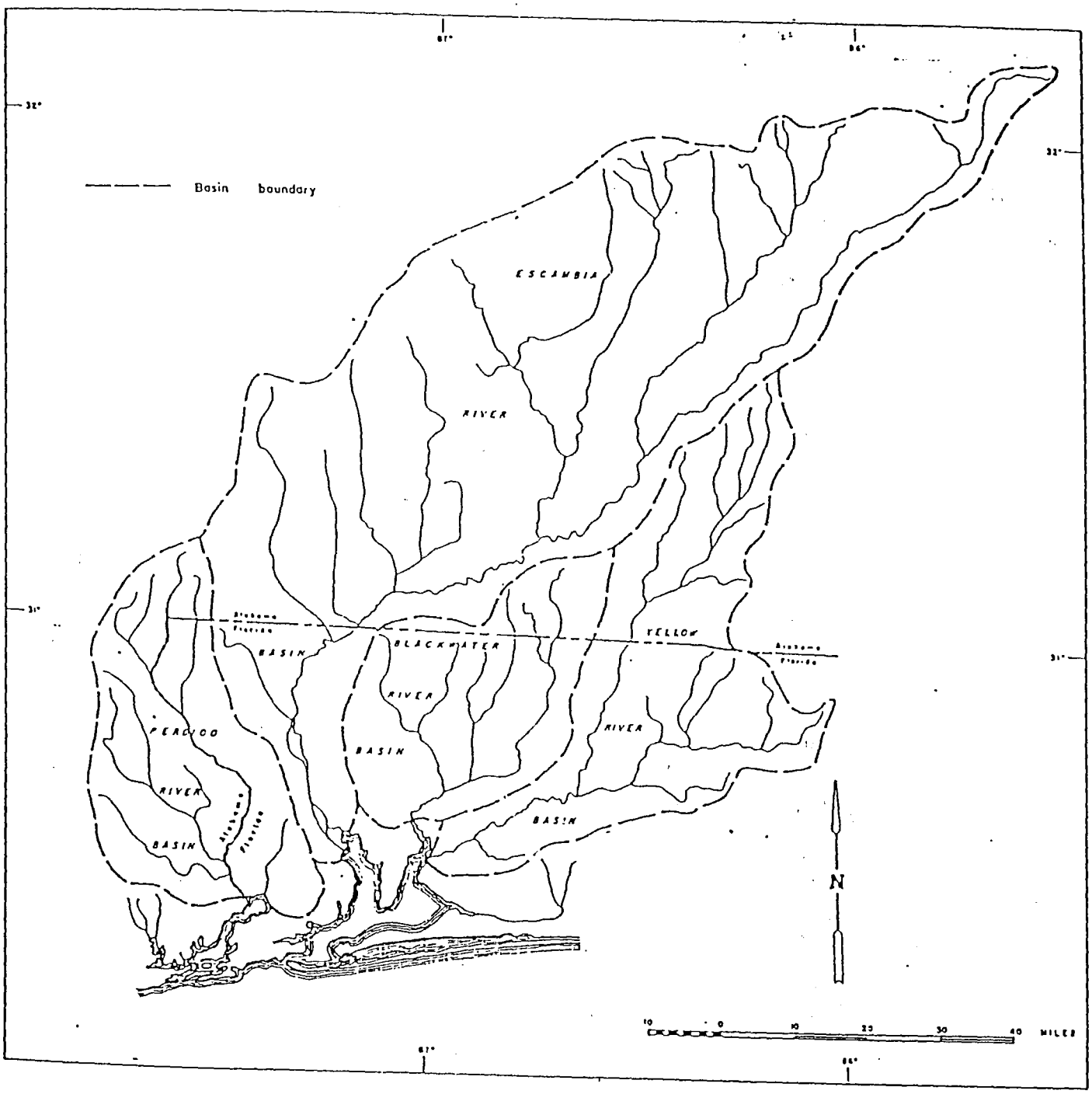

Figure 1-3
OLF BRONSON

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

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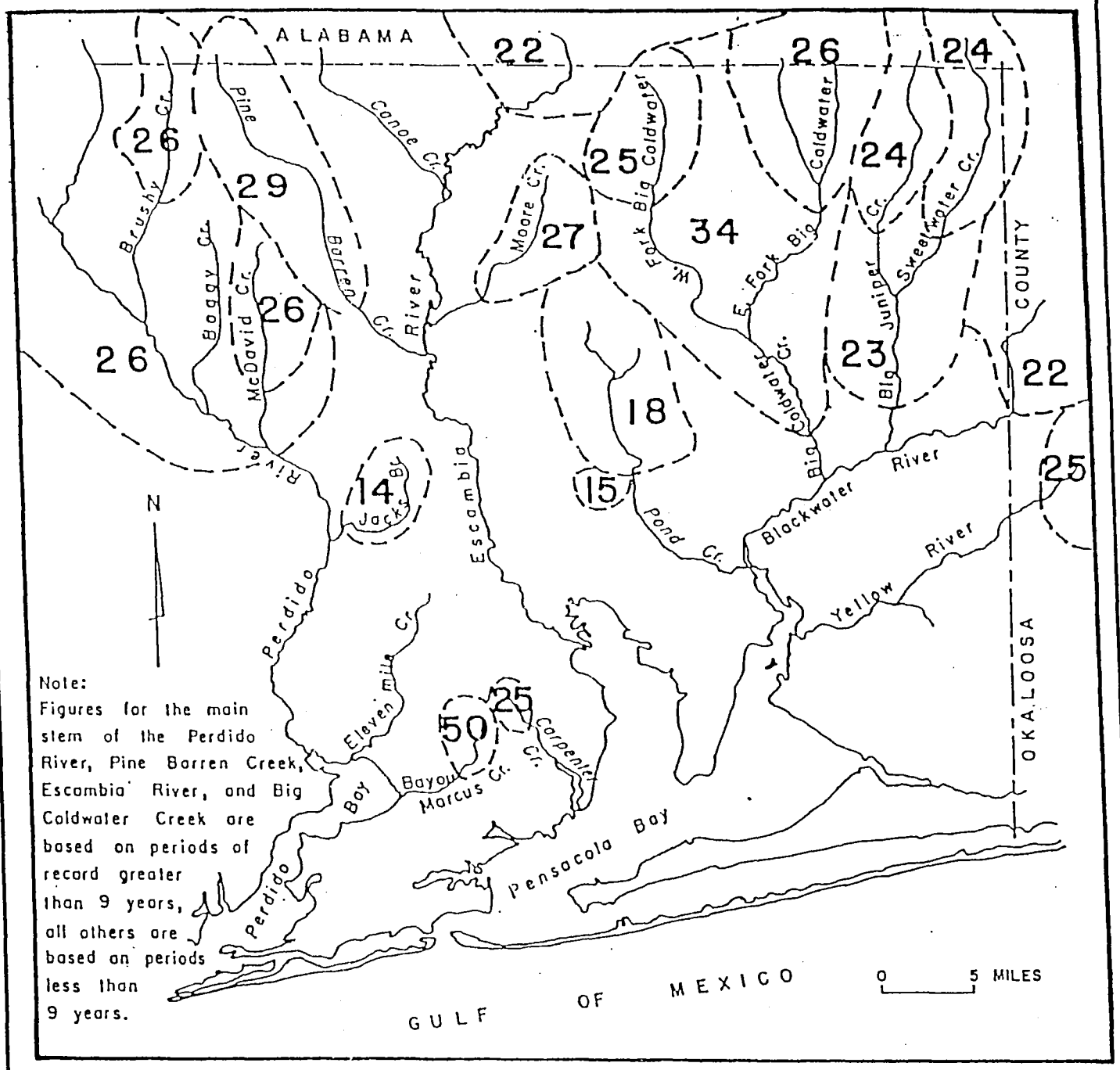


Figure 1-4
OLF BRONSON

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

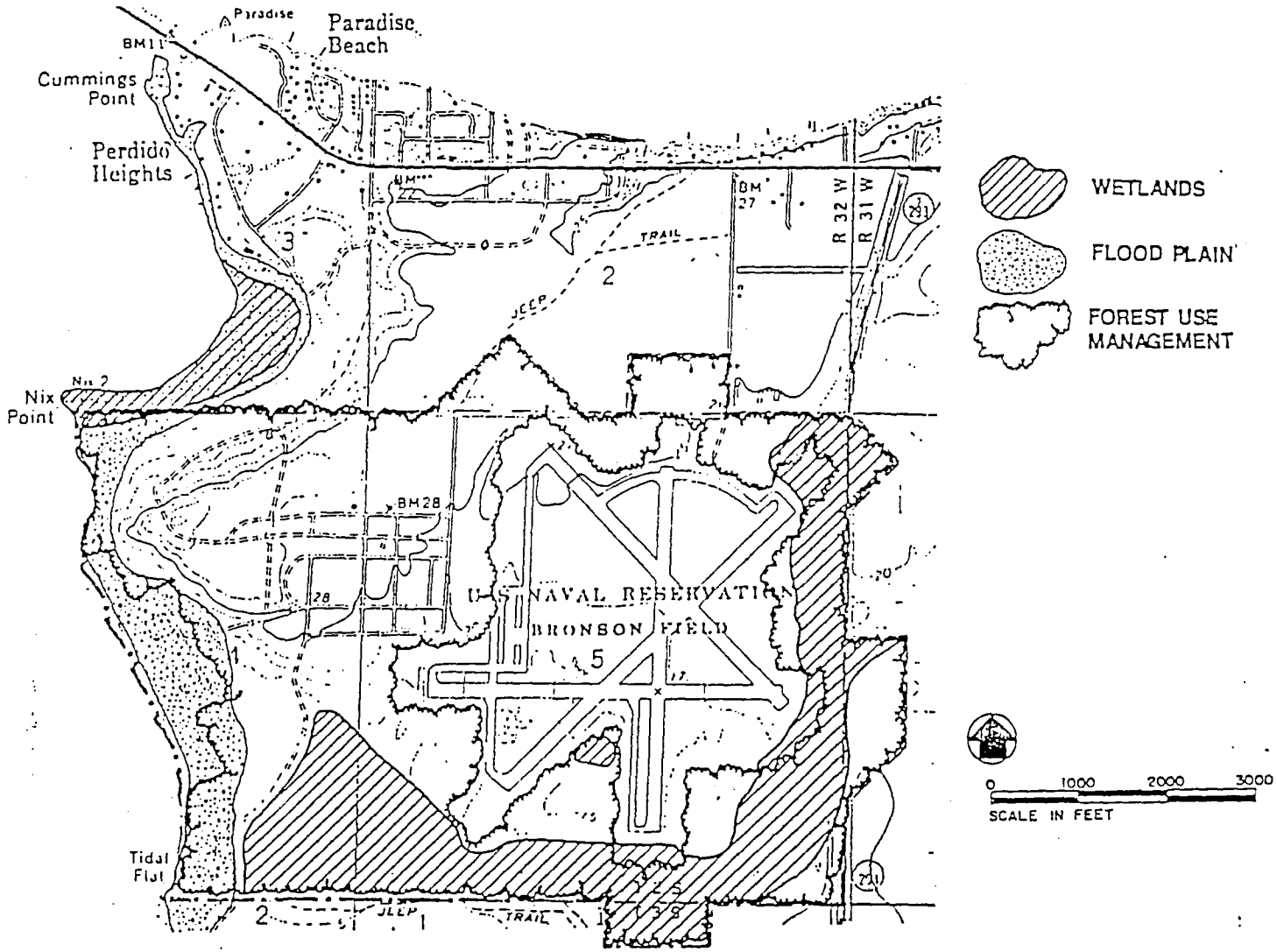


Figure 1-5
OLF Bronson
Flood Plain Area

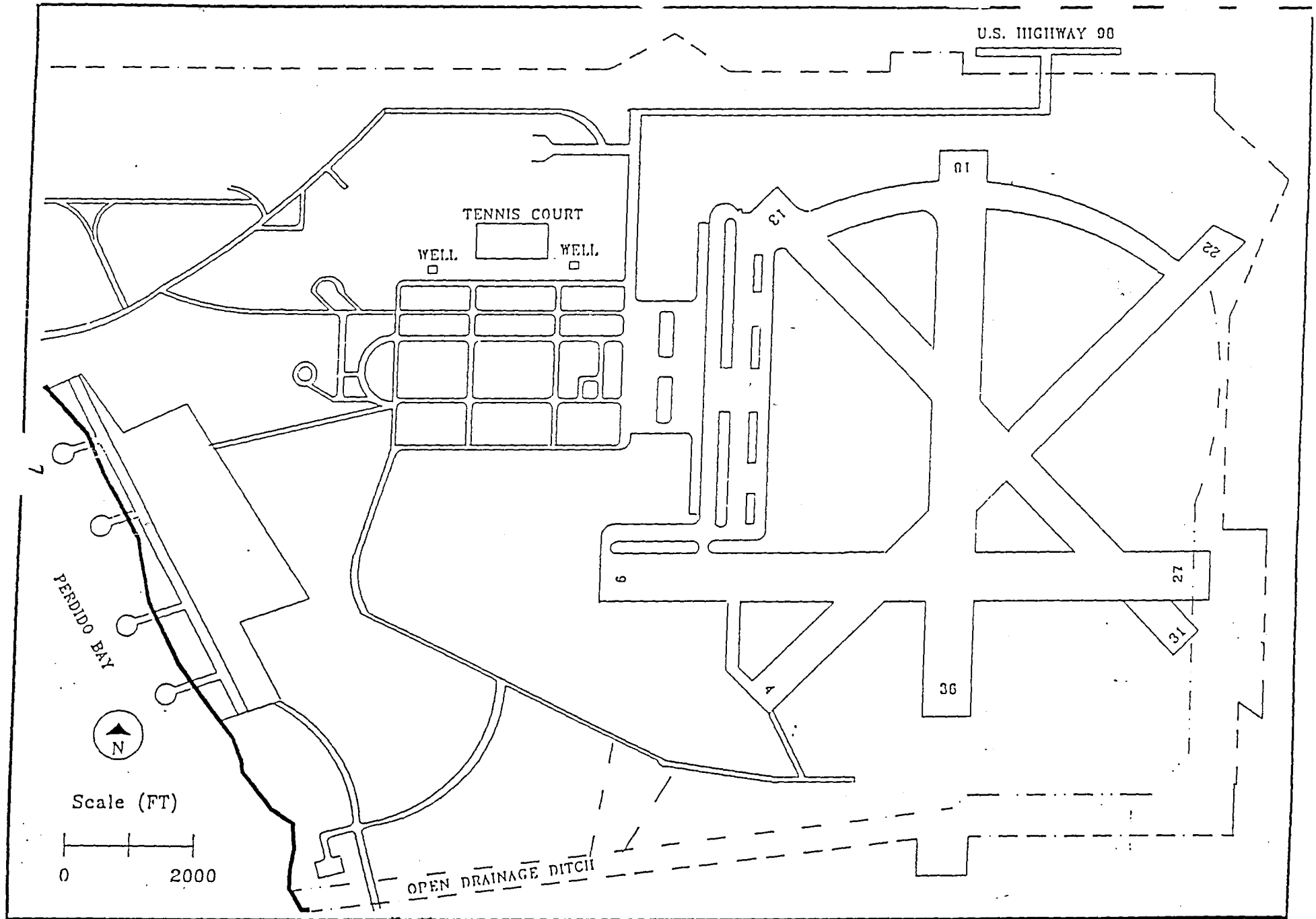


FIGURE 1-6
OLF BRONSON BASE MAP

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

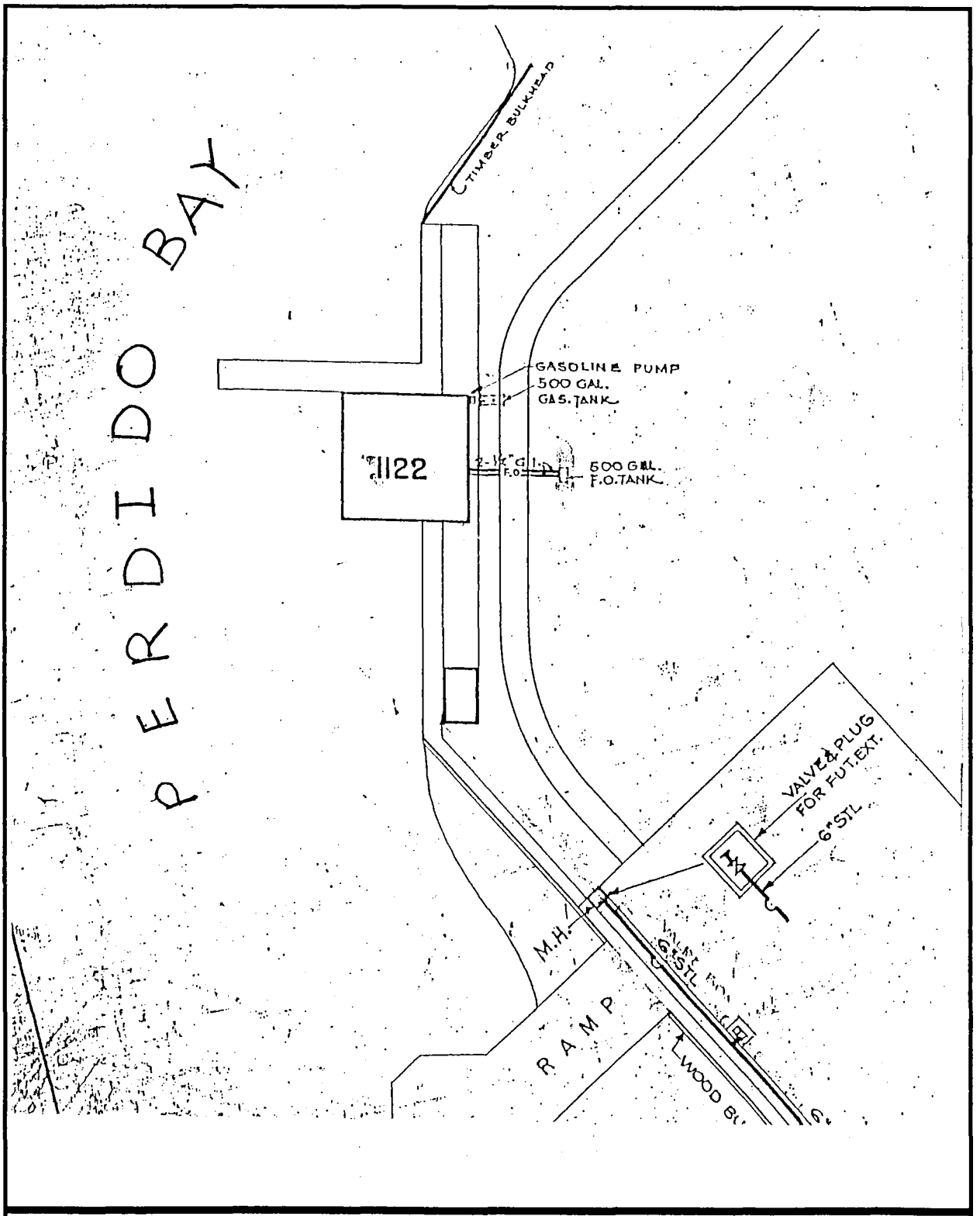


Figure 1-7
OLF Bronson
Site 1122

N

The underground tanks, approximately 50 years old, were used to store heating fuel oil and gasoline (see above for breakdown). The Closure Assessment Form for Site 1122 documents the presents of petroleum hydrocarbon vapor levels in the soils greater than 500 parts per million for gasoline and analytical laboratory results of the groundwater samples greater than the allowable state target levels.

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 1122 was designated as a Boat Shed and Pier. 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

Navy Public Works Center personnel discovered petroleum soil contamination at Site 1122 during the removal of one (1) underground fuel oil storage tank and one (1) underground gasoline tank located at the site. A Discharge Reporting Form (DRF) was submitted to FDEP on July 25, 1994. The fuel oil tank on the south side of the parking lot was excavated, and contaminated soil was found at the bottom of the excavation (512 ppm, OVA). The contaminated soil (approximately 10 CY) was completely removed, stockpiled onsite, and eventually disposed of in a permitted thermal treatment facility. Clean soil was used to fill the excavation.

The limits of the excavation were tested, and no contamination was detected. Four other OVA readings from the excavation showed no detectable contamination.

1.5 RESULTS OF PREVIOUS INVESTIGATIONS

A closure assessment was performed during the removal of one (1) underground fuel oil tank and one (1) underground gasoline tank which consisted of collecting soil, water/fuel, and groundwater samples. The samples were analyzed for volatile and semi-volatile organics, BNA Extractables, volatile organic aromatics (VOAs), and polynuclear aromatic hydrocarbons (PAHs). Copies of laboratory reports are found in Appendix D.

On July 25, 1994, a soil sample was collected from the disposal dirt at Site 1122B and analyzed for volatile compounds using EPA Method 8260 and semi-volatiles using EPA Method 8270A. N-butylbenzene, sec-butylbenzene, tert-butylbenzene, ethylbenzene, isopropylbenzene, naphthalene, n-propylbenzene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, o-xylene, and m,p-xylene were detected in the soil sample for disposal dirt at levels of 42 ppb, 3 ppb, 13 ppb, 2 ppb, 24 ppb, 2 ppb, 2 ppb, 2 ppb, 140 ppb, 850 ppb, 40 ppb, and 48 ppb,

respectively, (Table 1-1). Soil sample analyses for BNA Extractables, using EPA Method 8270A, indicated contamination of bis(2-ethylhexyl)phthalate and 2,4-dimethylphenol at levels of 580 ppb and 310 ppb, respectively (Table 1-2).

On July 25, 1994, a water/fuel sample was collected from the tank at Site 1122B and analyzed for volatile compounds using EPA Method 8260 and semi-volatiles using EPA Method 8270A. Benzene, tert-butylbenzene, ethylbenzene, isopropylbenzene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, o-xylene, and m,p-xylene were detected in the water/fuel sample at levels of 38000 ppb, 150 ppb, 2300 ppb, 830 ppb, 29000 ppb, 1000 ppb, 460 ppb, 11000 ppb, and 5000 ppb, respectively (Table 1-3). The water/fuel sample was also analyzed for BNA Extractables using EPA Method 8270A which indicated contamination of acetophenone, 2,4-dimethylphenol, o-cresol, m,p-cresols, and phenol at levels of 100 ppb, 860 ppb, 1200 ppb, 2300 ppb, and 1600 ppb, respectively (Table 1-4).

A shallow groundwater monitoring well was installed at Site 1122 (MW-10) by FGS Inc. on May 24, 1995. No visual evidence of the well was observed during a site visit on March 8, 1995. It is presumed that the well was damaged and had to be closed by the contractor. A lithological log for monitoring well MW-10 is shown in Appendix A. A well sample record and well construction diagram for monitoring well MW-10 is shown in Appendix B.

A groundwater sample was collected from monitoring well MW-10 on May 30, 1995, and analyzed for VOAs and PAHs. The VOA and PAH concentrations detected in the groundwater sample were found to be 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).

TABLE 1-1
SUMMARY OF VOLATILE AND SEMI-VOLATILE ORGANIC ANALYTICAL RESULTS FOR SOIL SAMPLE B1122B COLLECTED FROM THE EXCAVATION DISPOSAL DIRT U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1122

PARAMETER: VOLATILES BY GCMS	B1122B DISPOSAL DIRT
Benzene	BDL
n-Butylbenzene	42
sec-Butylbenzene	3
tert-Butylbenzene	13
Ethylbenzene	2
Isopropylbenzene	24
Naphthalene	2
n-Propylbenzene	2
Toluene	2
1,2,4-Trimethylbenzene	140
1,3,5-Trimethylbenzene	850
o-Xylene	40
m,p-Xylene	48

NOTES: BDL = Below detection limits.
Soil samples were collected on July 25, 1994.
All results are reported in parts per billion (ppb) unless otherwise noted.

TABLE 1-2
SUMMARY OF BNA EXTRACTABLES
ANALYTICAL RESULTS FOR SOIL SAMPLE B1122B
COLLECTED FROM THE EXCAVATION DISPOSAL DIRT
U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1122

PARAMETER: BNA Extr.	B1122B DISPOSAL DIRT
Bis(2-ethylhexyl)phthalate	580
2,4-Dimethylphenol	310

NOTES: BDL = Below detection limits.
Soil samples were collected on July 25, 1994.
All results are reported in parts per billion (ppb) unless otherwise noted.

TABLE 1-3
SUMMARY OF VOLATILE AND SEMI-VOLATILE ORGANIC ANALYTICAL RESULTS FOR WATER/FUEL SAMPLE COLLECTED FROM B1122B TANK
U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1122

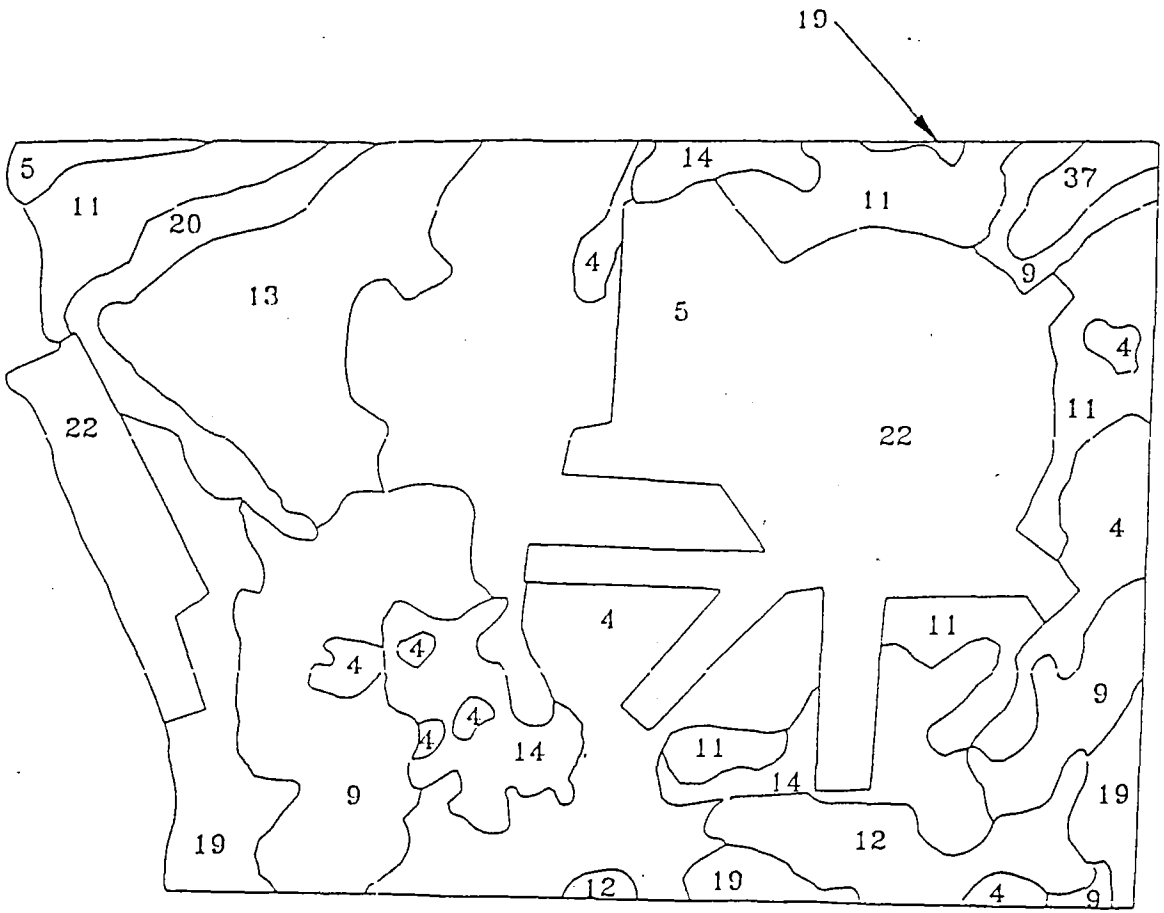
PARAMETER: VOLATILES BY GCMS	B1122B TANK
Benzene	38000
tert-Butylbenzene	150
Ethylbenzene	2300
Isopropylbenzene	830
Toluene	29000
1,3,5-Trimethylbenzene	460
1,2,4-Trimethylbenzene	1000
o-Xylene	11000
m,p-Xylene	5000

NOTES: BDL = Below detection limits.
Water/Fuel samples were collected on July 25, 1994.
All results are reported in parts per billion (ppb) unless otherwise noted.

TABLE 1-4
SUMMARY OF BNA EXTRACTABLES
ANALYTICAL RESULTS FOR WATER/FUEL SAMPLE
COLLECTED FROM B1122B TANK
U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1122

PARAMETER: BNA Extr.	B1122B TANK
Acetophenone	100
2,4-Dimethylphenol	860
o-Cresol	1200
m,p-Cresols	2300
Phenol	1600

NOTES: BDL = Below detection limits.
Water/Fuel samples were collected on July 25, 1994.
All results are reported in parts per billion (ppb) unless otherwise noted.



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)

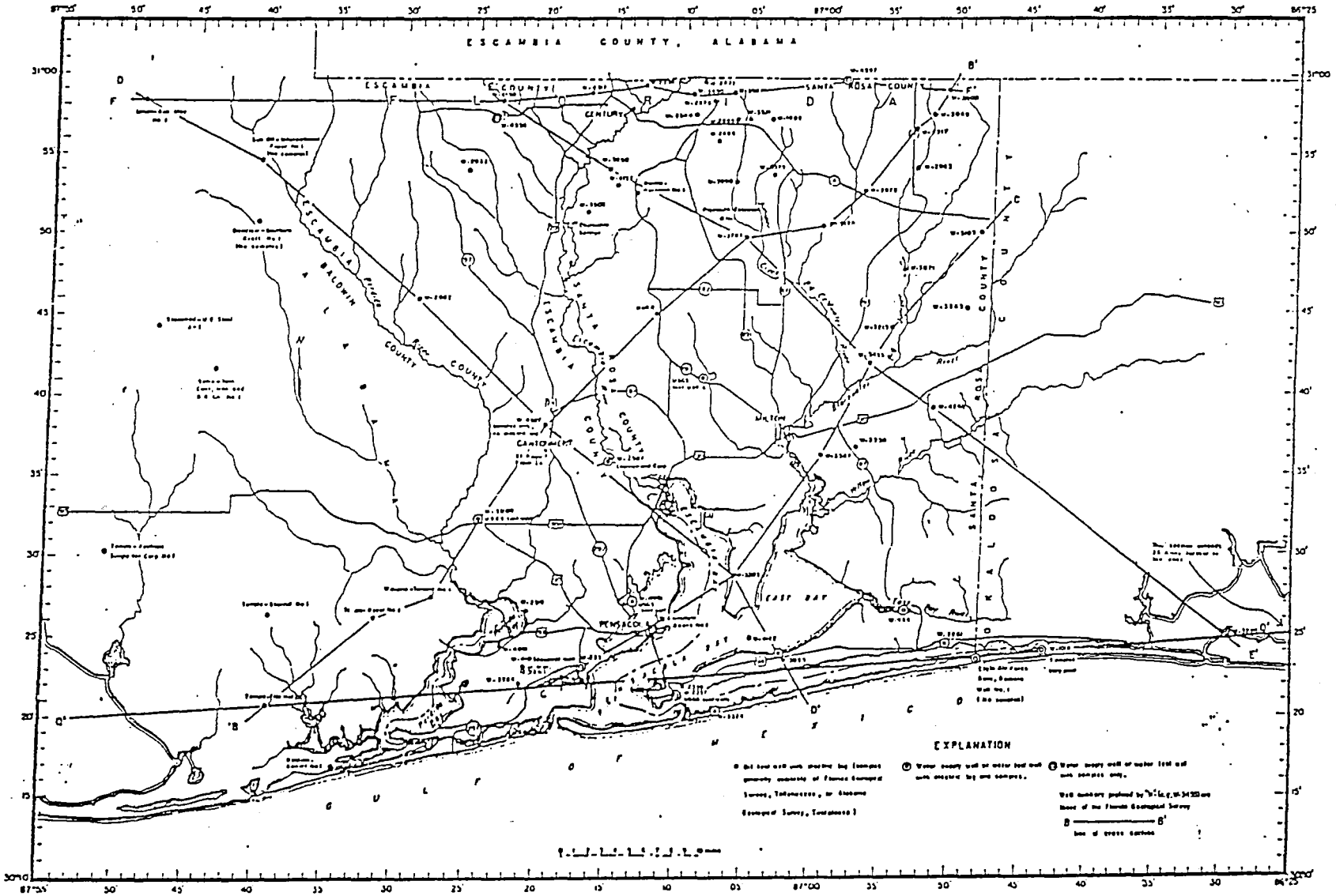


Figure 1-9
OLF Bronson

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

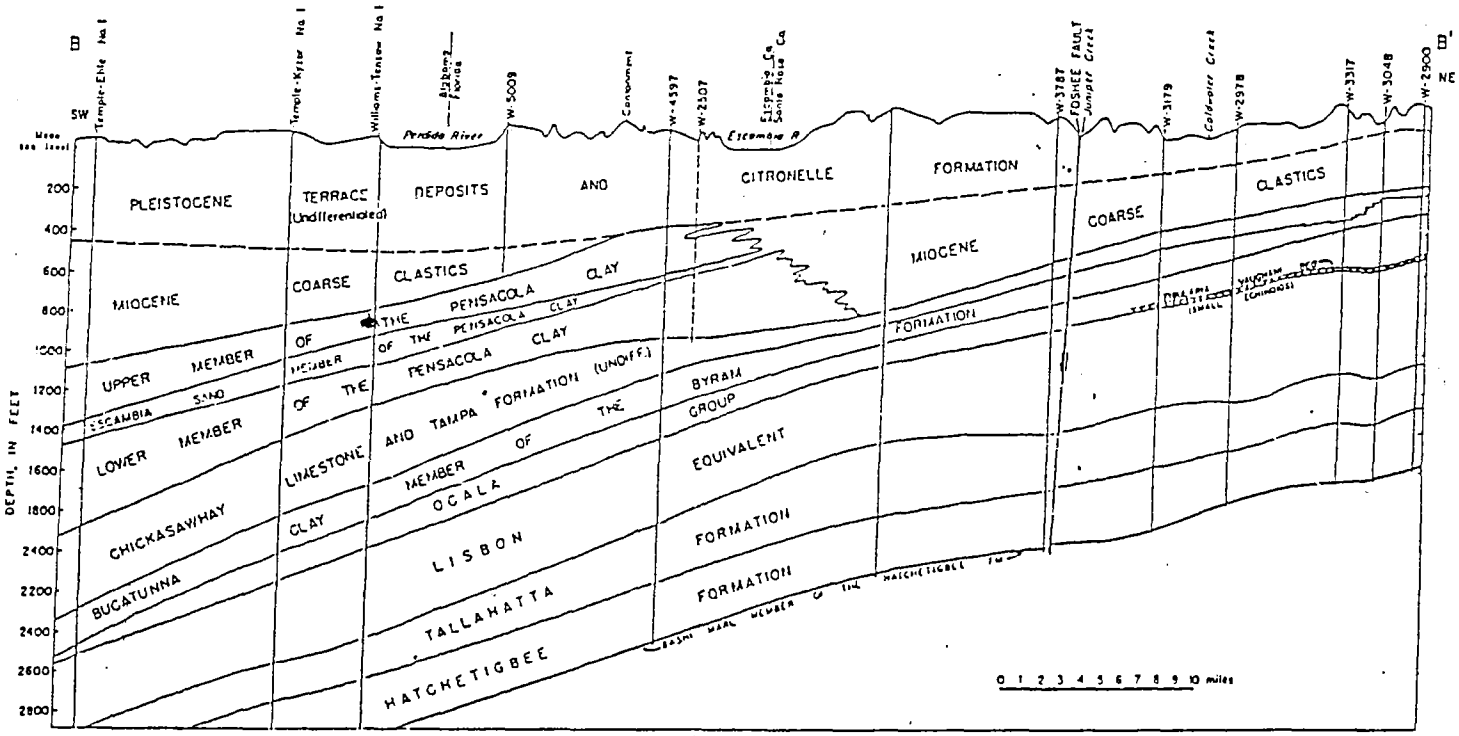


Figure 1-10
OLF Bronson

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

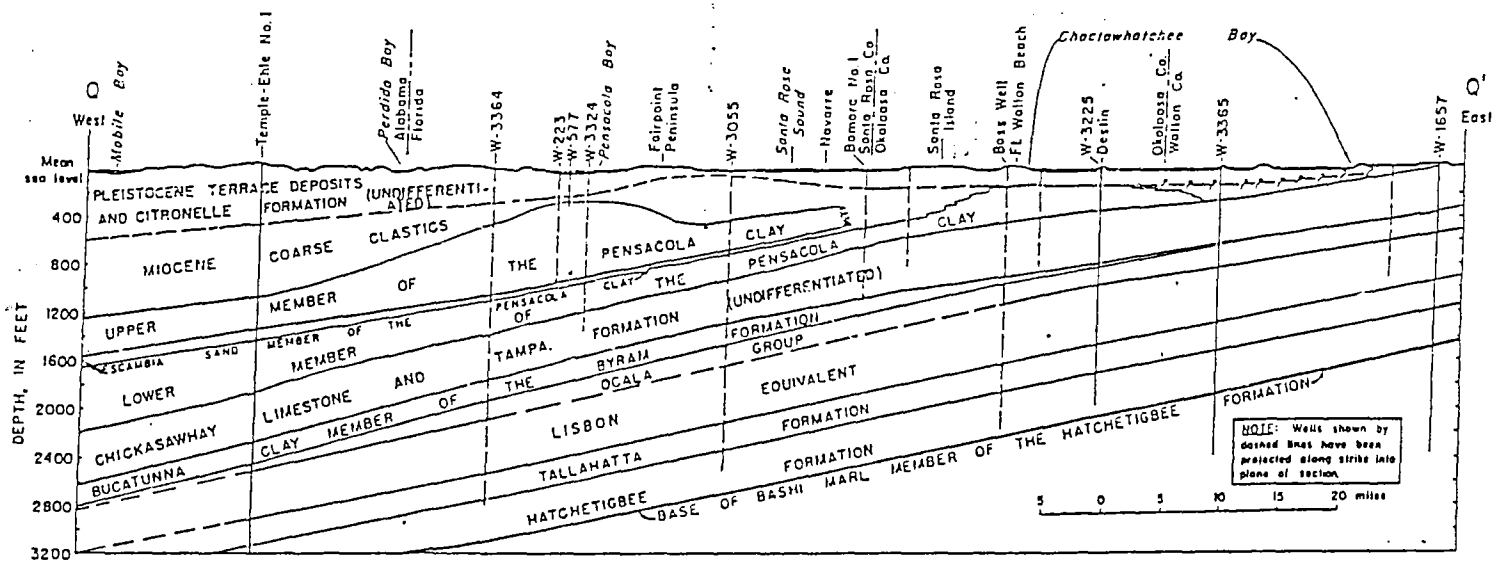


Figure 1-11
OLF Bronson

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).

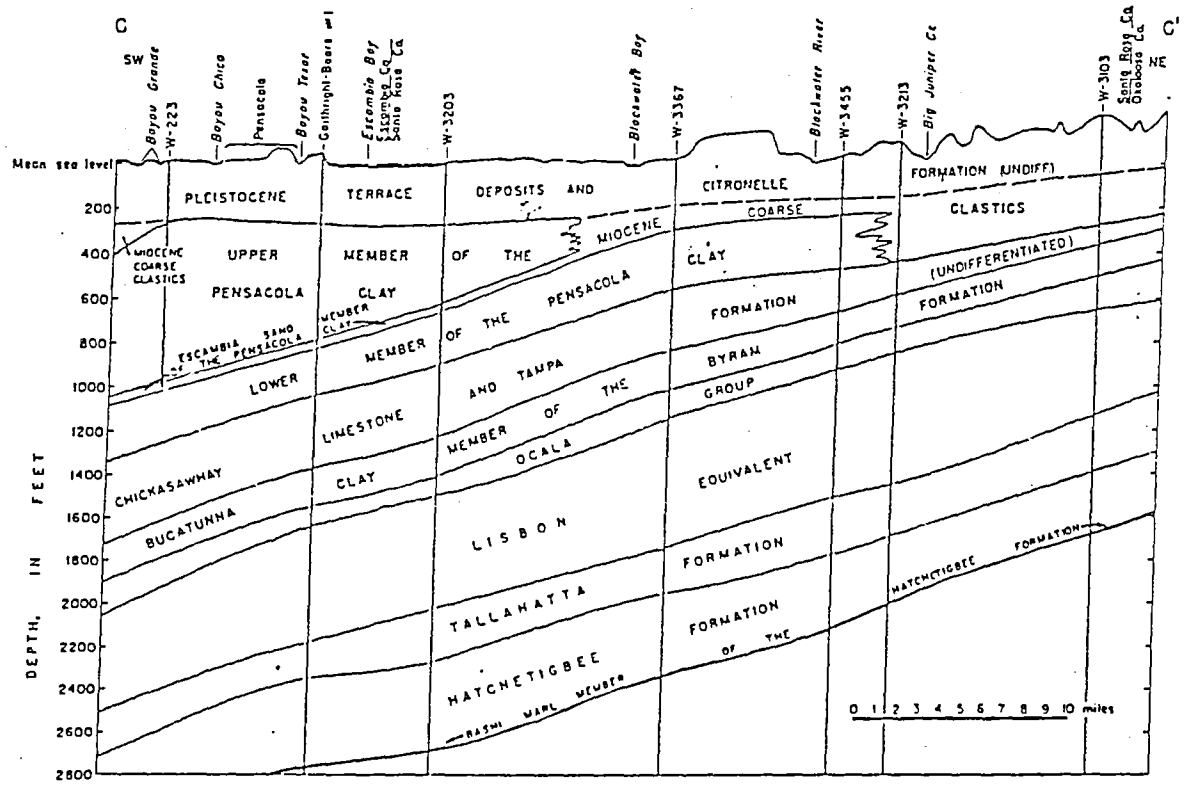


Figure 1-12
OLF Bronson

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

Figure 1-13 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 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

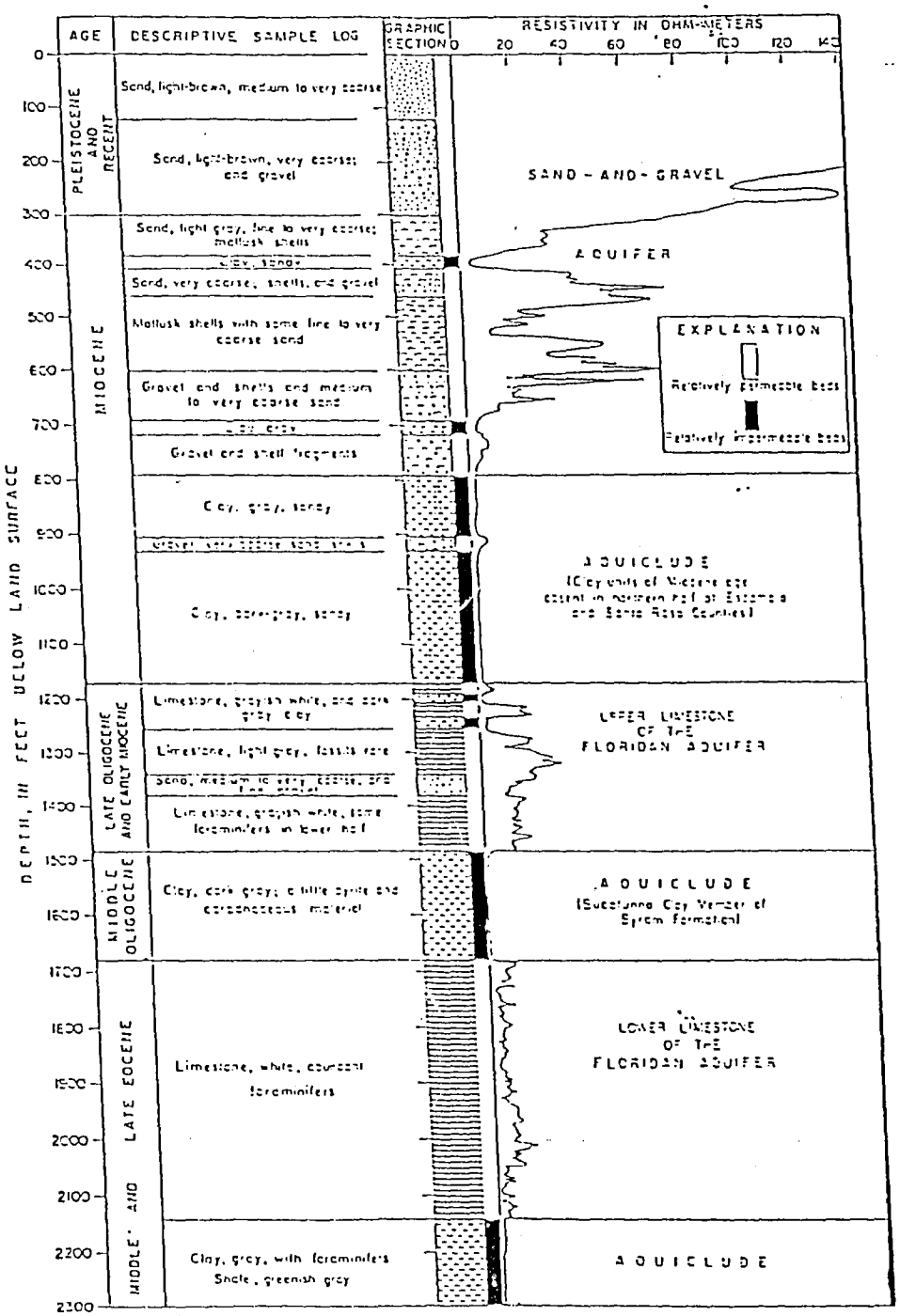


Figure 1-13
OLF Bronson

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

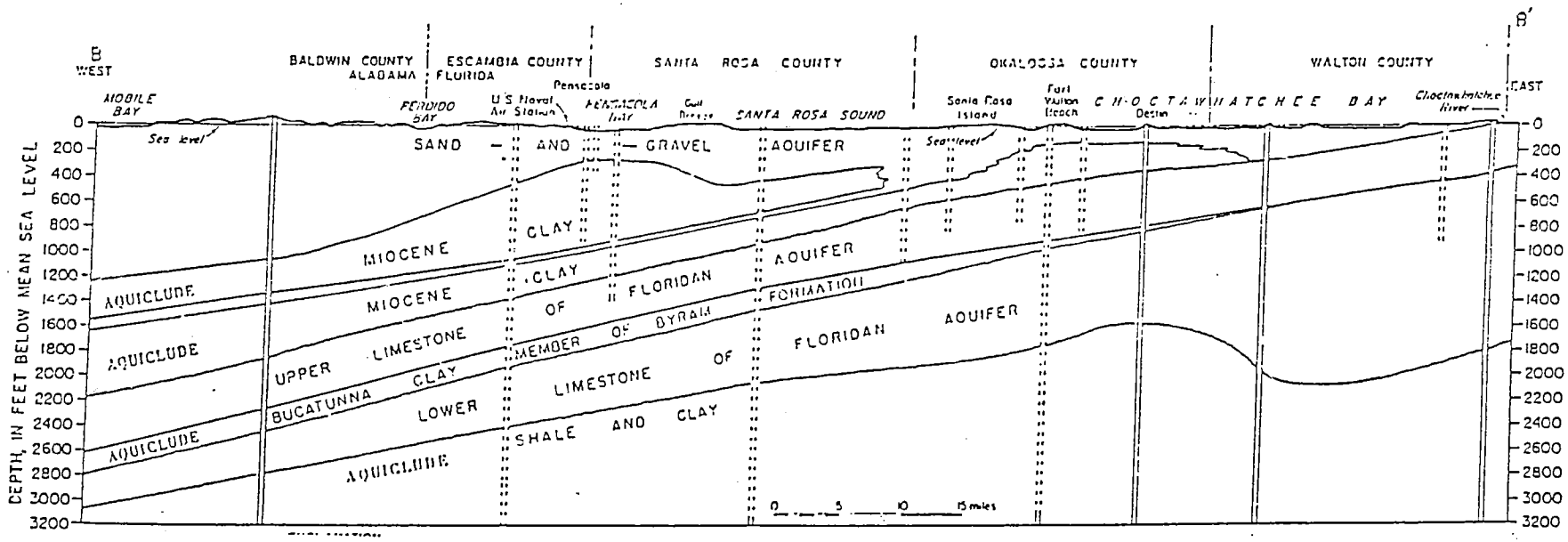


Figure 1-14
OLF Bronson

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

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 to 36 ppm. Water in this aquifer is exceptionally soft, generally containing 4 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 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. Construction details of Well #1 and Well #2 are shown in Table 1-5. Former potable water well #1 was taken out of service in June 1995. Both wells are located within a ½ mile radius of the site, but are not located within a 1/4 mile radius of the site.

2.0 SITE ASSESSMENT

2.1 SOIL BORING AND MONITORING WELL CONSTRUCTION DETAILS

Thirteen soil borings were installed at the site on January 12, 1996 by W.E.S., Inc.. Soil borings SB-1 thru SB-12 were installed to a depth of 4 feet below land surface (BLS) and SB-13 was installed to a depth of 16 feet BLS. The soil borings were installed using a hollow stem auger. Soil samples were collected from SB-1 thru SB-12 at 1 and 4 feet BLS and from SB-13 at 1, 4, 7, 10, 13, and 16 feet BLS. Soil samples were also collected from each of the boreholes during the installation of shallow monitoring wells MW-1 thru MW-12 and MW-14 and deep vertical monitoring well DMW-13 at 2 and 4 feet BLS. Each soil sample collected was analyzed for volatile organic vapors using an organic vapor analyzer (OVA) with a flame ionization detector. The location of the soil borings and monitoring wells is provided in Figures 2-1 and 2-2, respectfully.

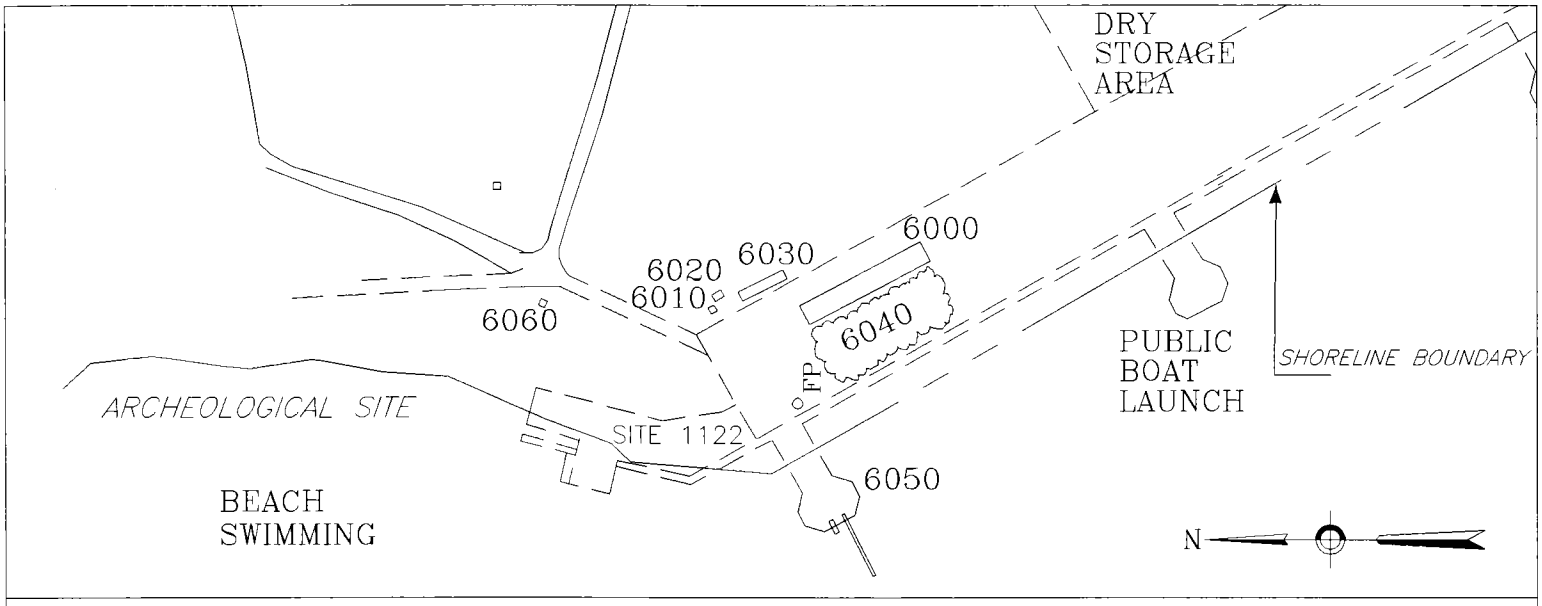
Eight monitoring wells (MW-1 thru MW-8) were installed at Site 1122 to a depth of 13.0 feet below land surface (BDL) by W.E.S., Inc. on March 13, 1996. The monitoring wells consist of 2-inch diameter by 10.0 feet of 0.010-inch slotted schedule 40 PVC pipe, threaded to 3.0 feet of solid PVC riser. The wells were completed in approximately 8-inch diameter boreholes approximately 13.5 feet in depth using the hollow stem auger drilling method. A sand pack consisting of course silica sand (sand pack mesh size 20-30) was extended from the bottom of the

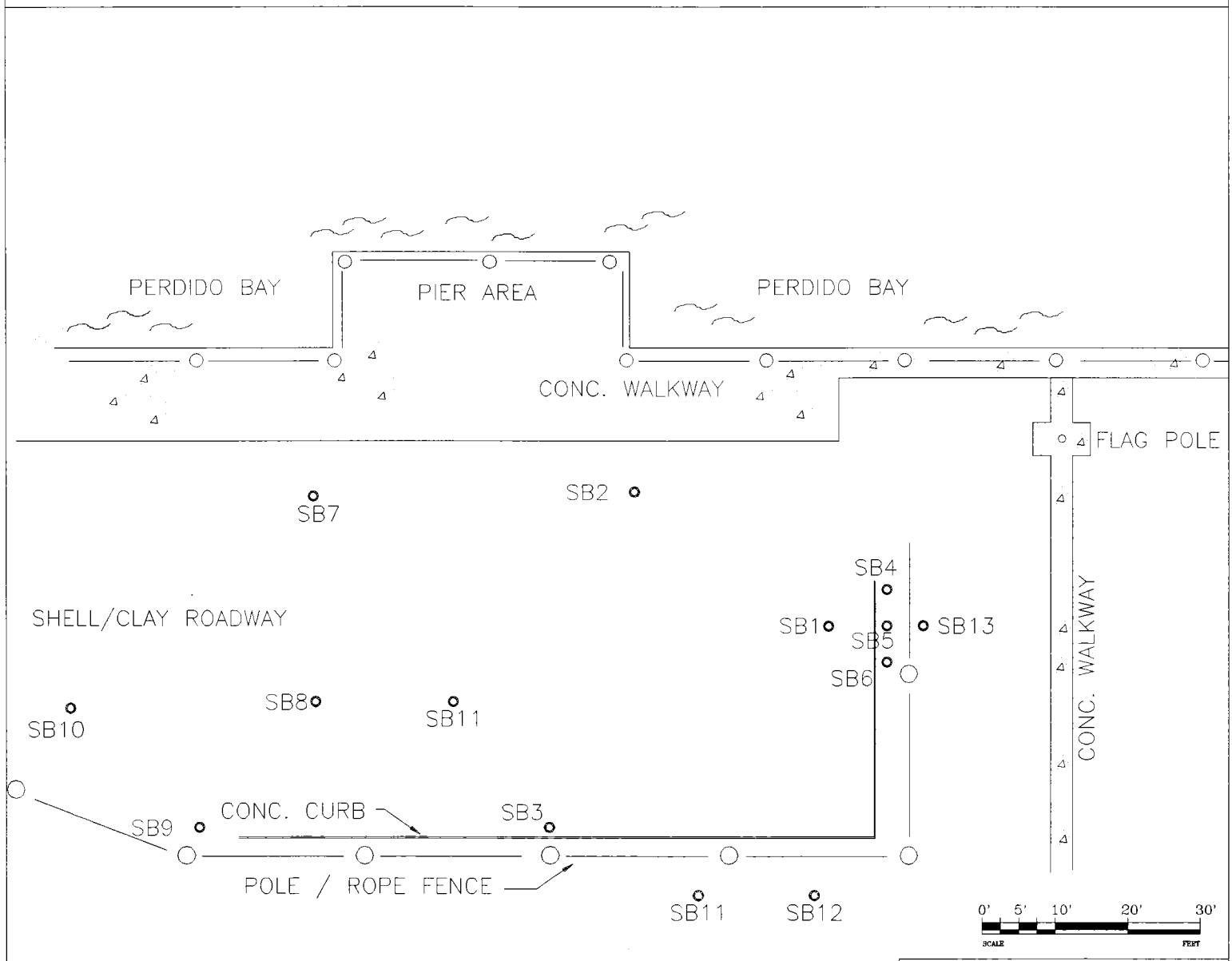
TABLE 1-5

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



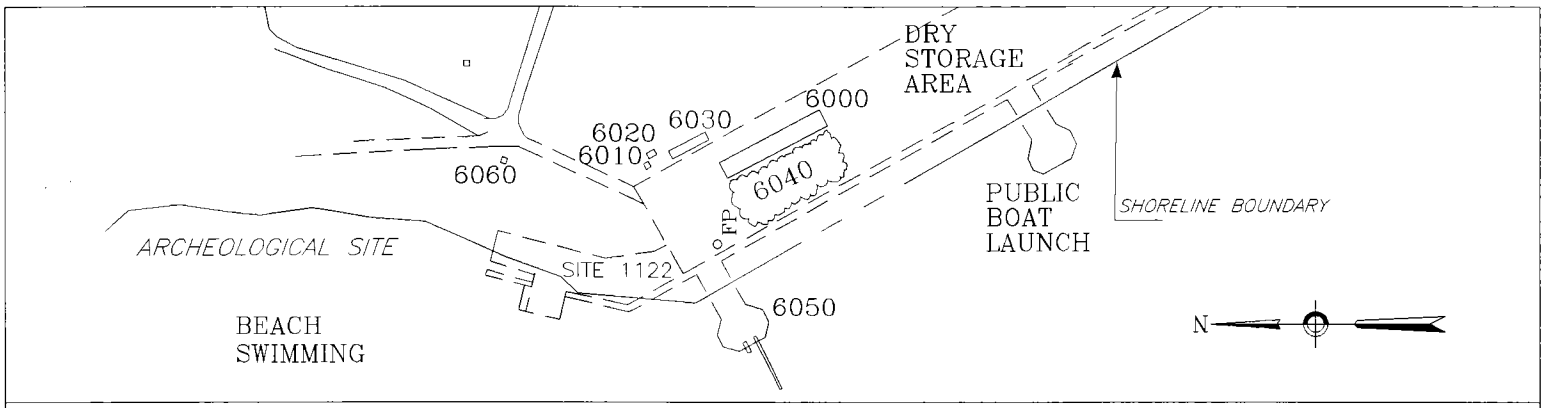


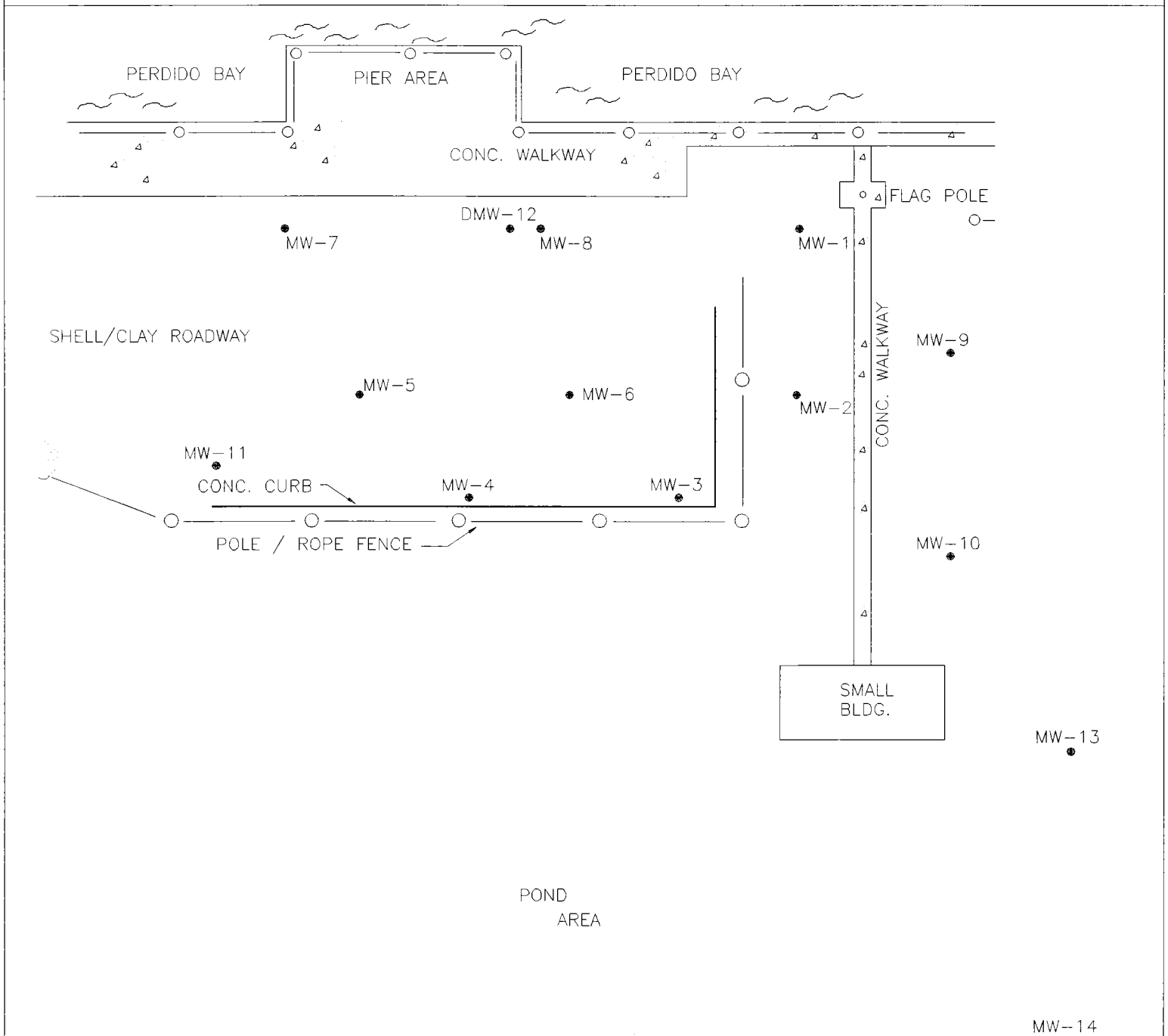
LEGEND

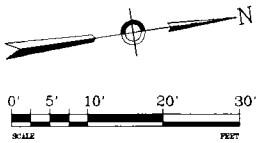
— X — FENCE

B12 ○ BORING HOLE NUMBER

NAVY PUBLIC WORKS CENTER PENSACOLA, FLORIDA		
SCALE:	FIGURE 2-1	DRAWN BY: DWG. NO: REVISED BY:
SOIL BORING LOCATION MAP SITE 1122, BRONSON FIELD		
CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA		







LEGEND
— X — FENCE
MW-3 ⊗ MONITORING WELL
BORING HOLE NUMBER

NAVY PUBLIC WORKS CENTER PENSACOLA, FLORIDA		
SCALE:	FIGURE 2-2	DRAWN BY: DWG. NO: REVISED BY:
MONITORING WELL LOCATION MAP SITE 1122, BRONSON FIELD		
CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA		

well to approximately one foot above the top of the well screen. A one foot bentonite seal was placed above the sand pack with the remaining annular space filled with neat cement grout. The PVC casing was brought up to 0.2' below ground level. A steel manhole cover was placed in borehole around the PVC riser and set with neat cement. An 8-inch diameter steel manhole cover was placed over the manhole. A two foot by two foot (2'x 2') concrete pad was installed around the outside of the manhole cover at the top of the land surface.

Three 13.0 ft. shallow monitoring wells (MW-9 thru MW-11) and one deep vertical extent monitoring well (DMW-12) at Site 1122 were installed by W.E.S., Inc. on May 15, 1996. Monitoring wells MW-9 thru MW-11 are constructed identical to monitoring wells MW-1 thru MW-8 (see construction details above). Deep vertical extent monitoring well DMW-12 was set at 25 feet BLS with 5' of 2-inch diameter, 0.010-inch slotted schedule 40, PVC screen and 20' of schedule 40, PVC riser casing. The sand filter pack consisted of course silica sand (sand pack mesh size 20-30) and extended approximately one foot above the top of the well screen. A one foot fine sand seal was placed above the sand pack, and the remaining annular space was filled with neat cement grout. The PVC casing was brought up to 0.2' below ground level. A steel manhole cover (8-inch diameter by .3' deep) was placed in the borehole around the PVC riser and set with neat cement grout. A 2' X 2' concrete pad was installed around the outside of the manhole cover at the top of the land surface.

One 13.0 ft. shallow monitoring well (MW-13) was installed at Site 1122 by W.E.S., Inc. on August 14, 1996. Monitoring well MW-13 is constructed identical to monitoring wells MW-1 thru MW-8 (see construction details above).

One shallow monitoring well (MW-14) was installed at Site 1122 to a depth of 15.5 ft. by W.E.S., Inc. on December 10, 1996. Monitoring well MW-14 consists of 2-inch diameter by 10.0 feet of 0.010-inch slotted schedule 40 PVC pipe, threaded to 5.0 feet of solid PVC riser. The well was completed in approximately 8-inch diameter borehole approximately 15.5 feet in depth using the hollow stem auger drilling method. A sand pack consisting of course silica sand (sand pack mesh size 20-30) was extended from the bottom of the well to approximately one foot above the top of the well screen. A one foot bentonite seal was placed above the sand pack with the remaining annular space filled with neat cement grout. The PVC casing was brought up to 0.2' below ground level. A steel manhole cover was placed in borehole around the PVC riser and set with neat cement. An 8-inch diameter steel manhole cover was placed over the manhole. A two foot by two foot (2' x 2') concrete pad was installed around the outside of the manhole cover at the top of the land surface.

The drill cuttings from monitoring wells were placed on top of and covered with plastic. The groundwater extracted during well development was placed into 55-gallon drums and labeled for disposal.

A location map of the monitoring wells is included in Figure 2-2. Lithological logs for monitoring wells are found in Appendix A. Monitoring well construction diagrams are found in Appendix B.

2.2 GROUNDWATER FLOW DIRECTION

The top of casing elevations for monitoring wells MW-1 thru MW-14 were surveyed by W.E.S, Inc. on December 17, 1996. Benchmark is assumed elevation of 30.00 ft. at the northwest corner of existing concrete slab, former transformer pad; located approximately 40' southeast of MW-4. Groundwater elevations for the groundwater level measurements taken on September 11, 1997 are shown in Table 2-1. Monitoring well MW-6 could not be located the day the groundwater depths were taken because sand and dirt covered the area to a depth of 1 - 2 inches. A probe was used to locate MW-6 but due to the hard ground and old deposits of asphalt in the area MW-6 could not be located. A groundwater flow direction map for the groundwater level measurements taken on September 11, 1997 is shown in Figure 2-3. The groundwater flow direction map indicates the groundwater flow direction at the site ~~be in~~ toward the west.

2.3 GROUNDWATER FLOW RATE

A rising head slug test was performed at site 1122 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 test, slug test data graph, and calculations are attached in Appendix C. The slug test results indicate the estimated horizontal hydraulic (k) at site 1122 to be 0.1771 ft/day. The calculated linear groundwater flow velocity at site 1122 was estimated to be 0.0043 ft/day (1.5514 ft/yr).

2.4 SOIL ASSESSMENT

The extent of soil contamination at the site was determined by OVA screening. Thirteen soil borings (SB-1 thru SB-13) were installed at the site on January 12, 1996 by W.E.S. Inc. to a depth of approximately four feet with the exception of soil boring SB-13 which was installed to 16 feet BLS. The soil borings were installed using a hollow stem auger. The soil borings were installed at and round the former tanks locations. Fourteen additional soil borings were installed during the installation of monitoring wells MW-1 thru MW-14. The groundwater table at the site was generally encountered at 5 feet BLS. Soil samples were collected from soil borings SB-1 thru SB-12 and monitoring wells MW-1 thru MW-13 at intervals of 1 and 4 feet BLS. Soil samples were collected from soil boring SB-13 at intervals of 1, 4, 7, 10, 13, and 16 feet BLS and from monitoring well MW-14 at intervals of 1, 4, and 6 feet BLS. The soil samples were analyzed with an OVA for volatile organic compounds. The location of the soil borings and monitoring wells are shown in Figures 2-1 and 2-2, respectively. No VOCs were detected in the soil samples collected from boreholes SB-1 thru SB-13 or the boreholes from monitoring wells MW-1 thru MW-14.

2.5 SITE SPECIFIC HYDROGEOLOGY

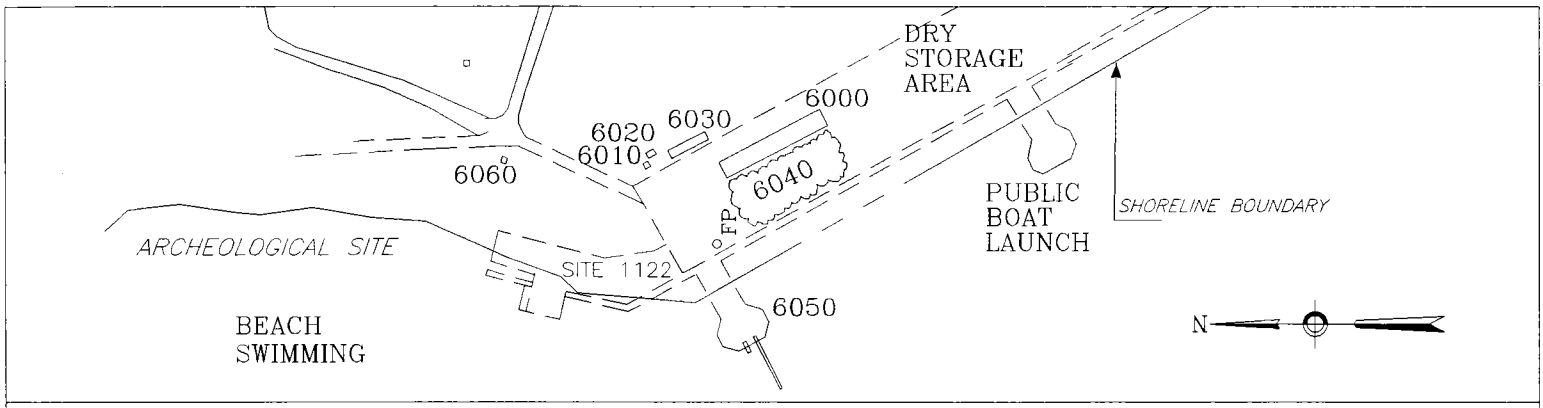
The principal aquifer of concern at the site is the surficial zone of the sand-and-gravel aquifer. The surficial zone was penetrated to a depth of 25 feet during this investigation. This zone is generally composed of fine to medium grained quartz sands. The sands are primarily light grey, brown or white in color. Black, sandy silt, mud consistency, "Bay Bottom" soil was found at the

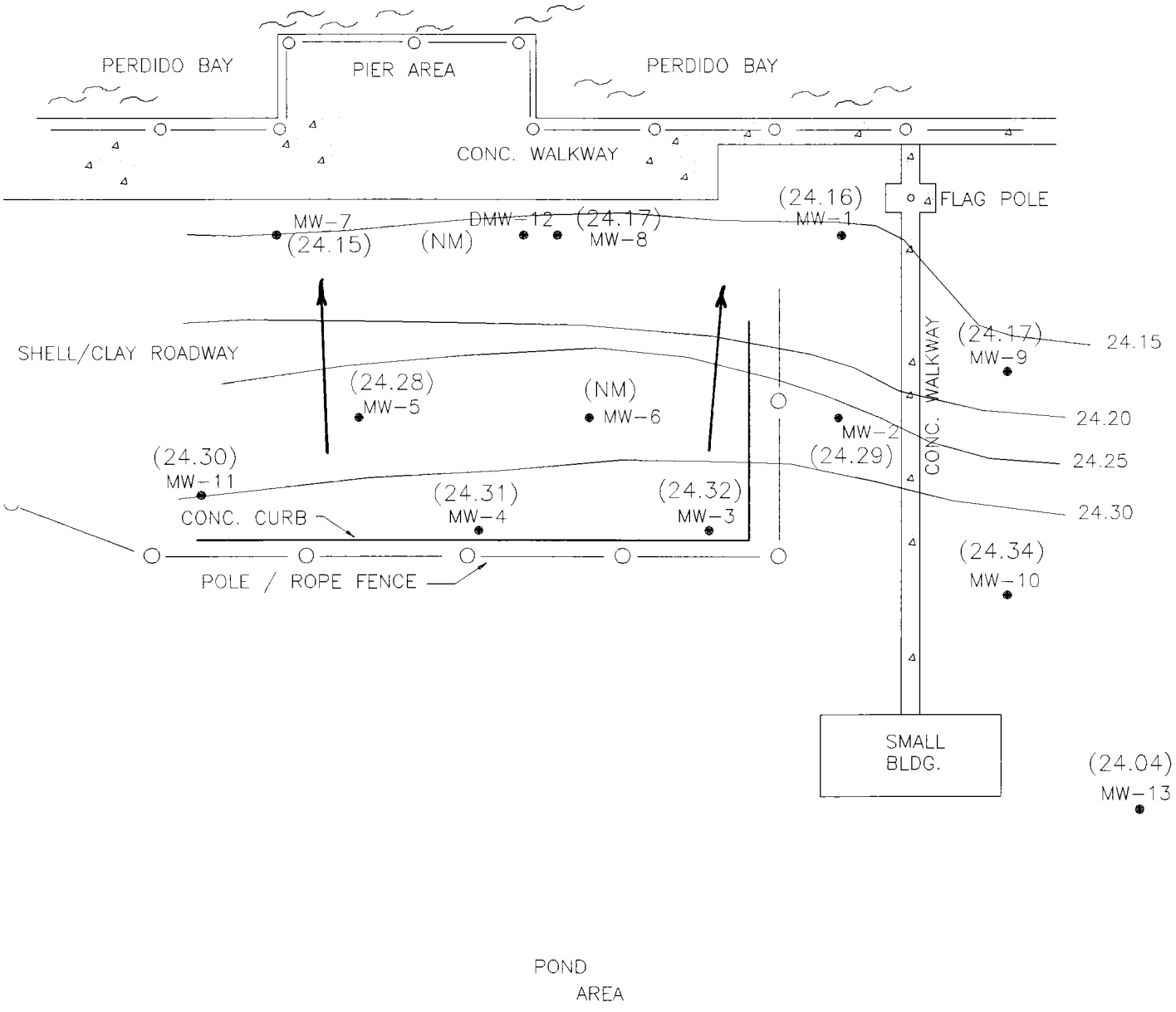
TABLE 2-1
TOP OF CASING AND GROUNDWATER ELEVATIONS
U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1122

WELL NUMBER	TOC FT. M.S.L.	DTW (FT) 9/04/97	GROUNDWATER ELEVATION 9/04/97
MW-1	27.86	3.70	24.16
MW-2	27.74	3.45	24.29
MW-3	28.12	3.80	24.32
MW-4	28.26	3.95	24.31
MW-5	27.73	3.45	24.28
MW-6	27.61	*	*
MW-7	27.60	3.45	24.15
MW-8	27.62	3.45	24.17
MW-9	28.22	4.05	24.17
MW-10	28.71	4.37	24.34
MW-11	28.15	3.85	24.30
DMW-12	27.67	N/A	N/A
MW-13	30.54	6.50	24.04
MW-14	32.73	8.10	24.63

NOTES: TOC = Top of Casing
DTW = Depth to Water
Benchmark assumes elevation of 30.00 ft. at the northwest corner of existing concrete slab, former transformer pad; located approximately 40' southeast of MW-4, Bronson Field, Florida.

* Unable to locate MW-6.





LEGEND

● MW-6	MONITORING WELL BORING HOLE NUMBER
(24.29)	GROUNDWATER ELEVATION 9-04-97
(NM)	NOT MEASURED
—16.92	ISOCONCENTRATIONN CONTOUR
→	GW FLOW DIRECTION

30

N

0' 5' 10' 20' 30'
SCALE FEET

NAVY PUBLIC WORKS CENTER PENSACOLA, FLORIDA		
SCALE:	FIGURE 2-3	DRAWN BY: DWG. NO: REVISED BY:
GROUNDWATER FLOW DIRECTION MAP SITE 1122, BRONSON FIELD		
CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA		

boreholes for monitoring wells MW-1 thru MW-14 from 4' to 5' BLS. Sand-clay road base or humus sandy loam with organics is located 0-2.5 feet BLS. The groundwater at the site was encountered at approximately 5 feet BLS. Lithologic logs describing the soils encountered at various depths, approximate groundwater level and OVA screening results for the soil borings installed for the monitoring well installations are found in Appendix A.

2.6 SURFACE WATER ASSESSMENT

Perdido Bay is located directly west and adjacent to the site. No petroleum sheen was observed on surface of the water adjacent to the site. 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-14 and deep vertical extent monitoring well DMW-12 by W.E.S., Inc. using the methods and procedures outlines in W.E.S., Inc. Comprehensive Quality Assurance Plan No. 900465G. Shallow monitoring wells MW-1 thru MW-14 and deep monitoring well DMW-12 were sampled and analyzed for the kerosene analytical group outlined in FDEP Rule 62-770. Monitoring wells MW-1 thru MW-14 were sampled using the quiescent sampling technique (lead only) and bailer sampling technique for all other parameters. Groundwater samples were collected from monitoring wells MW-1 thru MW-8 on March 21 using the bailer sampling technique and on May 17, 1996 using the quiescent sampling technique. Groundwater samples were collected from monitoring wells MW-9 thru DMW-12 on June 4 using the bailer sampling technique and on June 27, 1996 using the quiescent sampling technique. Groundwater samples were collected from monitoring well MW-13 on August 23, 1996 and from MW-14 on December 12, 1996 using the bailer sampling technique and from MW-13 and MW-14 on September 4, 1997 using the quiescent sampling technique. Additional groundwater samples were taken from monitoring wells MW-1 (May 22, 1996), MW-8 (April 24, 1996), and MW-13 (August 23, 1996). The kerosene analytical group included analysis of groundwater samples for volatile organic aromatics (VOAs), polynuclear aromatic hydrocarbons (PAHs), ethylene dibromide (EDB), total petroleum hydrocarbons (TPHs), and total lead utilizing EPA Methods 8260, 8270A, 504, FLPRO, and SW6010A, respectively. Summary tables of analysis are shown in Tables 2-2, 2-3, and 2-4. The analytical laboratory results are found in Appendix D.

No VOAs were detected in the groundwater samples collected from monitoring wells MW-1 thru 11 or MW-13; however, groundwater samples collected from deep vertical monitoring well DMW-12 detected concentrations of tetrachloroethene at 3 ppb and groundwater samples collected from monitoring well MW-14 detected concentrations of chloroform, ethylbenzene, and xylenes at 1 ppb, 1 ppb, and 3 ppb respectfully. The total VOA concentration in monitoring wells MW-1 thru MW-13 is BDL and the total VOA concentration in MW-14 is 4 ppb, which is well below the FDEP target level of 50 ppb for total VOAs. A summary table of the volatile organic aromatics (VOAs) detected in the monitoring wells is shown in Table 2-2.

No PAHs were detected in monitoring wells MW-1 thru MW-14.

TABLE 2-2
SUMMARY OF VOLATILE ORGANIC ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES COLLECTED FROM MONITORING WELLS MW-1 THRU MW-14 U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1122

PARAMETER	MONITORING WELL NUMBER													
	MW-1 3/21/96 5/22/96	MW-2 3/21/96	MW-3 3/21/96	MW-4 3/21/96	MW-5 3/21/96	MW-6 3/21/96	MW-7 3/21/96	MW-8 3/21/96	MW-9 6/4/96	MW-10 6/4/96	MW-11 6/4/96	DMW-12 6/4/96	MW-13 8/23/96	MW-14 12/12/96
Benzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Chloroform	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1
Ethylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1
Tetrachloroethene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	3	BDL	BDL
Toluene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Xylenes	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	3
Total VOA (BTEX)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	4

NOTES: All results reported in parts per billion (ppb) unless otherwise noted.
Groundwater sample collected from MW-1 thru MW-14 on dates indicated above.
BDL = Below detection limits
Total BTEX = Summation of benzene, ethylbenzene, toluene, and xylenes (total)

TABLE 2-3
SUMMARY OF PAHS
ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES
COLLECTED FROM MONITORING WELLS MW-1 THRU MW-14
U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1122

PARAMETER	MONITORING WELL NUMBER													
	MW-1 3/21/96 5/22/96	MW-2 3/21/96	MW-3 3/21/96	MW-4 3/21/96	MW-5 3/21/96	MW-6 3/21/96	MW-7 3/21/96	MW-8 3/21/96 4/24/96	MW-9 6/4/96	MW-10 6/4/96	MW-11 6/4/96	MW-12 6/4/96	MW-13 6/4/96 8/23/96	MW-14 12/12/96
Naphthalene	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
Total Naphthalenes	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

NOTES: All results reported in parts per billion (ppb) unless otherwise noted.
Groundwater sample collected from MW-1 thru MW-14 on dates indicated above.
BDL = Below detection limits

TABLE 2-4
SUMMARY OF TPH, LEAD, AND EDB ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES COLLECTED FROM MONITORING WELLS MW-1 THRU MW-14
U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1122

PARAMETER	MONITORING WELL NUMBERS AND DATE SAMPLE COLLECTED													
	3/21/96								6/4/96				8/23/96	12/12/96
	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	DMW-12	MW-13	MW-14
TPH	BDL	12000	BDL	BDL	40000	BDL	BDL	64000	BDL	BDL	BDL	BDL	BDL	BDL
EDB	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.03	BDL	BDL	0.46	BDL

NOTES: Groundwater samples for MW-1 thru MW-8 collected March 21, 1996.
Groundwater samples for MW-9 thru DMW-12 collected June 4, 1996.
Groundwater sample for MW-13 collected August 23,1996.
Groundwater sample for MW-14 collected December 12, 1996.

PARAMETER	DATE	MONITORING WELL NUMBERS													
		MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	DMW-12	MW-13	MW-14
Lead	5/17/96	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS	NS	NS	NS	NS
Lead	6/27/97	NS	NS	NS	NS	NS	NS	NS	NS	BDL	BDL	BDL	BDL	NS	NS
Lead	9/4/97	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	BDL	3

NOTES: All results reported in parts per billion (ppb) unless otherwise noted.
BDL = Below detection limits
EDB = 1,2 Dibromoethane
NS = Not sampled
TPH = Total Petroleum Hydrocarbons

Total petroleum hydrocarbons (TPHs) were detected in the groundwater samples collected from monitoring wells MW-2, MW-5 and MW-8 at concentrations of 12000 ppb, 40000 ppb and 64000 ppb, respectively. The levels of TPH detected in these monitoring wells were above the FDEP target level of 5000 ppb for TPH. TPH was not detected in any other groundwater samples collected from monitoring wells MW-1, MW-3, MW-4, MW-6, MW-7 and MW-9 thru MW-14. A TPH contamination distribution map is included as Figure 2-4. Total lead was not detected in the groundwater samples collected from MW-1 thru MW-8 on May 17, 1996, from monitoring wells MW-9 thru DMW-12 on June 27, 1996, or from MW-13 on September 4, 1997. However, lead was detected in the groundwater sample collected from MW-14 at a concentration of 3 ppb which is below the FDEP target limits of 50 ppb for lead. Ethylene dibromide (EDB) was detected in the groundwater samples collected from monitoring wells MW-10 and MW-13 at concentrations of 0.03 ppb and 0.46 ppb, respectfully, which is above the FDEP target limits of 0.02 ppb for ethylene dibromide. EDBs were not detected in the groundwater samples collected from monitoring wells MW-1 thru MW-9 or MW-11 thru MW-14. An EDB Contamination Distribution Map is included as Figure 2-5. A summary table of the TPHs, EDB, and lead results is shown in Table 2-4.

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 CONCLUSIONS

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

- Initial remedial actions include the removal and proper disposal of approximately 10 cubic yards of contaminated soil.

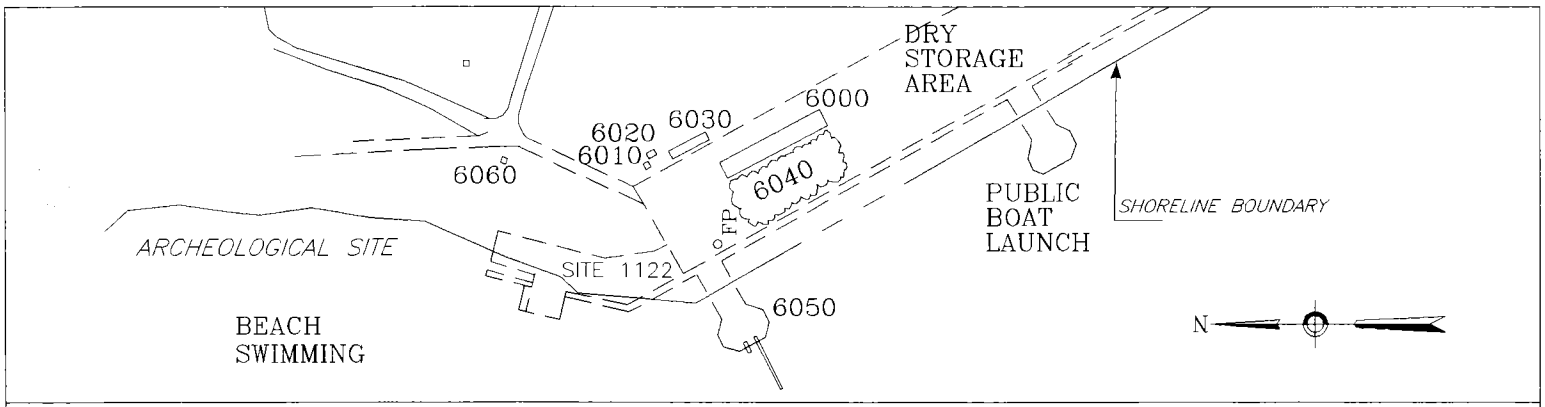
- A total of 27 soil borings were installed to the groundwater table in order to delineate the extent of contaminated soils. Soil samples from the soil borings were analyzed for VOCs using an OVA and found to be BDL.

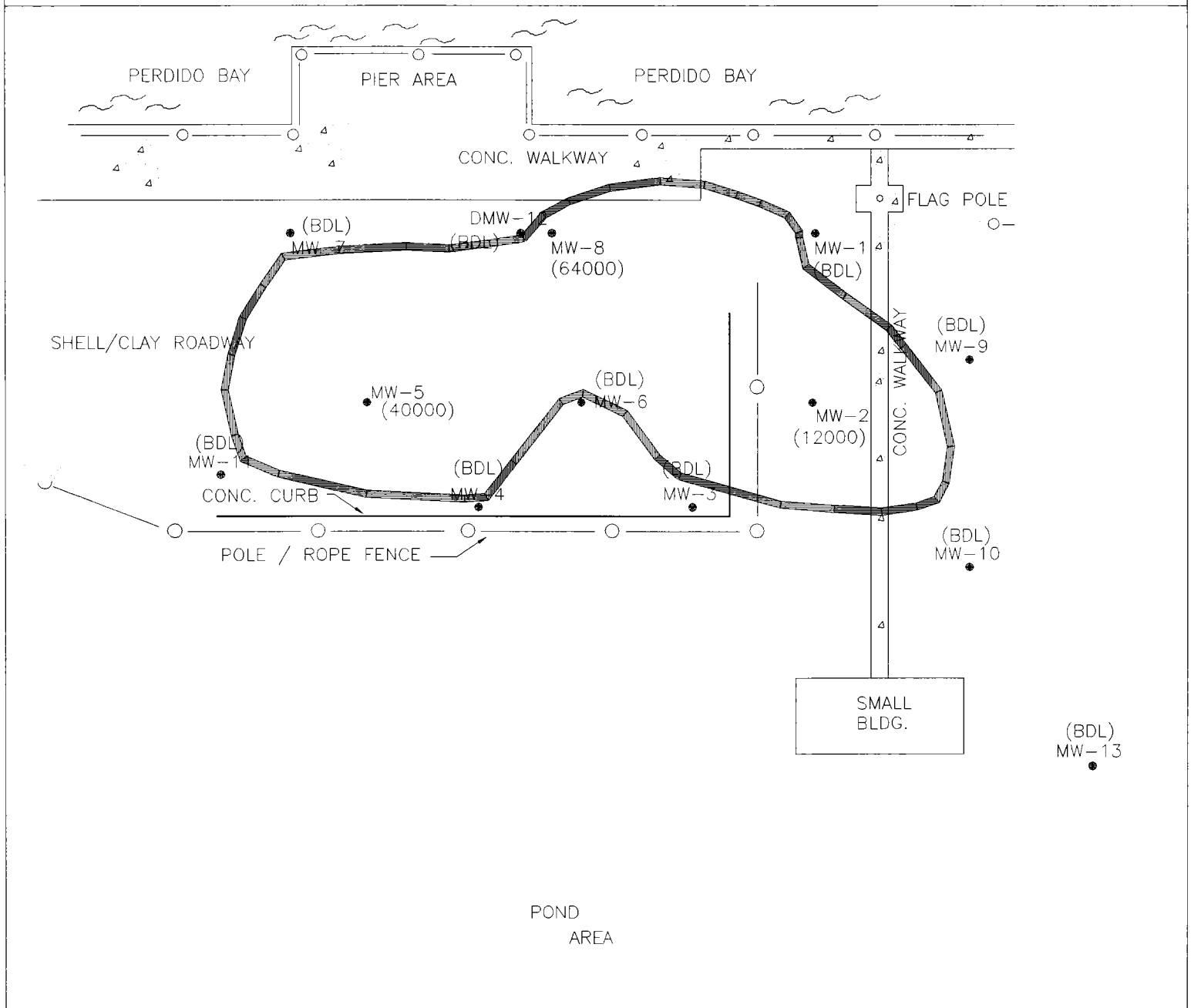
- Thirteen shallow groundwater monitoring wells (MW-1 thru MW-11 and MW-13 and MW-14) and one vertical extent monitoring well (DMW-12) were installed at the site and groundwater samples were collected from each well and analyzed for the kerosene analytical group listed in FDEP Rule 62-770.600(8)(b).

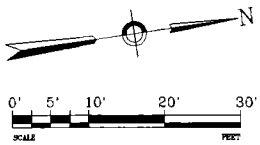
- No free-phase petroleum hydrocarbons were detected in any of the monitoring wells.

- Groundwater depths measured in monitoring wells MW-1 thru MW-14 on September 4, 1997 indicate the groundwater flow direction at the site to be toward the west direction.

- The estimated horizontal hydraulic conductivity at the site is 0.1771 ft/day.







LEGEND

— X — FENCE

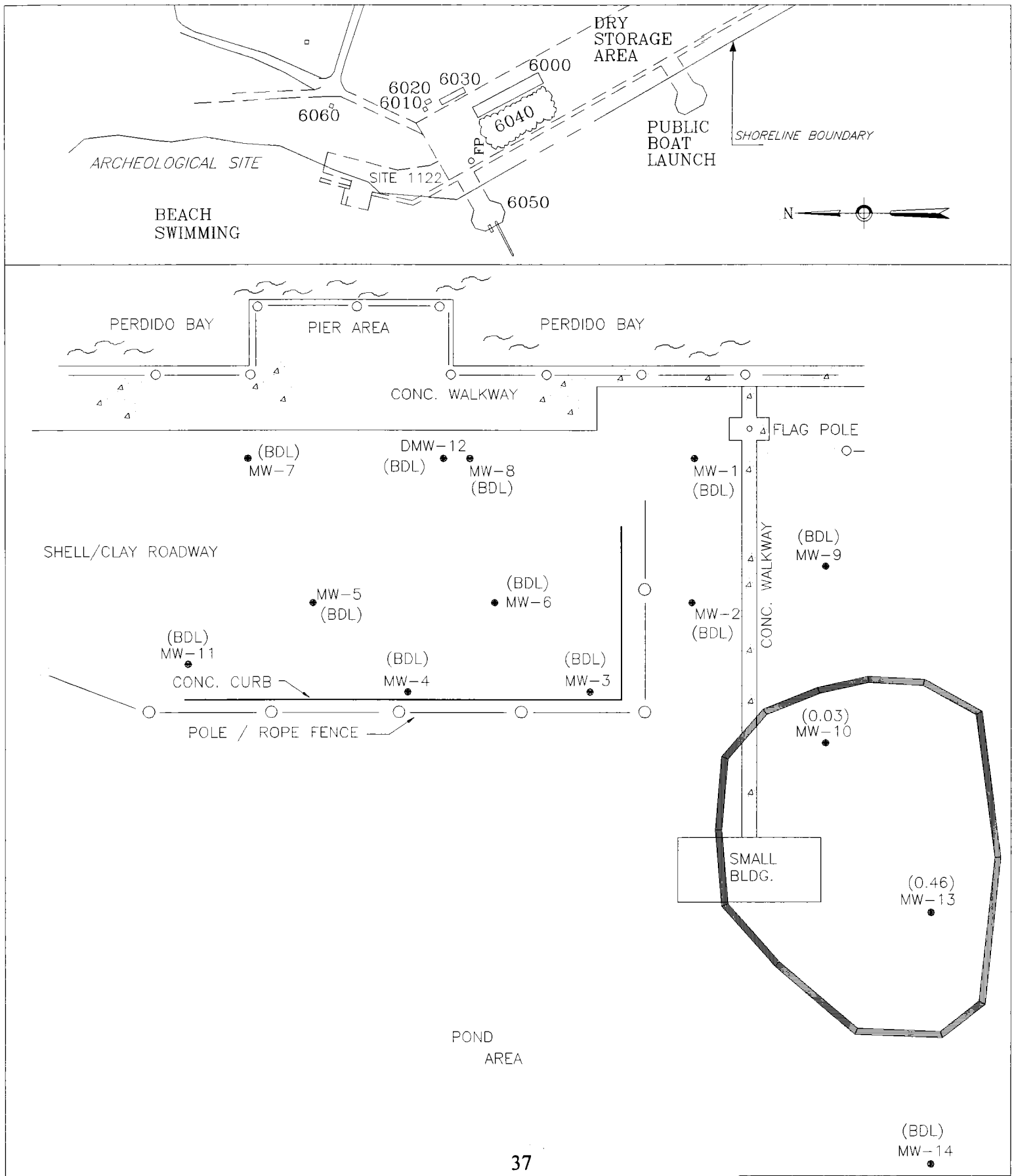
MW-3 ● MONITORING WELL
BORING HOLE NUMBER

(BDL) BELOW DETECTION LIMIT

(12000) TPH CONCENTRATION (PPB)

ISOCONCENTRATION CONTOUR (5000 PPB)

NAVY PUBLIC WORKS CENTER PENSACOLA, FLORIDA		
SCALE:	FIGURE 2-4	DRAWN BY: DWG. NO: REVISED BY:
TPH CONTAMINATION DISTRIBUTION MAP SITE 1122, BRONSON FIELD		
CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA		


DRY STORAGE AREA
6000
6020
6030
6010
6060
6040
FP
PUBLIC BOAT LAUNCH
SHORELINE BOUNDARY
ARCHEOLOGICAL SITE
SITE 1122
6050
BEACH SWIMMING
N
PERDIDO BAY
PIER AREA
PERDIDO BAY
CONC. WALKWAY
FLAG POLE
(BDL) MW-7
DMW-12 (BDL)
MW-8 (BDL)
MW-1 (BDL)
SHELL/CLAY ROADWAY
(BDL) MW-9
CONC. WALKWAY
MW-5 (BDL)
(BDL) MW-6
MW-2 (BDL)
(BDL) MW-11
(BDL) MW-4
(BDL) MW-3
CONC. CURB
POLE / ROPE FENCE
(0.03) MW-10
SMALL BLDG.
(0.46) MW-13
POND AREA
(BDL) MW-14
N
0' 5' 10' 20' 30'
SCALE FEET
LEGEND
X FENCE
MW-3 MONITORING WELL
BORING HOLE NUMBER
(BDL) BELOW DETECTION LIMIT
(0.46) EDB CONCENTRATION (PPB)
ISOCONCENTRATION CONTOUR (0.02 PPB)
NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA
SCALE:
FIGURE 2-5
DRAWN BY:
DWG. NO:
REVISED BY:
EDB CONTAMINATION DISTRIBUTION MAP
SITE 1122, BRONSON FIELD
CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA

- The calculated linear groundwater flow velocity at the site is estimated to be 0.0043 ft/day (1.5514 ft/yr).

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

- No VOAs were detected in any of the groundwater samples collected from monitoring wells MW-1 thru MW-14. Groundwater samples collected from vertical extent monitoring well DMW-12 indicated contamination levels of 3 ppb of tetrachloroethene.

- No PAHs were detected in any of the groundwater samples collected from monitoring wells MW-1 thru MW-14 or vertical extent monitoring well DMW-12.

- TPH concentrations detected in groundwater samples collected from monitoring wells MW-2, MW-5 and MW-8 were above the FDEP target level of 5000 ppb for TPH.

- Lead was detected in the groundwater sample collected from shallow monitoring well MW-14 at concentrations of 3 ppb. No lead was detected in the groundwater samples collected from shallow monitoring wells MW-1 thru MW-13 or deep monitoring well DMW-12.

- EDB concentrations detected in groundwater samples collected from monitoring well MW-10 and MW-13 exceeded the FDEP regulatory limits of 0.02 ppb for EDBs.

- The areal extent of the soil and groundwater contamination at the site appears to be limited to a small area and the levels of contamination are minimal.

3.2 RECOMMENDATIONS

PWC Pensacola recommends, based upon the findings and conclusions contained in this report, "no further action" be required for the soil and that a groundwater Monitoring Only Plan be implemented for the groundwater at Site 1122 located at U.S. Navy Outlying Landing Field (OLF) Bronson as follows:

(1) Monitoring wells MW-5, MW-8, MW-10, and MW-13 be sampled and analyzed for TPH and EDB using EPA FLPRO Methods 8015 and 504, respectively, quarterly for a one year period.

(2) Monitoring wells MW-5 and MW-8 which had the highest petroleum contamination are considered the source monitoring wells. Monitoring wells MW-10 and MW-11 are considered the upgradient monitoring wells. No downgradient monitoring wells are possible since the groundwater flow direction is toward Perdido Bay and MW-8 is located directly adjacent to the Bay.

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 1122, Pensacola, Florida, and should not be construed to apply to any other site.

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

10/22/97
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

LITHOLOGIC LOG

LOG OF MONITORING WELL

Project Name: Bronson Field

Job # P95-255.34

Location: 1122

Facility: NAS

Start Date/Time: 5/24/95

MW Number: MW10

Finish Date/Time: 5/24/95

Logged By: Darryl Gates

Top Of Casing Elevation: N/A

Drilling Contractor: Pensacola Testing Labs

Surface Elevation: N/A

Total Depth: 12'

Driller: Larry Minchu

Depth Feet	Sampler Type	Sample ID #	Contamination: Odor	Contamination: OVA/HNu ppm	Contamination: Visible Y=Yes N=No	Soil Rock Symbol	Soil and Rock Description/Comment	Monitor Well Data: Material Description	Monitor Well Data: Concrete Pad
	H_2O			SOIL			Dirt Surface		
							1' Brown fine to med grained sand	grout	
								bentonite seal	
			N	BDL	N		Gray fine to med grained sand	2" pvc riser	
	X						4'		
5			Y					0.010 slotted screen	
								16/40 Silica sand	
10									
							12' End of Boring		
15									
20									
25									

A-1

WELL SAMPLE RECORD

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

PROJECT Brownson 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 1122	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: 03/13/96	Completed: 03/13/96	
MONITOR WELL NO.: MW-1	Start Time: 1015	Finish Time: 1045	
Delivery Order 00010	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'-1.5'; Red, Sandy Clay (Road Base).	0	NR	0
				100%	3	1.5'-4'; Brown, Fine to Medium Grained, Sand.	0	NR	0
					5	4'-5'; Black, Sandy Silt. Mud consistency. "Bay Bottom"			
			Water Table @ approx. 5' bls						
				100%	7	5'-13'; Grey, Fine to Medium to Coarse Grained, Sand. Petroleum Stained, Strong Petroleum Odor.			
				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: 03/14/96

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

Site 1122	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: 03/13/96	Completed: 03/13/96
MONITOR WELL NO.: MW-2	Start Time: 1045	Finish Time: 1115
Delivery Order 00010	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'-1.5'; Red, Sandy Clay (Road Base).	0	NR	0	
				100%	3	1.5'-4'; Brown, Fine to Medium Grained, Sand.	0	NR	0	
					5	4'-5'; Black, Sandy Silt. Mud consistency. "Bay Bottom"				
			Water Table @ approx. 5' bls							
				100%	7	5'-13'; Grey, Fine to Medium to Coarse Grained, Sand.				
				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 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 03/14/96

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

Site 1122	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: 03/13/96	Completed: 03/13/96
MONITOR WELL NO.: MW-3	Start Time: 1115	Finish Time: 1145
Delivery Order 00010	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'-1.5'; Red, Sandy Clay (Road Base).	0	NR	0
				100%	3	1.5'-4'; Brown, Fine to Medium Grained, Sand.	0	NR	0
					5	4'-5'; Black, Sandy Silt. Mud consistency. "Bay Bottom"			
			Water Table @ approx. 5' bls						
				100%	7	5'-13'; Grey, Fine to Medium to Coarse Grained, Sand.			
				100%	9				
				100%	11				
				100%	13				
						End of Boring @ 13.5' bls			
					15				

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

Date 03/14/96

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

A-5

Site 1122	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: 03/13/96	Completed: 03/13/96
MONITOR WELL NO.: MW-4	Start Time: 1145	Finish Time: 1215
Delivery Order 00010	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'-1.5'; Red, Sandy Clay (Road Base).	0	NR	0
				100%	3	1.5'-4'; Brown, Fine to Medium Grained, Sand.	0	NR	0
			Water Table @ approx. 5' bls		5	4'-5'; Black, Sandy Silt. Mud consistency. "Bay Bottom"			
				100%	7	5'-13'; Grey, Fine to Medium to Coarse Grained, Sand.			
HA				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 03/14/96

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

Site 1122	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: 03/13/96	Completed: 03/13/96
MONITOR WELL NO.: MW-5	Start Time: 1315	Finish Time: 1345
Delivery Order 00010	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'-1.5'; Red, Sandy Clay (Road Base).	0	NR	0
				100%	3	1.5'-4'; Brown, Fine to Medium Grained, Sand.	0	NR	0
			Water Table @ approx. 5' bls		5	4'-5'; Black, Sandy Silt. Mud consistency. "Bay Bottom"			
				100%	7	5'-13'; Grey, Fine to Medium to Coarse Grained, Sand.			
				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 03/14/96

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

Site 1122	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: 03/13/96	Completed: 03/13/96
MONITOR WELL NO.: MW-6	Start Time: 1415	Finish Time: 1445
Delivery Order 00010	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'-1.5'; Red, Sandy Clay (Road Base).	0	NR	0
				100%	3	1.5'-4'; Brown, Fine to Medium Grained, Sand.	0	NR	0
					5	4'-5'; Black, Sandy Silt. Mud consistency. "Bay Bottom"			
			Water Table @ approx. 5' bls						
				100%	7	5'-13'; Grey, Fine to Medium to Coarse Grained, Sand.			
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 03/14/96

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

A-8

Site 1122	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: 03/13/96	Completed: 03/13/96
MONITOR WELL NO.: MW-7	Start Time: 1445	Finish Time: 1515
Delivery Order 00010	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'-1.5'; Red, Sandy Clay (Road Base).	0	NR	0
				100%	3	1.5'-4'; Brown, Fine to Medium Grained, Sand.	0	NR	0
			Water Table @ approx. 5' bls		5	4'-5'; Black, Sandy Silt Mud consistency. "Bay Bottom"			
HSA				100%	7	5'-13'; Grey, Fine to Medium to Coarse Grained, Sand.			
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 03/14/96

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

Site 1122	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: 03/13/96	Completed: 03/13/96
MONITOR WELL NO.: MW-8	Start Time: 1515	Finish Time: 1545
Delivery Order 00010	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'-1.5'; Red, Sandy Clay (Road Base).	0	NR	0
				100%	3	1.5'-4'; Brown, Fine to Medium Grained, Sand.	0	NR	0
			Water Table @ approx. 5' bls		5	4'-5'; Black, Sandy Silt Mud consistency. "Bay Bottom"			
				100%	7	5'-13'; Grey, Fine to Medium to Coarse Grained, Sand. Petroleum Stained, Strong Petroleum Odor.			
				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 03/14/96

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

Site 1122	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: 05/15/96	Completed: 05/15/96	
MONITOR WELL NO.: MW-9	Start Time: 1200	Finish Time: 1230	
Delivery Order 00019	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
P. H.				100%	1	0-1';Humus Sandy Loam w/ Organics.	0	NR	0
						1'-2'; Red, Sandy Clay (Road Base).			
				100%	3	2'-4.5'; Lt. Grey Silty, Medium Grained Sand.	0	NR	0
			Water Table @ Approx. 4.5' BLS						
HOLLOW STEM AUGER					5	4.5'-5'; Black, Sandy Silt Mud Consistency "Bay Bottom".			
				100%	7				
				100%	9	5'-13.5'; Grey, Coarse Grained Sand.			
				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 D. Walsh, P.G.
Florida Professional Geologist No. 0001181

Date: 05/30/96

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

Site 1122	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: 05/15/96	Completed: 05/15/96
MONITOR WELL NO.: MW-10	Start Time: 1230	Finish Time: 1300
Delivery Order 00019	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
P.						0-1';Humus Sandy Loam w/	W/O	WITH	NET
H.				100%	1	Organics.	0	NR	0
						1'-2'; Red, Sandy Clay (Road Base).			
				100%	3				
						2'-4.5'; Lt. Brown Silty, Medium Grained Sand.	0	NR	0
			Water Table @ Approx. 4.5' BLS						
H					5	4.5'-5'; Black, Sandy Silt Mud Consistency "Bay Bottom".			
O									
L									
L									
O				100%	7				
W									
S									
T				100%	9	5'-13.5'; Grey, Coarse Grained Sand.			
E									
M									
A				100%	11				
U									
G									
E									
R				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 05/30/96

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

Site 1122	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: 05/15/96	Completed: 05/15/96
MONITOR WELL NO.: MW-11	Start Time: 1300	Finish Time: 1330
Delivery Order 00019	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
P. H.				100%	1	0-1';Humus Sandy Loam w/ Organics.	0	NR	0
				100%	3	1'-2'; Red, Sandy Clay (Road Base).			
						2'-4.'; Lt. Brown Silty, Medium Grained Sand.	0	NR	0
			Water Table @ Approx. 4.5' BLS						
HOLLOW STEM AUGER					5				
				100%	7				
				100%	9	4'-13.5'; Grey, Coarse Grained Silty Sand.			
				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 05/30/96

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

Site 1122	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: 05/15/96	Completed: 05/15/96	
MONITOR WELL NO.: DMW-12	Start Time: 1315	Finish Time: 1445	
Delivery Order 00017	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
P.						0'-1.'; Lt. Brown Sandy Loam.			
H.				100%			0	NR	0
						1'-2.5'; Red Sandy Clay			
					4	(Road Base).	0	NR	0
				100%		2.5'-4.5'; Lt. Grey, Silty			
H						Medium Grained Sand.			
O					8				
L						4'-5'; Black, Sandy Silt.			
L						Mud consistency.			
O			Water Table @ Approx. 4.5' BLS			"Bay Bottom"			
W					12				
S				100%		5'-8'; Grey, Fine to Medium			
T						to Coarse Grained, Sand.			
E					16	Petroleum Stained.			
M									
				100%		8'-14'; Lt. Grey, Medium to			
A						Coarse Grained Sand			
U					20	Extremely Wet.			
G									
E				100%					
R						14'-25'; White/Clear Fine			
					24	Grained Sand.			
						End of Boring @ 25' BLS			
				100%					
					28				

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

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

Date 05/30/96

Site 1122	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-13	Start Time: 1345	Finish Time:	1445
Delivery Order 0028	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'; Lt. Brown, Fine to Medium Silty Sand w/Humus (Organics).	0	NR	0	
				100%	3	1'-4'; Brown, Fine to Medium Grained, Sand.	0	NR	0	
					5	4'-6'; Lt. Brown, Fine to Medium Silty Sand.				
			Water Table @ approx. 5' bls							
				100%	7	6'-13.5'; Dark Brown, Fine to Medium to Course Silty Sand.				
				100%	9					
				100%	11					
				100%	13					
					15	End of Boring @ 13.5' 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.

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 1122	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: 12/10/96	Completed:	12/10/96
MONITOR WELL NO.: MW-14	Start Time: 1230	Finish Time:	1315
Delivery Order 0045	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'; Lt. Brown, Fine to med. silty Sand w/humus (organics).	0	NR	0
					3	1'-4'; Brown, Medium sand w/ humus mix			
				100%			0	NR	0
					5	4'-7'; Beige,medium sand			
				100%			0	NR	0
			Water Table @ approx. 7' bls			7-10'; Black, medium sand mixed w/ humus(organics)			
					9				
					11				
					13				
						End of Boring @ 15.0' 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

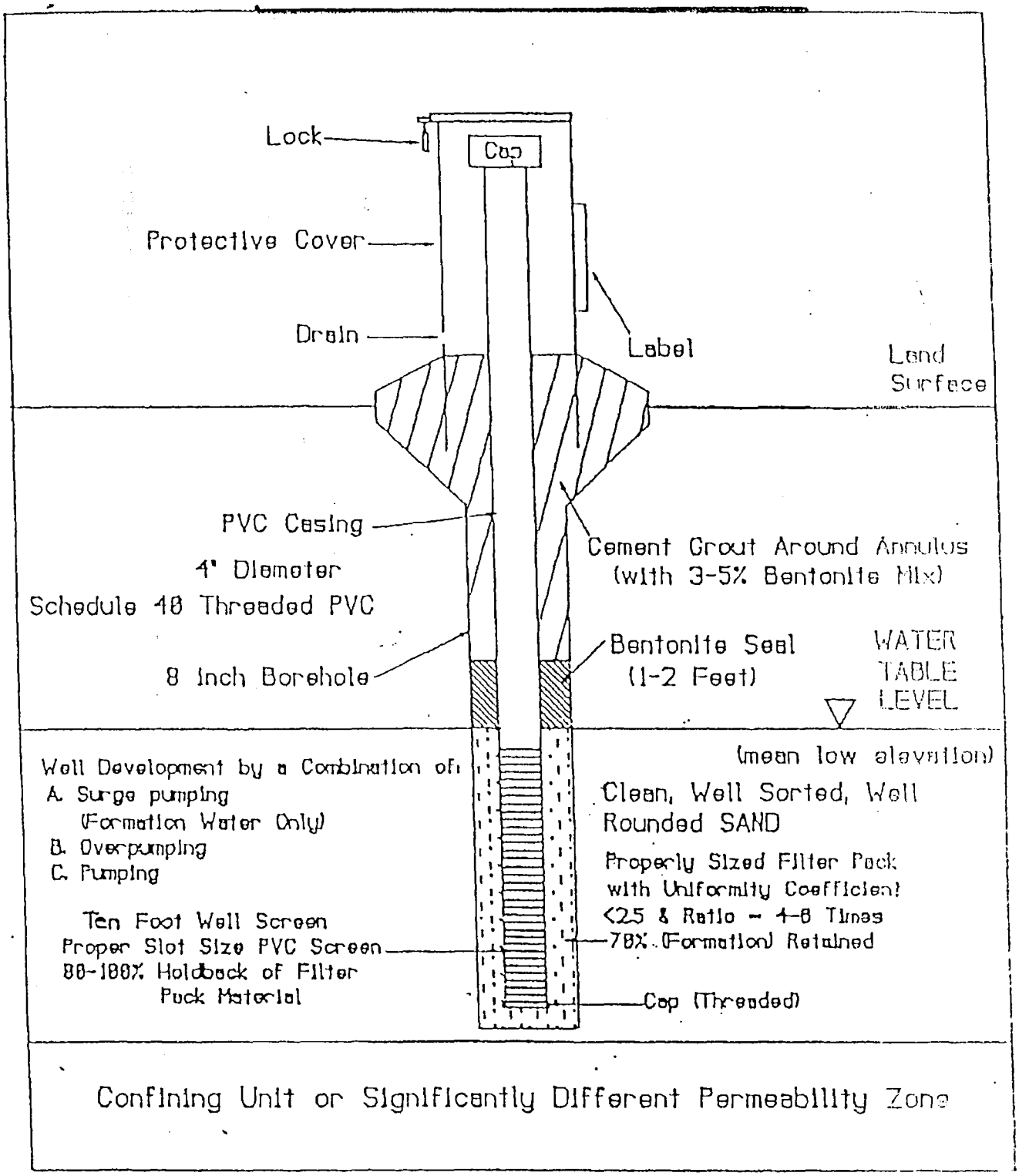
Date 12/16/96

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

A-16

APPENDIX B

MONITORING WELL CONSTRUCTION DIAGRAMS



DECEMBER, 1991
M. KENNEDY &
D. STAPLES

BASIC MONITOR WELL
DESIGN IN A WATER
TABLE AQUIFER

W.E.S., Inc.
Environmental Division

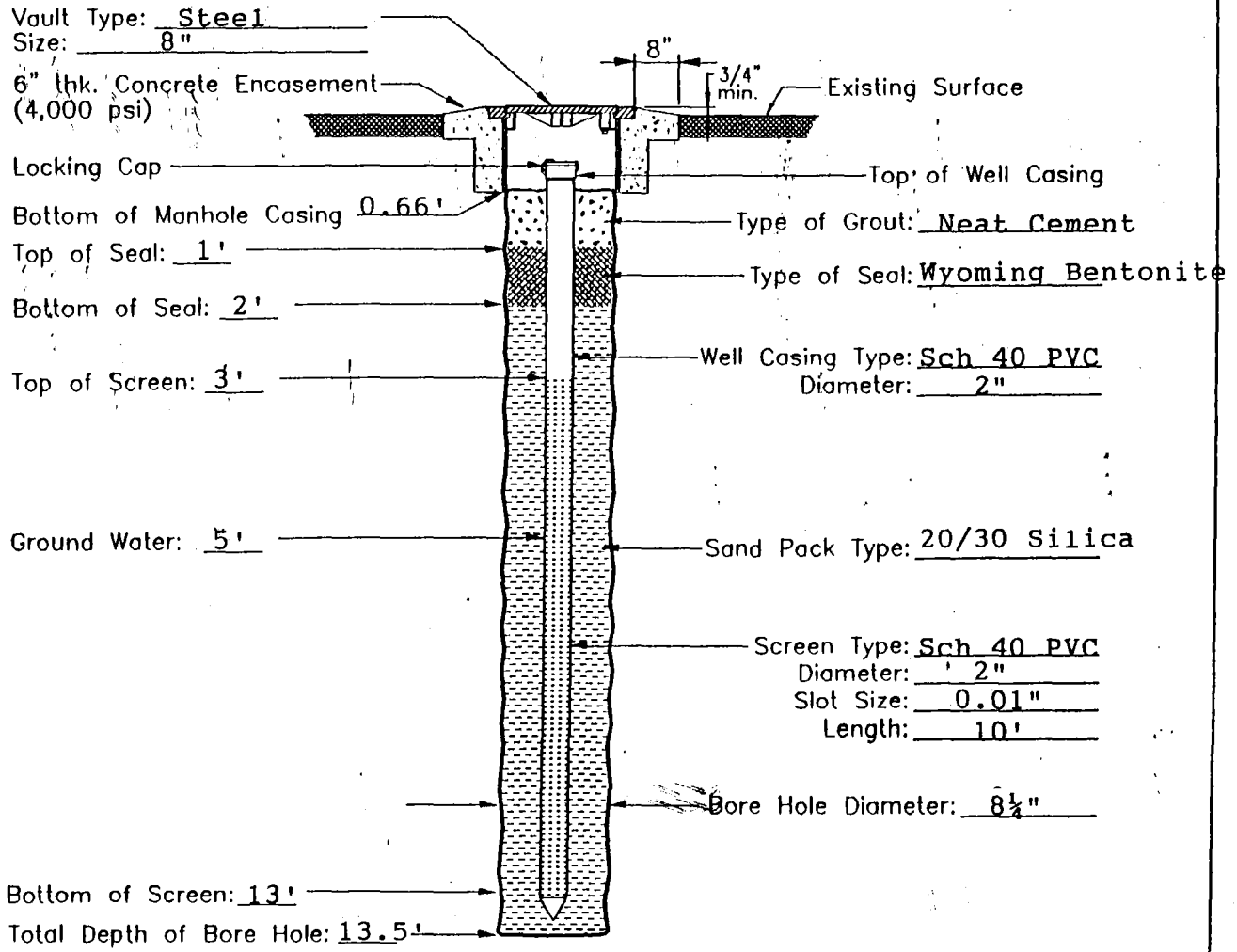
6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J.Brown
DRILLING CONTRACTOR: S FL Test & Dr
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-1

CLIENT: NPWC Environmental Dept.
LOCATION: SITE 1122, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 3-13-96 Finish: 3-13-96
TIME Start: 1015 Finish: 1045

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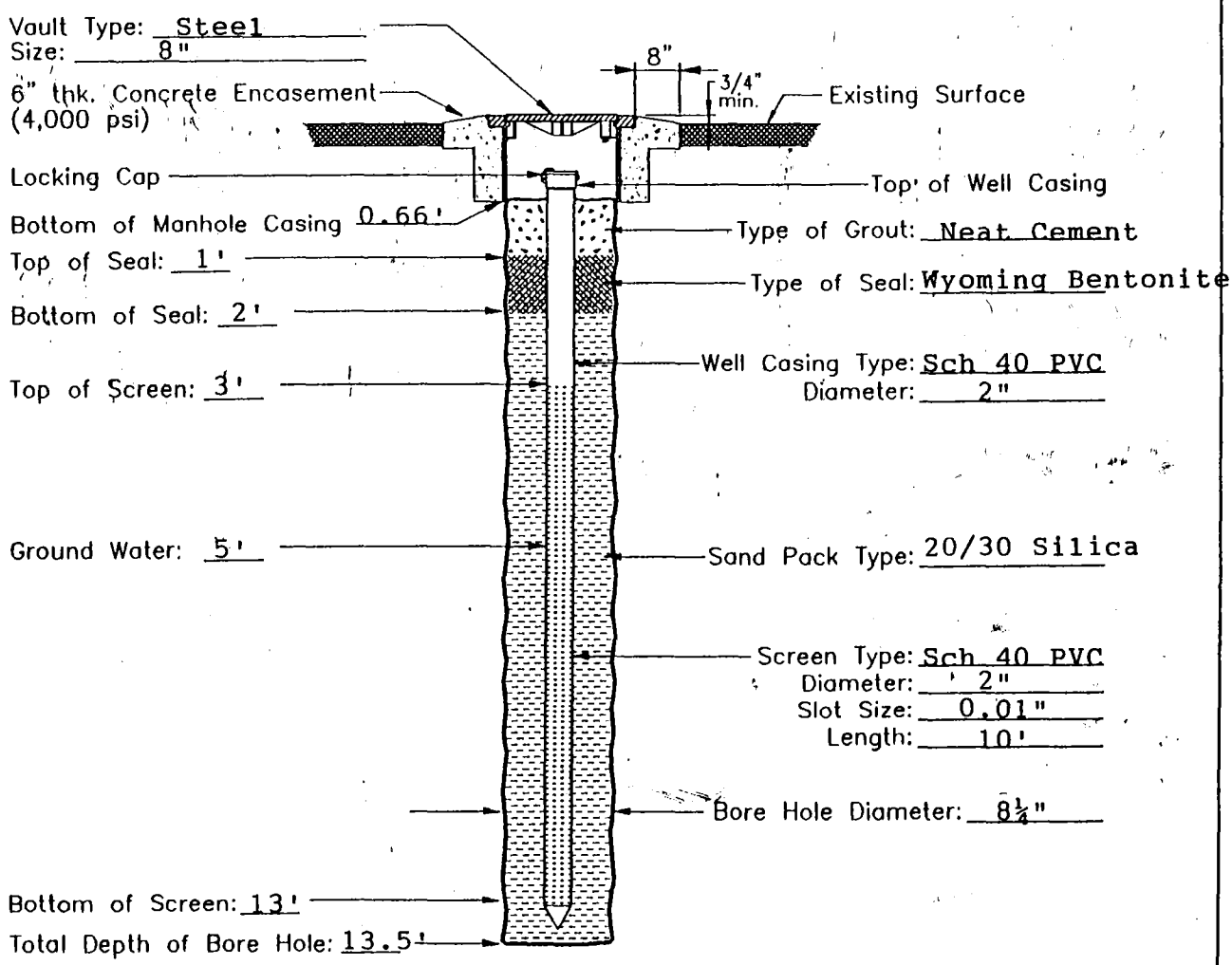
Environmental Division
6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC Environmental Dept.
LOCATION: SITE 1122, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 3-13-96 Finish: 3-13-96
TIME Start: 1045 Finish: 1115

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



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

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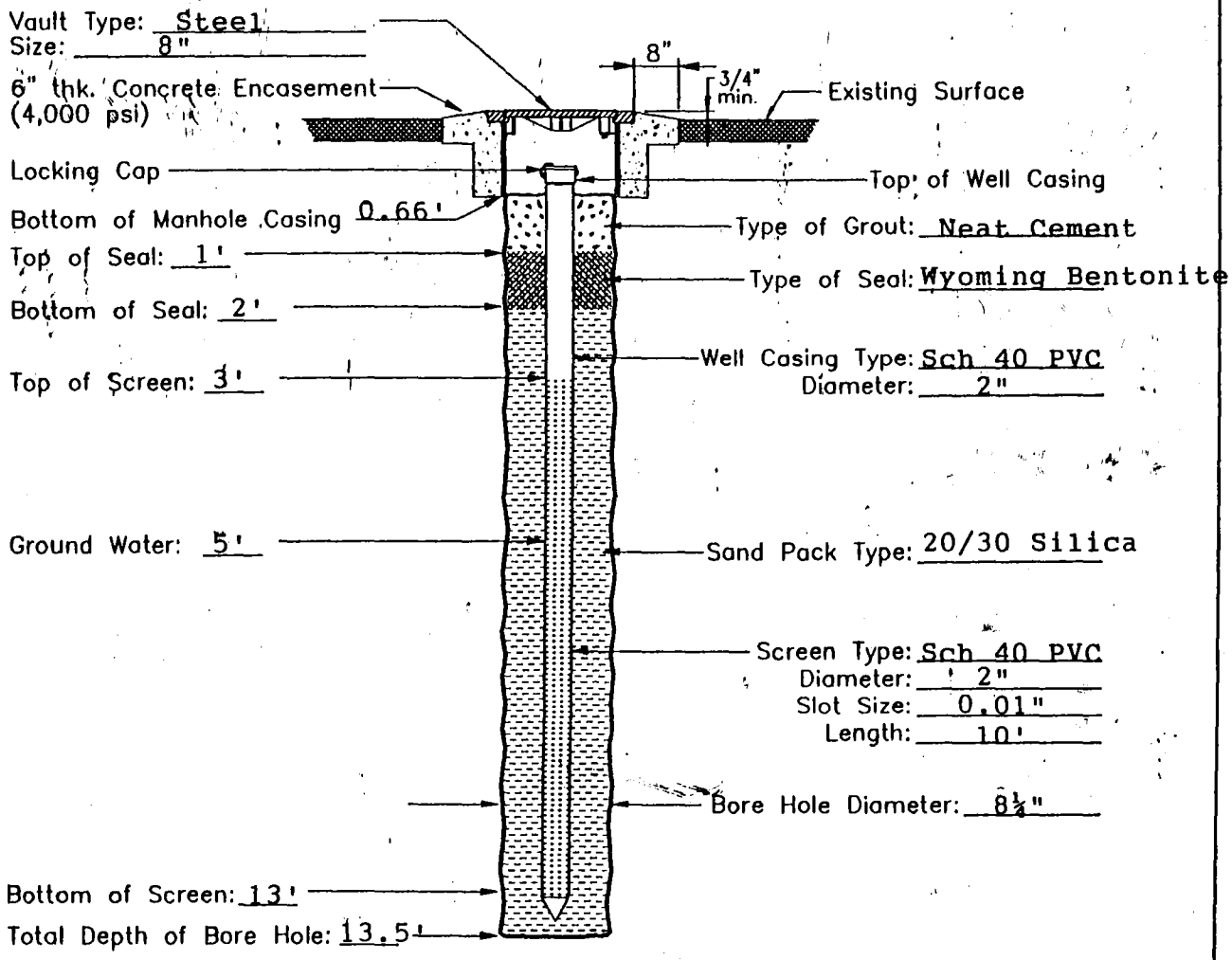
Environmental Division
6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC Environmental Dept.
LOCATION: SITE 1122, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 3-13-96 Finish: 3-13-96
TIME Start: 1115 Finish: 1145

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



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

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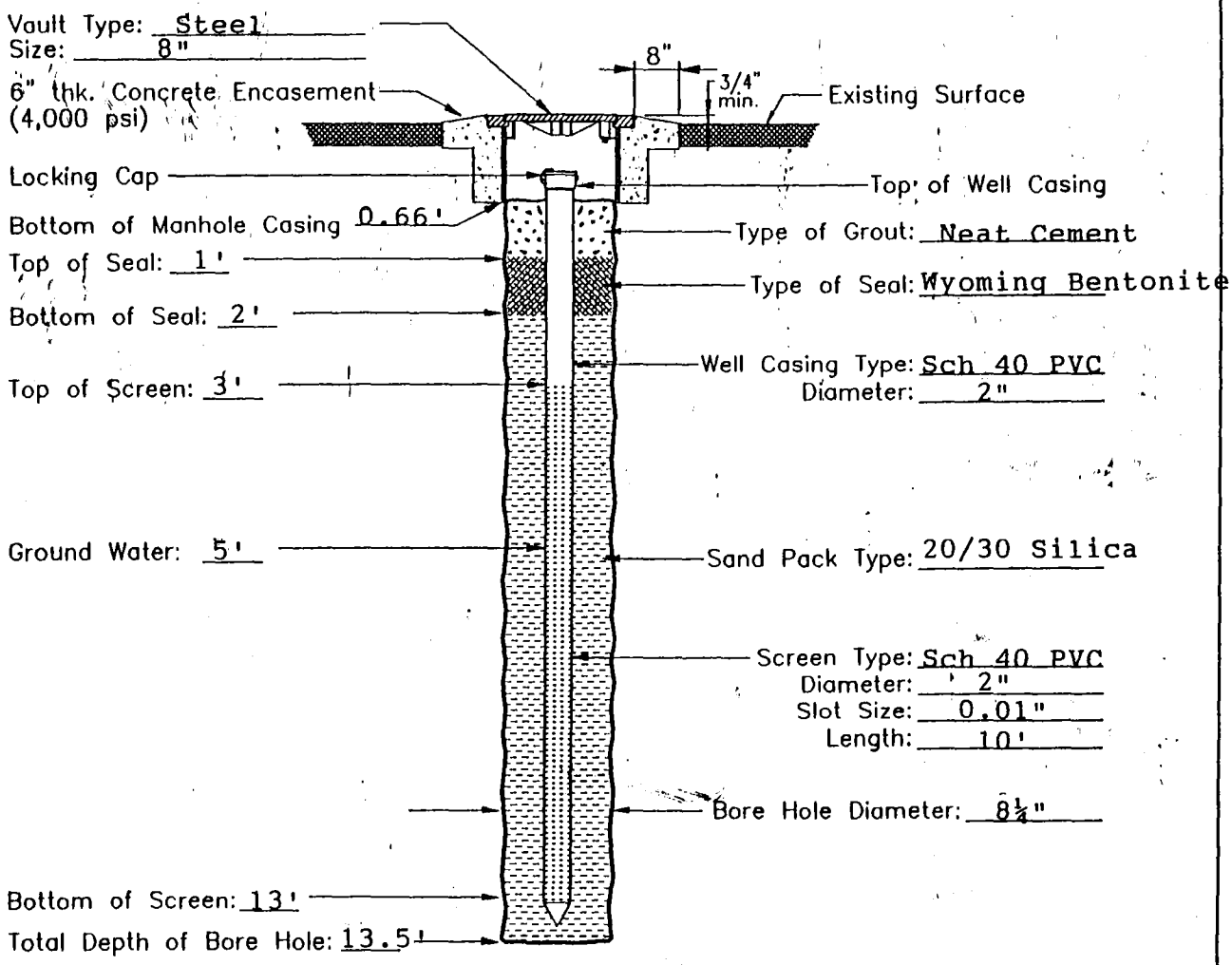
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC Environmental Dept.
LOCATION: SITE 1122, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 3-13-96 Finish: 3-13-96
TIME Start: 1145 Finish: 1215

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

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

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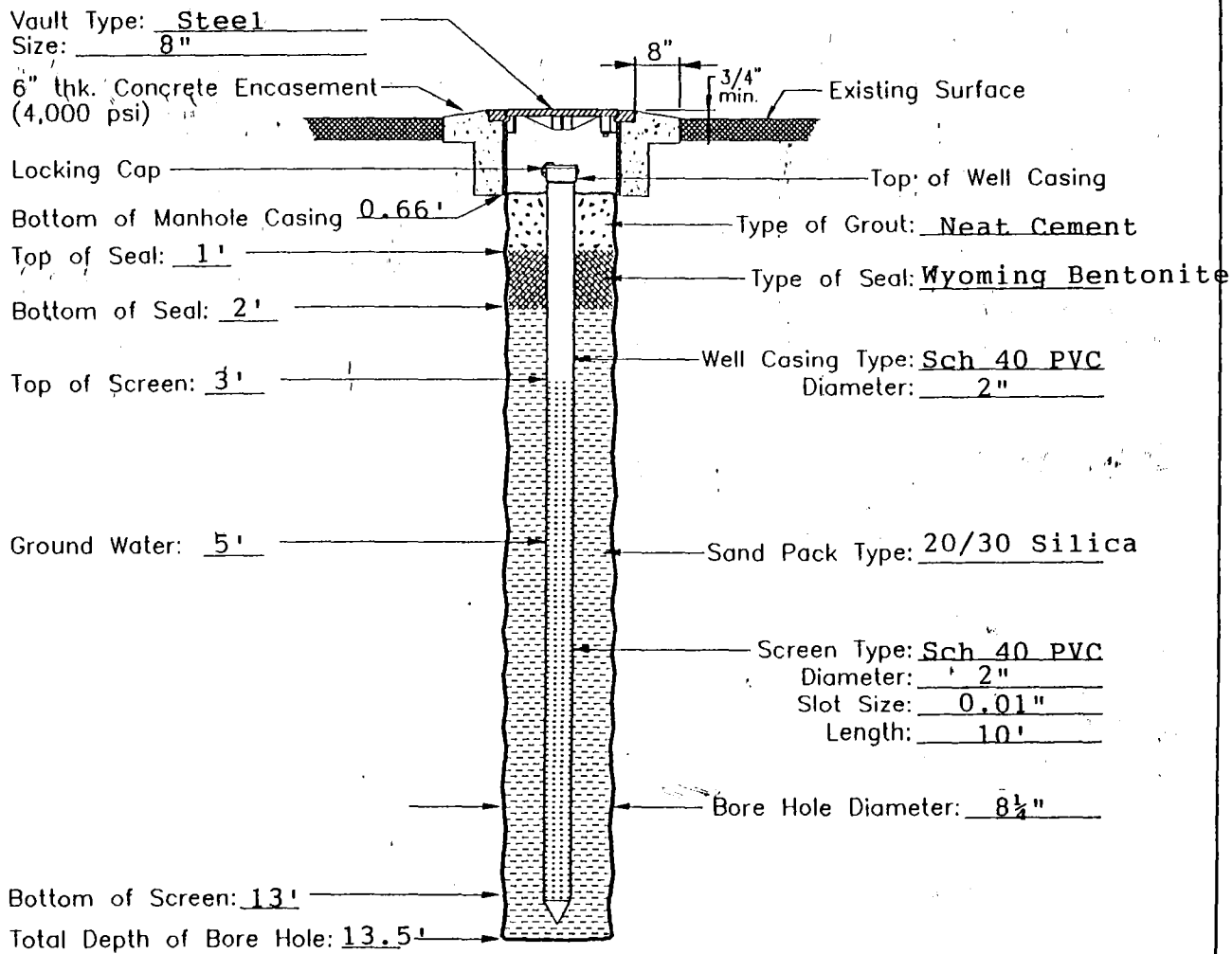
MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC Environmental Dept.
LOCATION: SITE 1122, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 3-13-96 Finish: 3-13-96
TIME Start: 1315 Finish: 1345

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



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

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Environmental Division

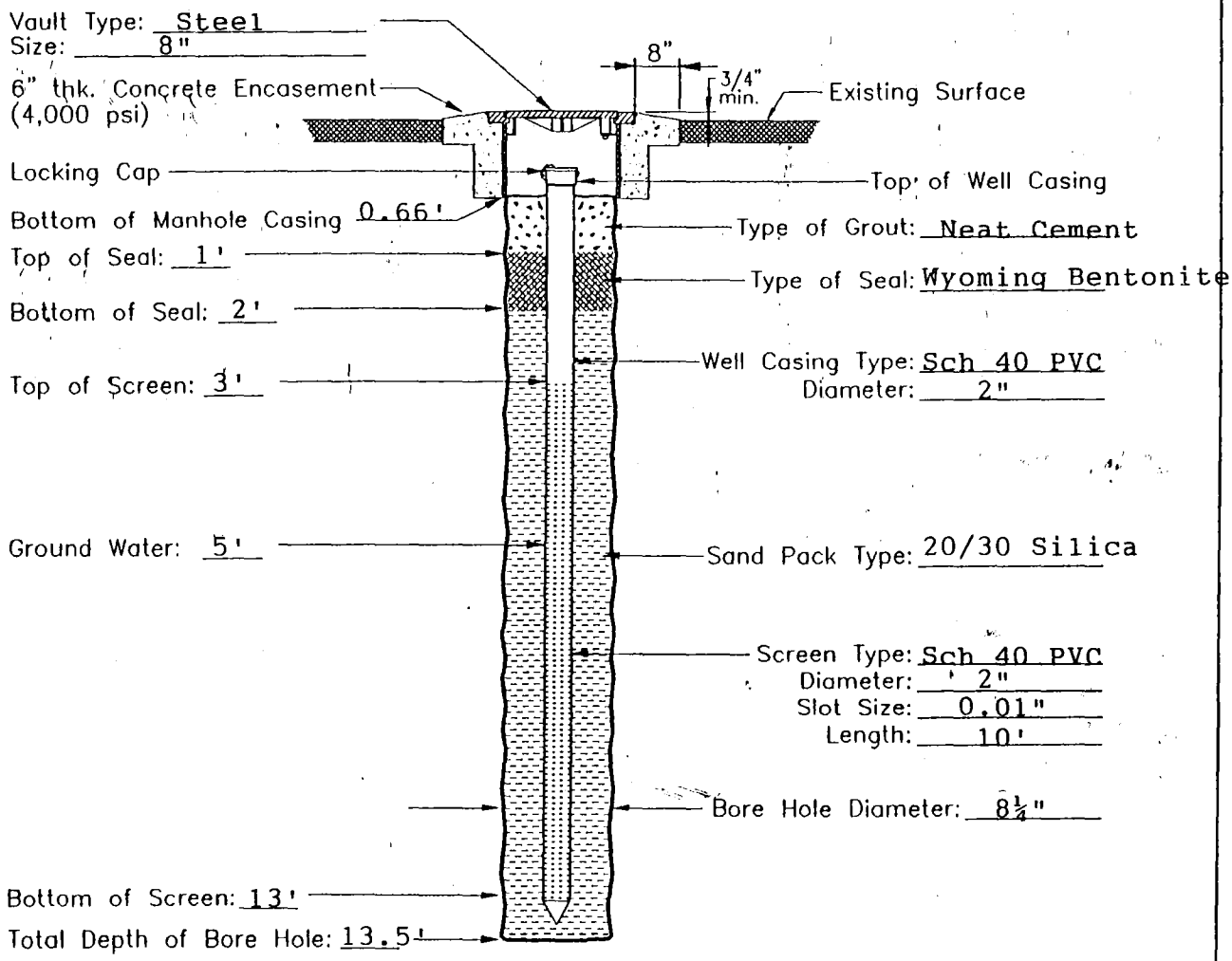
6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC Environmental Dept.
LOCATION: SITE 1122, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 3-13-96 Finish: 3-13-96
TIME Start: 1415 Finish: 1445

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



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

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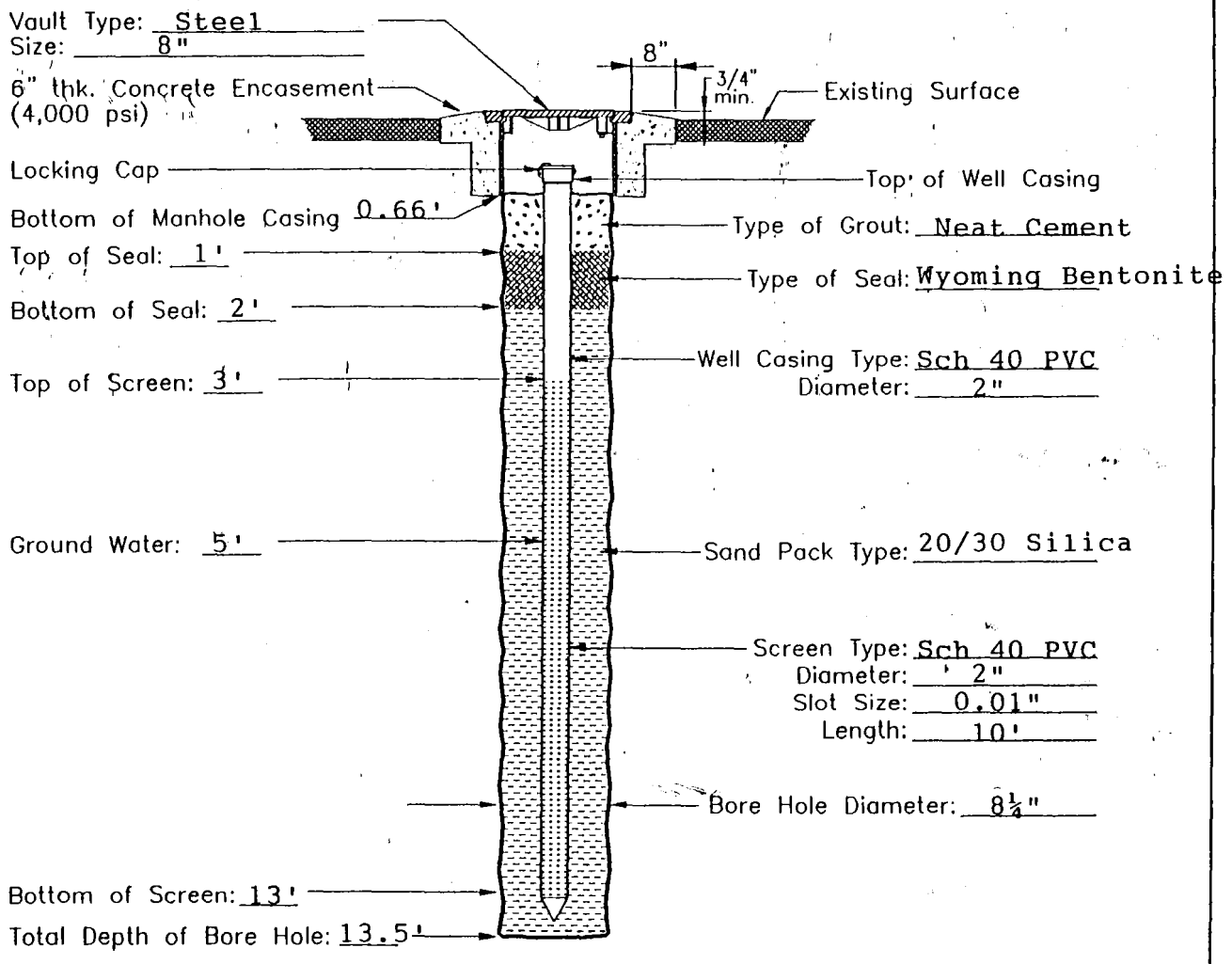
Environmental Division
6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J.Brown
DRILLING CONTRACTOR: S FL Test & Dr
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-7

CLIENT: NPWC Environmental Dept.
LOCATION: SITE 1122, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 3-13-96 Finish: 3-13-96
TIME Start: 1445 Finish: 1515

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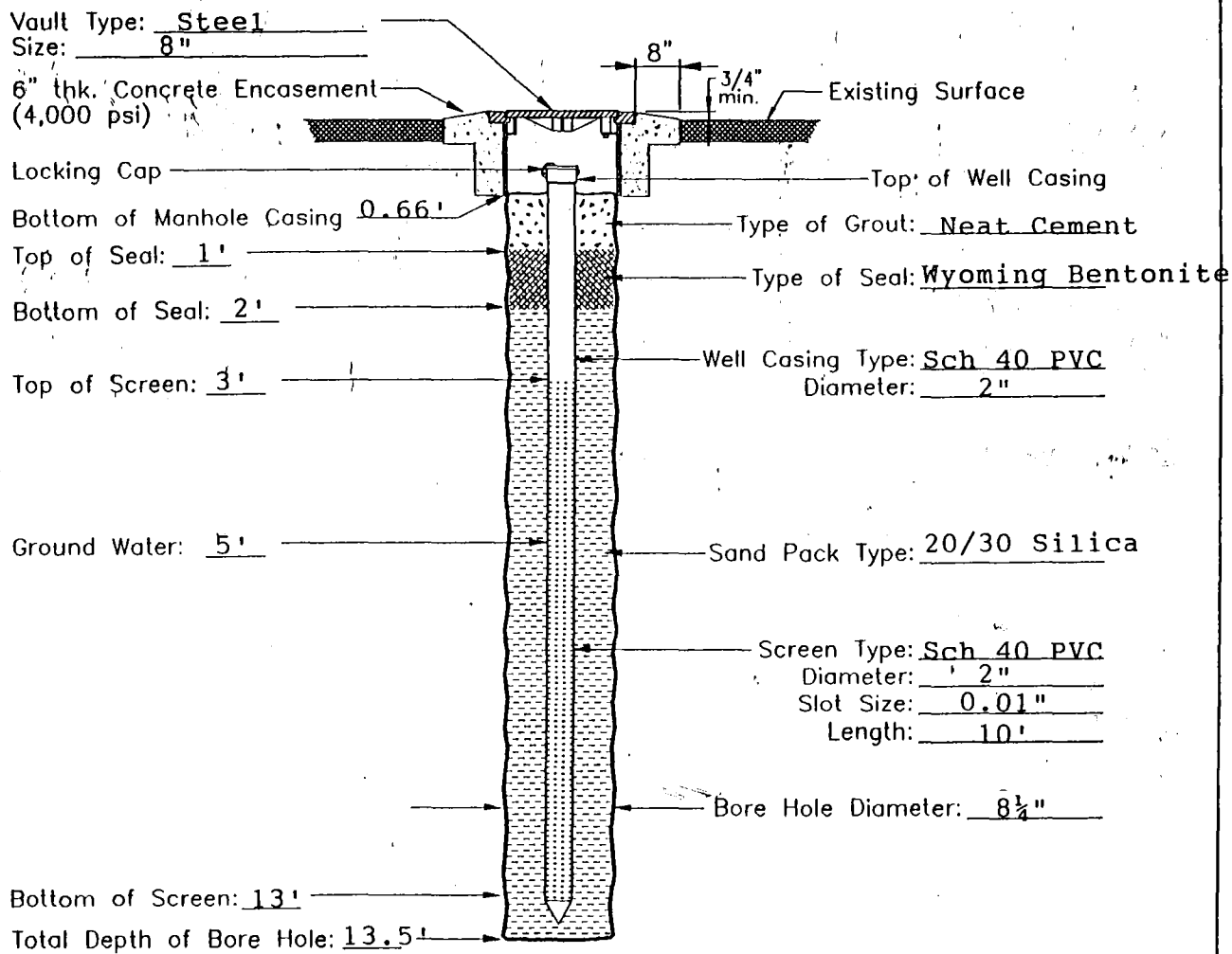
Environmental Division
6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J.Brown
DRILLING CONTRACTOR: S FL Test & Dr
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-8

CLIENT: NPWC Environmental Dept.
LOCATION: SITE 1122, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 3-13-96 Finish: 3-13-96
TIME Start: 1515 Finish: 1545

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

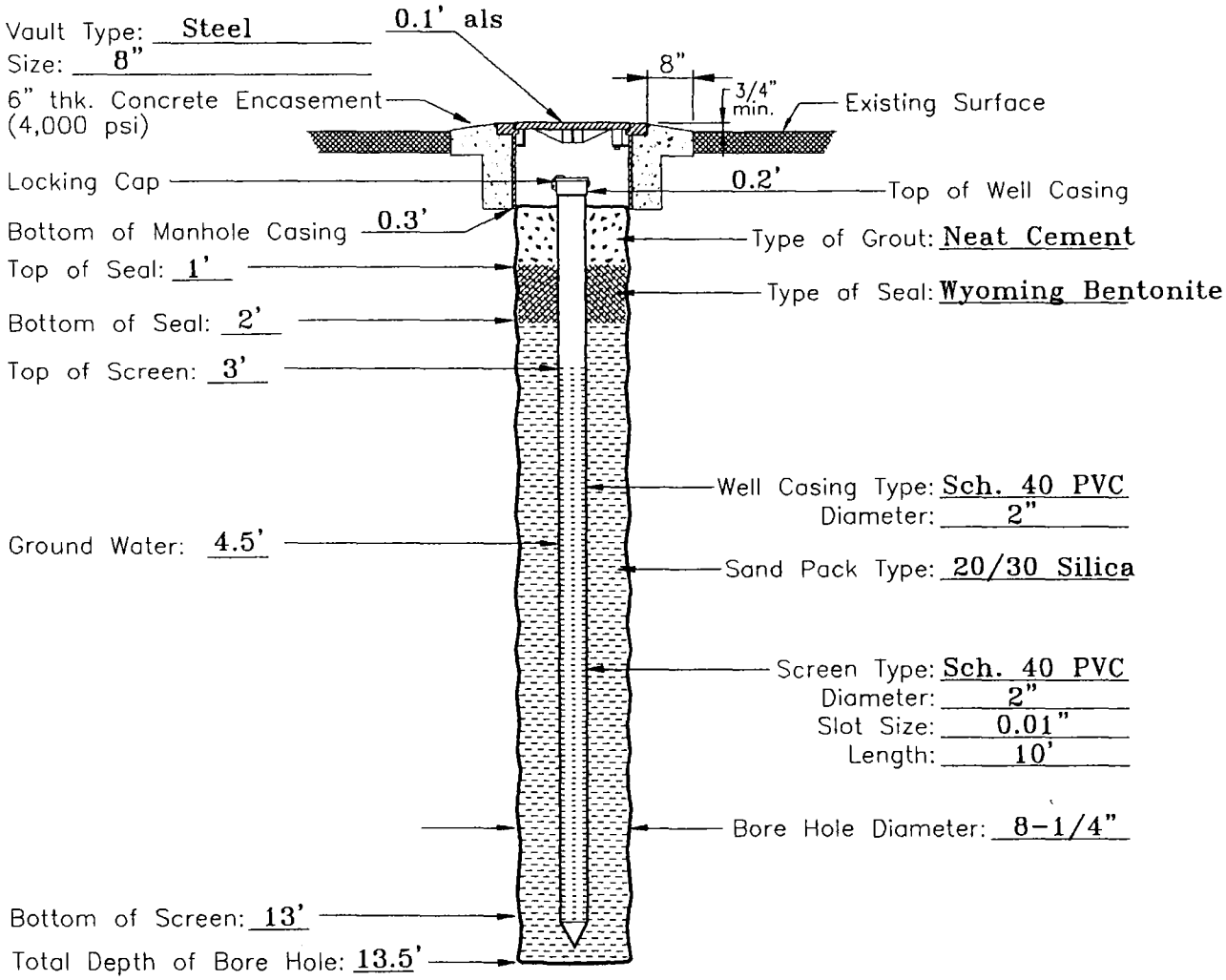
MONITOR WELL CONSTRUCTION DETAIL

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-9

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1122, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/15/96 Finish: 5/15/96
TIME Start: 1200 Finish: 1230

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

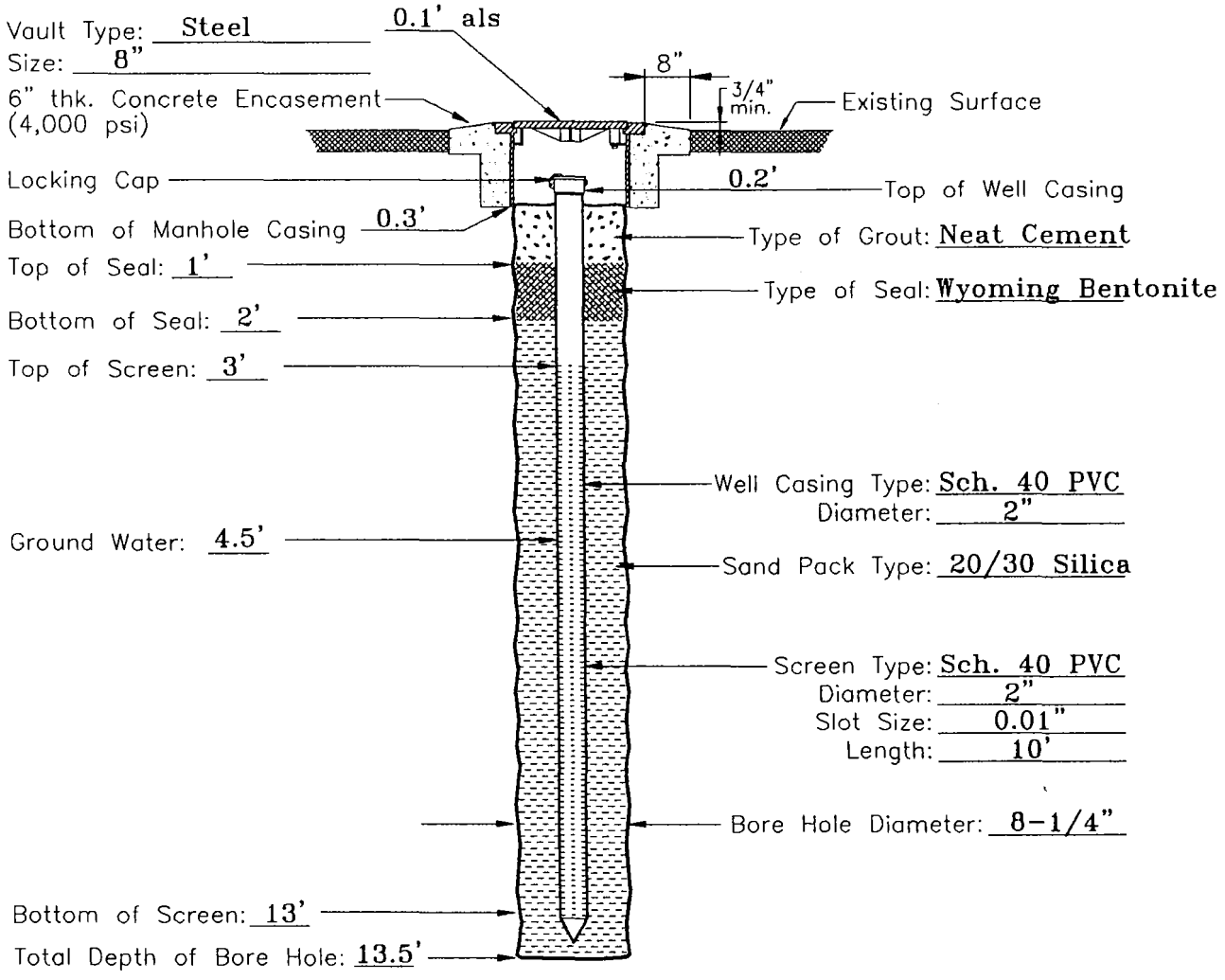
MONITOR WELL CONSTRUCTION DETAIL

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-10

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1122, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/15/96 Finish: 5/15/96
TIME Start: 1230 Finish: 1300

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

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

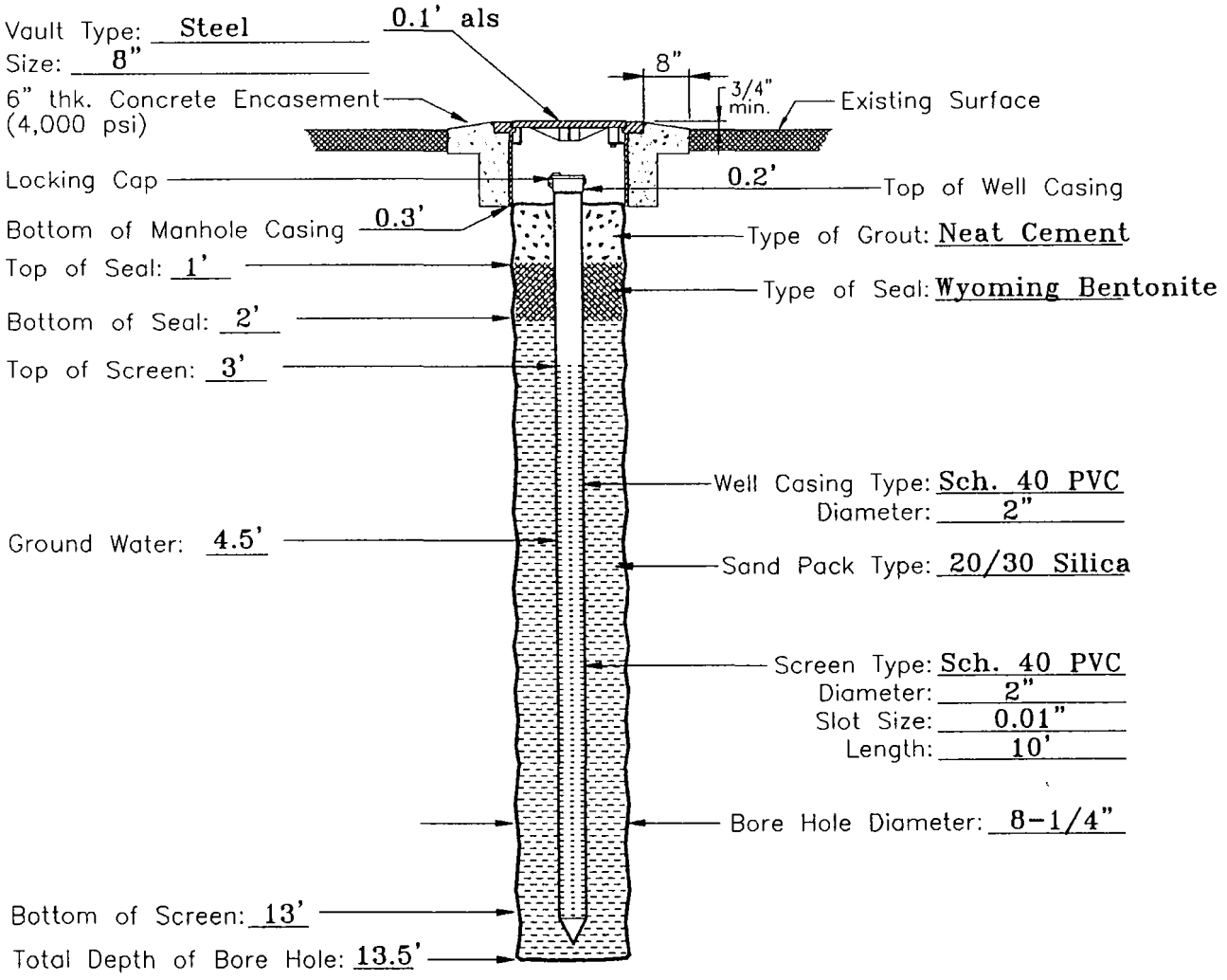
W.E.S., Inc.
Environmental Division
6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-11

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1122, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/15/96 Finish: 5/15/96
TIME Start: 1300 Finish: 1330

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

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

W.E.S., Inc.
Environmental Division

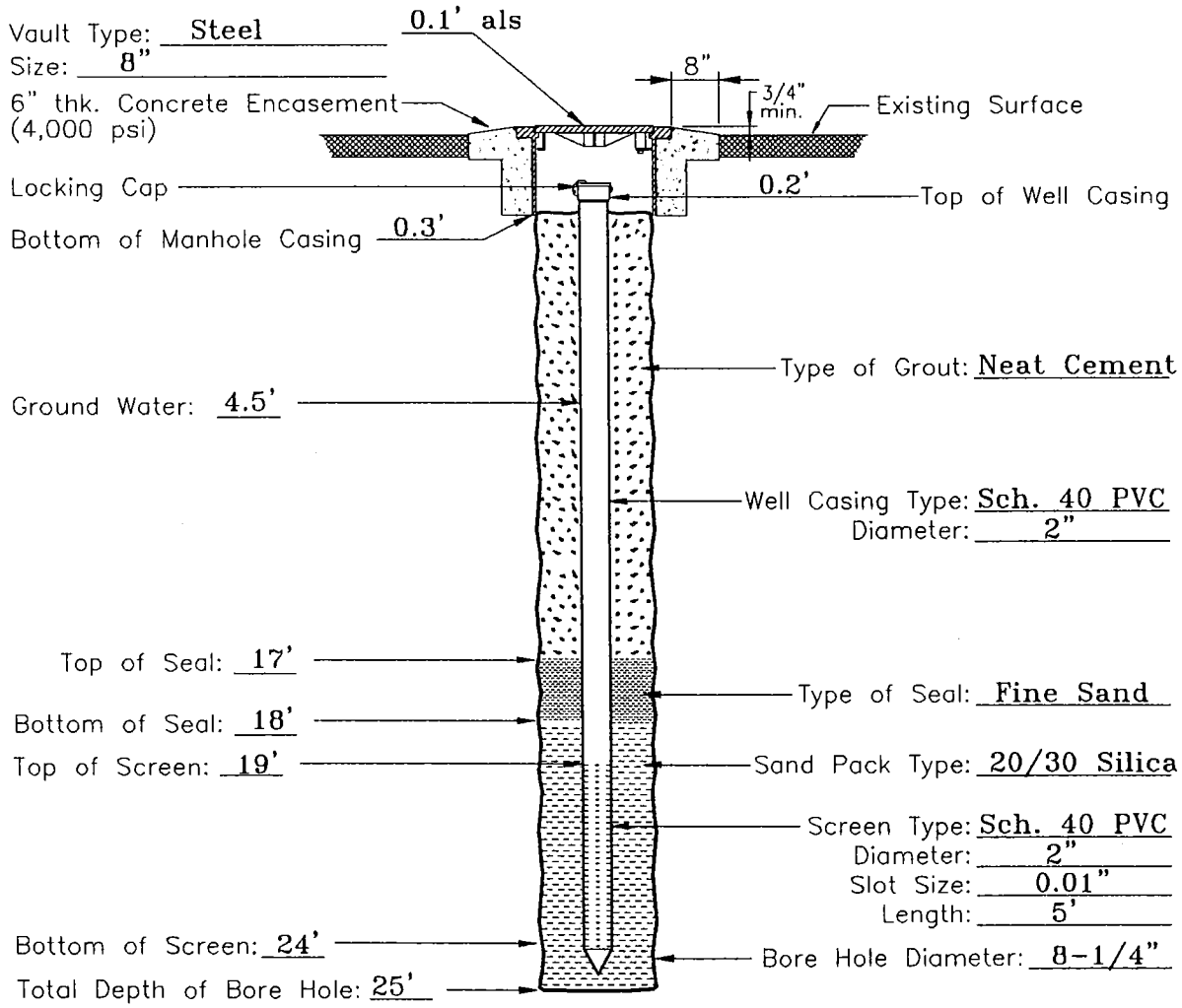
6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

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-12

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1122, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/15/96 Finish: 5/15/96
TIME Start: 1345 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

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

W.E.S., Inc.
Environmental Division

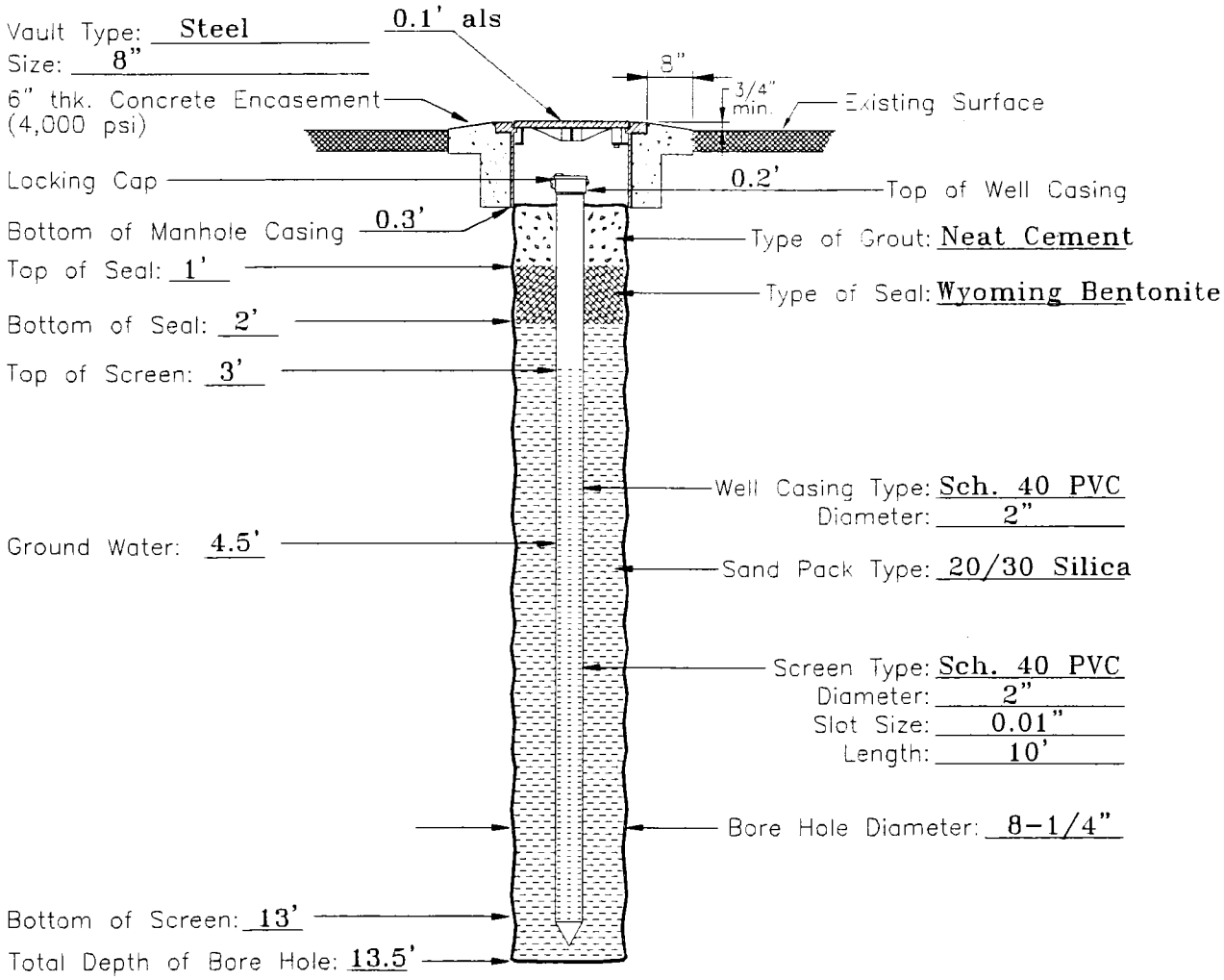
MONITOR WELL CONSTRUCTION DETAIL

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-13

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1122, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 8/14/96 Finish: 8/14/96
TIME Start: 1345 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

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

W.E.S., Inc.
Environmental Division

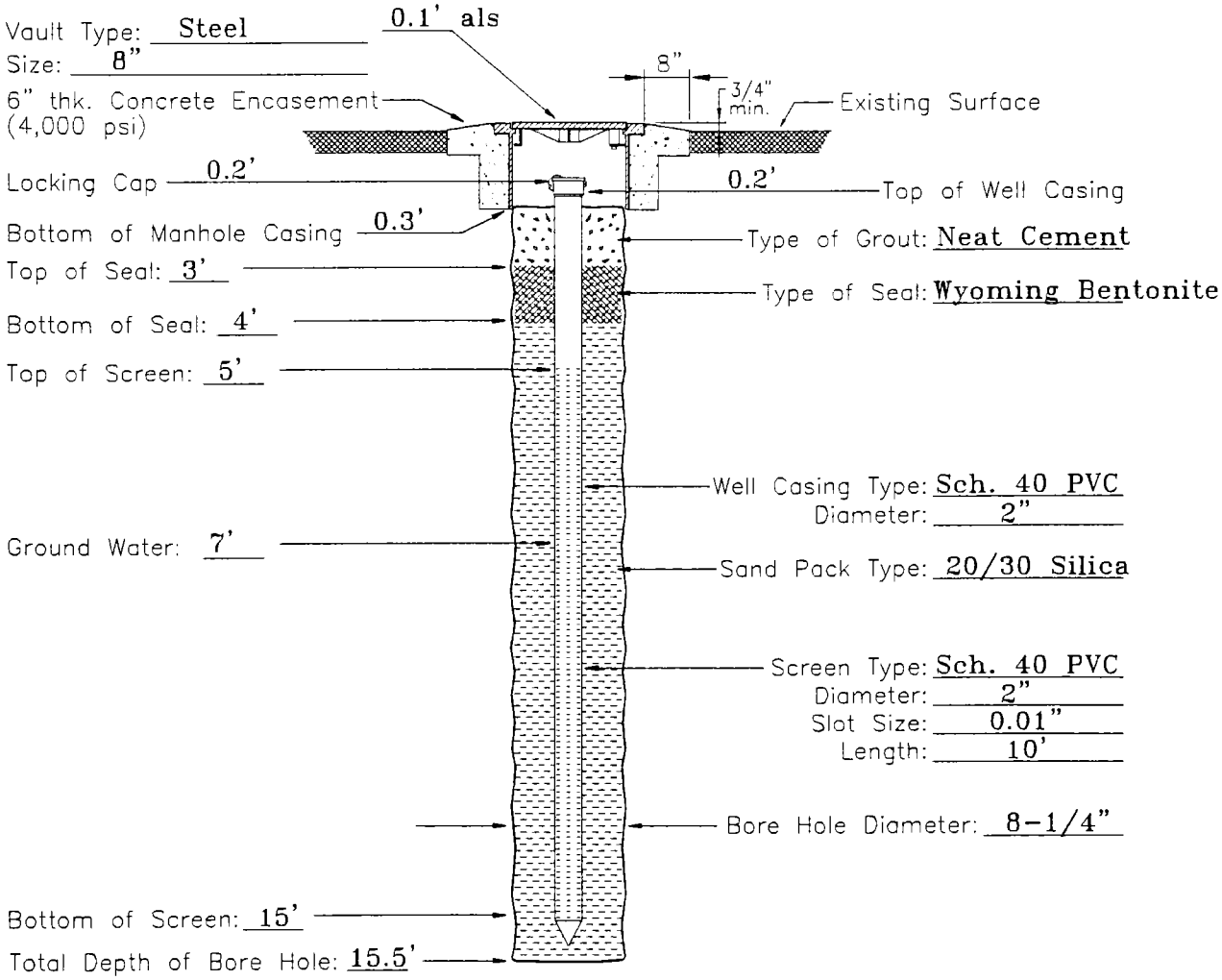
6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-14

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1122, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 12/10/96 Finish: 12/10/96
TIME Start: 1230 Finish: 1315

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

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

APPENDIX C

SLUG TEST DATA, GRAPHS AND CALCULATIONS

W.E.S., Inc.

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 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-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

• 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,

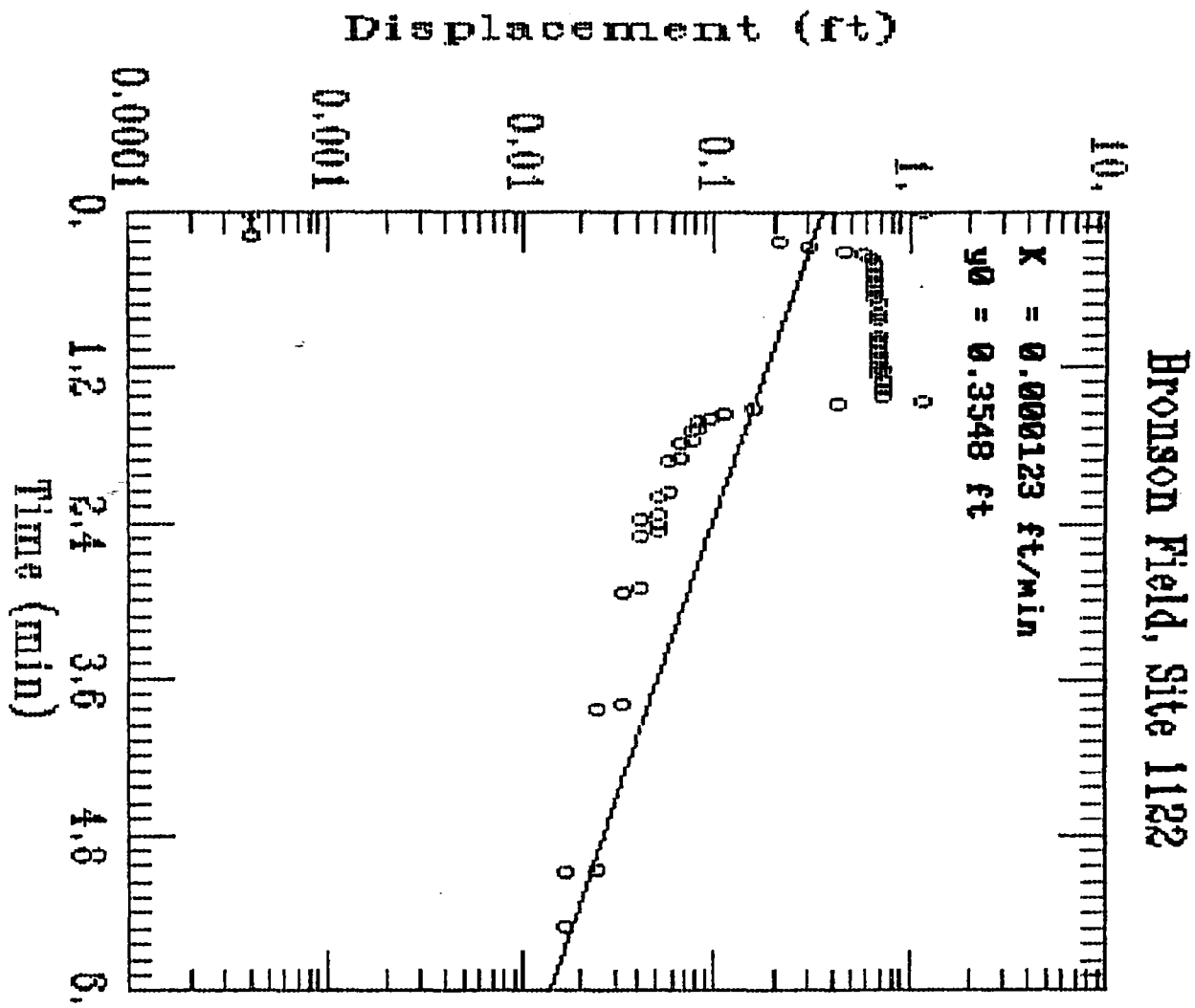
W.E.S., Inc.
Environmental Division

Patrick J. Brown
Staff Geologist

Michael J. Walsh, P.G.
Project Administrator

cc: File

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


Bronson Field, Site 1122
K = 0.000123 ft/min
y0 = 0.3548 ft
10.
1.
0.1
0.01
0.001
0.0001
Displacement (ft)
0.
1.2
2.4
3.6
4.8
6.
Time (min)

S/N SDEE-03A-SN-3098 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	+6.6834	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	+6.9875	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

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

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

Laboratory Report
Volatiles by Method 8260

Requester:	NPWC Environmental	Lab ID Number:	9408256 A
Address:	Bldg. 3691	Sample Date:	25 Jul 94
	NAS Pensacola, FL 32508	Received Date:	25 Jul 94
Phone #:	452-3094	Sample Site:	Bronson Field
Contact:	Paul Semmes	Job Order #:	170 6647

Sample ID#	Lab	1- 5169	2-	3-	4-
Sample Name	Requester	B-1122 B Disposal Dirt			
Collector Name		M. Chambers			
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	25 Jul 94 @ 0958			
Sample Type	Comp/Grab	Grab			
Analyst		J. W. Moore			
Date of Analysis		28 Jul 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- 5169	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	42	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
sec-Butylbenzene	EPA 8260	3	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
tert-Butylbenzene	EPA 8260	13	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	2	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	24	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: 9408256 A
Sample Date: 25 Jul 94
Received Date: 25 Jul 94
Sample Site: Bronson Field
Job Order #: 170 6647

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Volatiles by GCMS (Capillary)	METHOD #	1- 5169	units	Limit	2-	units	Limit	3-	units	Limit	4-	units	Limit
Naphthalene	EPA 8260	2	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
n-Propylbenzene	EPA 8260	2	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	2	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	140	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
1,3,5-Trimethylbenzene	EPA 8260	850	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	40	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
m,p-Xylene	EPA 8260	48	ug/kg	2		ug/kg	2		ug/kg	2		ug/kg	2

Surrogate Recoveries Compound	Acceptance Limits				
1,2-Dichloroethane-d4	70-121	99			
Toluene-d8	84-138	107			
Bromofluorobenzene	59-113	109			

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.

Approved by: Jerry Dees, Laboratory Director Date: 18-Aug-94 @ 10:34

PWC5090/14

End of Report

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
BNA Extractables by 8270A

Requester: NPWC Environmental
Address: Bldg. 3691
NAS Pensacola, FL 32508
Phone #: 452-3094
Contact: Paul Semmes

Lab ID Number: 9408256 B
Sample Date: 25 Jul 94
Received Date: 25 Jul 94
Sample Site: Bronson Field
Job Order #: 170 6647

Sample ID#	Lab	1- 5169	2-	3-	4-
Sample Name	Requester	B-1122 B Disposal Dirt			
Collector Name		M. Chambers			
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	25 Jul 94 @ 0958			
Sample Type	Comp/Grab	Grab			
Analyst		M. chambers			
Date of Analysis		1 Aug 94			
Sample Matrix		Soil			
Dilution		Dilution X 1	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER BNA Extr.:	METHOD #	ID# 1- 5169	units	Det. Limit	ID# 2-	units	Det. Limit	ID# 3-	units	Det. Limit	ID# 4-	units	Det. Limit
Acenaphthene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Acenaphthylene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Acetophenone	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
2-Acetylaminofluorene	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
Aldrin	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
4-Aminobiphenyl	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Aniline	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Anthracene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Aramite	EPA 8270	BDL	ug/kg	825		ug/kg	825		ug/kg	825		ug/kg	825
Benzidine	EPA 8270	BDL	ug/kg	1650		ug/kg	1650		ug/kg	1650		ug/kg	1650
Benzoic Acid	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Benz(a)anthracene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Benzo(b)fluoranthene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Benzo(k)fluoranthene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Benzo(g,h,i)perylene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Benzo(a)pyrene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
p-Benzoquinone	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Benzyl alcohol	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
alpha-BHC	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
beta-BHC	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
delta-BHC	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
gamma-BHC (Lindane)	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
Bis(2-chloroethoxy)methane	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Bis(2-chloroethyl)ether	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Bis(2-chloroisopropyl)ether	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Bis(2-ethylhexyl)phthalate	EPA 8270	580	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
4-Bromophenyl phenyl ether	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Butyl benzyl phthalate	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
4-Chloroaniline	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
Chlorobenzilate	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
4-Chloro-3-methylphenol	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
2-Chloronaphthalene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
2-Chlorophenol	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
4-Chlorophenyl phenyl ether	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Chrysene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
4,4'-DDD	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
4,4'-DDE	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
4,4'-DDT	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Dibenzo(a,h)anthracene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Dibenzofuran	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Di-n-butyl phthalate	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
1,2-Dichlorobenzene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
1,3-Dichlorobenzene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165

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
BNA Extractables by 8270A

Requester: NPWC Environmental
Address: Bldg. 3691
NAS Pensacola, FL 32508
Phone #: 452-3094
Contact: Paul Semmes

Lab ID Number: 9408256 B
Sample Date: 25 Jul 94
Received Date: 25 Jul 94
Sample Site: Bronson Field
Job Order #: 170 6647

PARAMETER BNA Extr.:	METHOD #	ID# 1- 5169	units	Det. Limit	ID# 2-	units	Det. Limit	ID# 3-	units	Det. Limit	ID# 4-	units	Det. Limit
1,4-Dichlorobenzene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
3,3-Dichlorobenzidine	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
2,4-Dichlorophenol	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
2,6-Dichlorophenol	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Dieldrin	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
Diethyl phthalate	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Dimethoate	EPA 8270	BDL	ug/kg	825		ug/kg	825		ug/kg	825		ug/kg	825
Dimethylaminazobenzene	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
7,12-Dimethylbenz(a)anthracene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
3,3'-Dimethylbenzidine	EPA 8270	BDL	ug/kg	825		ug/kg	825		ug/kg	825		ug/kg	825
a,a,-Dimethylphenethylamine	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
2,4-Dimethylphenol	EPA 8270	310	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Dimethyl phthalate	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
4,6-Dinitro-o-cresol	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
2,4-Dinitrophenol	EPA 8270	BDL	ug/kg	825		ug/kg	825		ug/kg	825		ug/kg	825
2,4-Dinitrotoluene	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
2,6-Dinitrotoluene	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
1,2-Diphenylhydrazine	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
Di-n-octyl phthalate	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
Endosulfan-I	EPA 8270	BDL	ug/kg	660		ug/kg	660		ug/kg	660		ug/kg	660
Endosulfan-II	EPA 8270	BDL	ug/kg	660		ug/kg	660		ug/kg	660		ug/kg	660
Endosulfan Sulfate	EPA 8270	BDL	ug/kg	660		ug/kg	660		ug/kg	660		ug/kg	660
Endrin	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
Endrin aldehyde	EPA 8270	BDL	ug/kg	660		ug/kg	660		ug/kg	660		ug/kg	660
Endrin ketone	EPA 8270	BDL	ug/kg	660		ug/kg	660		ug/kg	660		ug/kg	660
Ethyl methanesulfonate	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
Fluoranthene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Fluorene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Heptachlor	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
Heptachlor epoxide	EPA 8270	BDL	ug/kg	660		ug/kg	660		ug/kg	660		ug/kg	660
Hexachlorobenzene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Hexachlorobutadiene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Hexachlorocyclopentadiene	EPA 8270	BDL	ug/kg	825		ug/kg	825		ug/kg	825		ug/kg	825
Hexachloroethane	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Indeno(1,2,3-cd)pyrene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Isodrin	EPA 8270	BDL	ug/kg	825		ug/kg	825		ug/kg	825		ug/kg	825
Isophorone	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
3-Methylcholanthrene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Methyl methanesulfonate	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
2-Methylnaphthalene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
o-Cresol	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
m,p-Cresols	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Naphthalene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
1,4-Naphthoquinone	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
1-Naphthylamine	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
2-Naphthylamine	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
2-Nitroaniline	EPA 8270	BDL	ug/kg	825		ug/kg	825		ug/kg	825		ug/kg	825
3-Nitroaniline	EPA 8270	BDL	ug/kg	825		ug/kg	825		ug/kg	825		ug/kg	825
4-Nitroaniline	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
Nitrobenzene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
2-Nitrophenol	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
4-Nitrophenol	EPA 8270	BDL	ug/kg	825		ug/kg	825		ug/kg	825		ug/kg	825

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
BNA Extractables by 8270A

Requester: NPWC Environmental
Address: Bldg. 3691
NAS Pensacola, FL 32508
Phone #: 452-3094
Contact: Paul Semmes

Lab ID Number: 9408256 B
Sample Date: 25 Jul 94
Received Date: 25 Jul 94
Sample Site: Bronson Field
Job Order #: 170 6647

PARAMETER BNA Extr.:	METHOD #	ID# 1- 5169	units	Det. Limit	ID# 2-	units	Det. Limit	ID# 3-	units	Det. Limit	ID# 4-	units	Det. Limit
5-Nitro-o-toluidine	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
N-nitrosodibutylamine	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
N-nitrosodiethylamine	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
N-nitrosodimethylamine	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
N-nitrosomethylethylamine	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
N-nitrosodiphenylamine	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
N-nitrosodi-n-propylamine	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
N-nitrosomorpholine	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
N-nitrosopiperidine	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
N-nitrosopyrrolidine	EPA 8270	BDL	ug/kg	660		ug/kg	660		ug/kg	660		ug/kg	660
Pentachlorobenzene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Pentachloronitrobenzene	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
Pentachlorophenol	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
Phenacetin	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
Phenanthrene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Phenol	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
1,4-Phenylenediamine	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Phorate	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
2-Picoline	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
Pronamide	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Pyrene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
Pyridine	EPA 8270	BDL	ug/kg	825		ug/kg	825		ug/kg	825		ug/kg	825
Safrole	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
2,3,4,6-Tetrachlorophenol	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330
Thionazine	EPA 8270	BDL	ug/kg	825		ug/kg	825		ug/kg	825		ug/kg	825
o-Toluidine	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
1,2,4-Trichlorobenzene	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
2,4,5-Trichlorophenol	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
2,4,6-Trichlorophenol	EPA 8270	BDL	ug/kg	165		ug/kg	165		ug/kg	165		ug/kg	165
1,3,5-Trinitrobenzene	EPA 8270	BDL	ug/kg	330		ug/kg	330		ug/kg	330		ug/kg	330

SURROGATE RECOVERIES Compound	Acceptance Limits				
Nitrobenzene-d5	23-120	54			
2-Fluorobiphenyl	30-115	57			
Terphenyl-d14	18-137	82			
Phenol-d5	24-125	69			
2-Fluorophenol	25-121	81			
2,4,6-Tribromophenol	19-122	79			

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 18-Aug-94 @ 10:47

PWC5090/14

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:	9408243A
Address:	Bldg. 3691	Sample Date:	25 Jul 94
	NAS Pensacola, FL 32508	Received Date:	25 Jul 94
Phone #:	452-3094	Sample Site:	Bronson Field
Contact:	Paul Semmes	Job Order #:	170 6647

Sample ID#	Lab	1- 5170	2-	3-	4-
Sample Name	Requester	B 1122B Tank			
Collector Name		M Chambers			
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	25 Jul 94 @ 1530			
Sample Type	Comp/Grab	Grab			
Analyst		Joe Mocre			
Date of Analysis		27 Jul 94			
Sample Matrix		Water/Fuel			
Dilution		Dilution X 100	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER Volatiles by GCMS (Capillary)	METHOD #	ID# 1- 5170	units	Det. Limit	ID# 2-	units	Det. Limit	ID# 3-	units	Det. Limit	ID# 4-	units	Det. Limit
Benzene	EPA 8260	38000	ug/l	1000		ug/l	1		ug/l	1		ug/l	1
Bromobenzene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Bromochloromethane	EPA 8260	BDL	ug/l	200		ug/l	2		ug/l	2		ug/l	2
Bromodichloromethane	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Bromoform	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Bromomethane	EPA 8260	BDL	ug/l	200		ug/l	2		ug/l	2		ug/l	2
n-Butylbenzene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
sec-Butylbenzene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
tert-Butylbenzene	EPA 8260	150	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Carbon Tetrachloride	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Chlorobenzene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Chloroethane	EPA 8260	BDL	ug/l	200		ug/l	2		ug/l	2		ug/l	2
Chloroform	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Chloromethane	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
2-Chlorotoluene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
4-Chlorotoluene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Dibromochloromethane	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
1,2-Dibromo-3-chloropropane	EPA 8260	BDL	ug/l	500		ug/l	5		ug/l	5		ug/l	5
1,2-Dibromoethane	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Dibromomethane	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
1,2-Dichlorobenzene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
1,3-Dichlorobenzene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
1,4-Dichlorobenzene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Dichlorodifluoromethane	EPA 8260	BDL	ug/l	200		ug/l	2		ug/l	2		ug/l	2
1,1-Dichloroethane	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
1,2-Dichloroethane	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
1,1-Dichloroethene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
cis-1,2-Dichloroethene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
trans-1,2-Dichloroethene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
1,2-Dichloropropane	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
1,3-Dichloropropane	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
2,2-Dichloropropane	EPA 8260	BDL	ug/l	400		ug/l	4		ug/l	4		ug/l	4
1,1-Dichloropropene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Ethylbenzene	EPA 8260	2300	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Hexachlorobutadiene	EPA 8260	BDL	ug/l	200		ug/l	2		ug/l	2		ug/l	2
Isopropylbenzene	EPA 8260	830	ug/l	100		ug/l	1		ug/l	1		ug/l	1
p-Isopropyltoluene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Methylene chloride	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	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: 9408243A
Sample Date: 25 Jul 94
Received Date: 25 Jul 94
Sample Site: Bronson Field
Job Order #: 170 6647

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Volatiles by GCMS (Capillary)	METHOD #	1- 5170	units	Limit	2-	units	Limit	3-	units	Limit	4-	units	Limit
Naphthalene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
n-Propylbenzene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Styrene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
1,1,1,2-Tetrachloroethane	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
1,1,2,2-Tetrachloroethane	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Tetrachloroethene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Toluene	EPA 8260	29000	ug/l	1000		ug/l	1		ug/l	1		ug/l	1
1,2,3-Trichlorobenzene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
1,2,4-Trichlorobenzene	EPA 8260	BDL	ug/l	200		ug/l	2		ug/l	2		ug/l	2
1,1,1-Trichloroethane	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
1,1,2-Trichloroethane	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Trichloroethene	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Trichlorofluoromethane	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
1,2,3-Trichloropropane	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
1,2,4-Trimethylbenzene	EPA 8260	1000	ug/l	100		ug/l	1		ug/l	1		ug/l	1
1,3,5-Trimethylbenzene	EPA 8260	460	ug/l	100		ug/l	1		ug/l	1		ug/l	1
Vinyl Chloride	EPA 8260	BDL	ug/l	100		ug/l	1		ug/l	1		ug/l	1
o-Xylene	EPA 8260	11000	ug/l	100		ug/l	1		ug/l	1		ug/l	1
m,p-Xylene	EPA 8260	5000	ug/l	200		ug/l	2		ug/l	2		ug/l	2

Surrogate Recoveries Compound	Acceptance Limits				
1,2-Dichloroethane-d4	76-114	92			
Toluene-d8	88-110	98			
Bromofluorobenzene	86-115	95			

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.
Other compounds identified: Acetone @ 3000 ug/l, MEK @ 2200 ug/l.

Approved by: Jerry Deck, Laboratory Director **Date/Time:** 02-Aug-94 @ 13:56

PWC 5090/14

 End of Report

Navy Public Works Center
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Laboratory Report
Extractables by Method 8270A

Requester: NPWC Environmental
Address: Bldg. 3691
NAS Pensacola, FL 32508
Phone #: 452-3094
Contact: Paul Semmes

Lab ID Number: 9408243B
Sample Date: 25 Jul 94
Received Date: 25 Jul 94
Sample Site: Bronson Field
Job Order #: 170 6647

Sample ID#	Lab	1- 5170	2-	3-	4-
Sample Name	Requester	B 1122B Tank			
Collector Name		M. Chambers			
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	25 Jul 94 @ 1530			
Sample Type	Comp/Grab	Grab			
Analyst		M. Chambers			
Date of Analysis		29 Jul 94			
Sample Matrix		Water/Fuel			
Dilution		Dilution X 20	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER BNA Extr.:	METHOD #	ID# 1- 5170	units	Det. Limit	ID# 2-	units	Det. Limit	ID# 3-	units	Det. Limit	ID# 4-	units	Det. Limit
Acenaphthene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Acenaphthylene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Acetophenone	EPA 8270A	100	ug/l	100		ug/l	5		ug/l	5		ug/l	5
2-Acetylaminofluorene	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
Aldrin	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
4-Aminobiphenyl	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Aniline	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Anthracene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Aramite	EPA 8270A	BDL	ug/l	500		ug/l	25		ug/l	25		ug/l	25
Benzidine	EPA 8270A	BDL	ug/l	1000		ug/l	50		ug/l	50		ug/l	50
Benzoic Acid	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Benz(a)anthracene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Benzo(b)fluoranthene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Benzo(k)fluoranthene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Benzo(g,h,i)perylene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Benzo(a)pyrene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
p-Benzoquinone	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Benzyl alcohol	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
alpha-BHC	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
beta-BHC	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
delta-BHC	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
gamma-BHC (Lindane)	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
Bis(2-chloroethoxy)methane	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Bis(2-chloroethyl)ether	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Bis(2-chloroisopropyl)ether	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Bis(2-ethylhexyl)phthalate	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
4-Bromophenyl phenyl ether	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Butyl benzyl phthalate	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
4-Chloroaniline	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
Chlorobenzilate	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
4-Chloro-3-methylphenol	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
2-Chloronaphthalene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
2-Chlorophenol	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
4-Chlorophenyl phenyl ether	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Chrysene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
4,4'-DDD	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
4,4'-DDE	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
4,4'-DDT	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Dibenzo(a,h)anthracene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Dibenzofuran	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Di-n-butyl phthalate	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
1,2-Dichlorobenzene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
1,3-Dichlorobenzene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5

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Laboratory Report
Extractables by Method 8270A

Requester: NPWC Environmental
Address: Bldg. 3691
NAS Pensacola, FL 32508
Phone #: 452-3094
Contact: Paul Semmes

Lab ID Number: 9408243B
Sample Date: 25 Jul 94
Received Date: 25 Jul 94
Sample Site: Bronson Field
Job Order #: 170 6647

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
BNA Extr.:	METHOD #	1- 5170	units	Limit	2-	units	Limit	3-	units	Limit	4-	units	Limit
1,4-Dichlorobenzene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
3,3-Dichlorobenzidine	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
2,4-Dichlorophenol	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
2,6-Dichlorophenol	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Dieldrin	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
Diethyl phthalate	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Dimethoate	EPA 8270A	BDL	ug/l	500		ug/l	25		ug/l	25		ug/l	25
Dimethylaminazobenzene	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
7,12-Dimethylbenz(a)anthracene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
3,3'-Dimethylbenzidine	EPA 8270A	BDL	ug/l	500		ug/l	25		ug/l	25		ug/l	25
a,a,-Dimethylphenethylamine	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
2,4-Dimethylphenol	EPA 8270A	860	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Dimethyl phthalate	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
4,6-Dinitro-o-cresol	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
2,4-Dinitrophenol	EPA 8270A	BDL	ug/l	500		ug/l	25		ug/l	25		ug/l	25
2,4-Dinitrotoluene	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
2,6-Dinitrotoluene	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
1,2-Diphenylhydrazine	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
Di-n-octyl phthalate	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
Endosulfan-I	EPA 8270A	BDL	ug/l	400		ug/l	20		ug/l	20		ug/l	20
Endosulfan-II	EPA 8270A	BDL	ug/l	400		ug/l	20		ug/l	20		ug/l	20
Endosulfan Sulfate	EPA 8270A	BDL	ug/l	400		ug/l	20		ug/l	20		ug/l	20
Endrin	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
Endrin aldehyde	EPA 8270A	BDL	ug/l	400		ug/l	20		ug/l	20		ug/l	20
Endrin ketone	EPA 8270A	BDL	ug/l	400		ug/l	20		ug/l	20		ug/l	20
Ethyl methanesulfonate	EPA 8270A	BDL.	ug/l	200		ug/l	10		ug/l	10		ug/l	10
Fluoranthene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Fluorene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Heptachlor	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
Heptachlor epoxide	EPA 8270A	BDL	ug/l	400		ug/l	20		ug/l	20		ug/l	20
Hexachlorobenzene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Hexachlorobutadiene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Hexachlorocyclopentadiene	EPA 8270A	BDL	ug/l	500		ug/l	25		ug/l	25		ug/l	25
Hexachloroethane	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Indeno(1,2,3-cd)pyrene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Isodrin	EPA 8270A	BDL	ug/l	500		ug/l	25		ug/l	25		ug/l	25
Isophorone	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
3-Methylcholanthrene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Methyl methanesulfonate	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
2-Methylnaphthalene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
o-Cresol	EPA 8270A	1200	ug/l	100		ug/l	5		ug/l	5		ug/l	5
m,p-Cresols	EPA 8270A	2300	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Naphthalene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
1,4-Naphthoquinone	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
1-Naphthylamine	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
2-Naphthylamine	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
2-Nitroaniline	EPA 8270A	BDL	ug/l	500		ug/l	25		ug/l	25		ug/l	25
3-Nitroaniline	EPA 8270A	BDL	ug/l	500		ug/l	25		ug/l	25		ug/l	25
4-Nitroaniline	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
Nitrobenzene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
2-Nitrophenol	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
4-Nitrophenol	EPA 8270A	BDL	ug/l	500		ug/l	25		ug/l	25		ug/l	25

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Laboratory Report
Extractables by Method 8270A

Requester: NPWC Environmental
Address: Bldg. 3691
NAS Pensacola, FL 32508
Phone #: 452-3094
Contact: Paul Semmes

Lab ID Number: 9408243B
Sample Date: 25 Jul 94
Received Date: 25 Jul 94
Sample Site: Bronson Field
Job Order #: 170 6647

PARAMETER BNA Extr.:	METHOD #	ID# 1- 5170	units	Det. Limit	ID# 2-	units	Det. Limit	ID# 3-	units	Det. Limit	ID# 4-	units	Det. Limit
5-Nitro-o-toluidine	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
N-nitrosodibutylamine	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
N-nitrosodiethylamine	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
N-nitrosodimethylamine	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
N-nitrosomethylethylamine	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
N-nitrosodiphenylamine	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
N-nitrosodi-n-propylamine	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
N-nitrosomorpholine	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
N-nitrosopiperidine	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
N-nitrosopyrrolidine	EPA 8270A	BDL	ug/l	400		ug/l	20		ug/l	20		ug/l	20
Pentachlorobenzene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Pentachloronitrobenzene	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
Pentachlorophenol	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
Phenacetin	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
Phenanthrene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Phenol	EPA 8270A	1600	ug/l	100		ug/l	5		ug/l	5		ug/l	5
1,4-Phenylenediamine	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Phorate	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
2-Picoline	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
Pronamide	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Pyrene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
Pyridine	EPA 8270A	BDL	ug/l	500		ug/l	25		ug/l	25		ug/l	25
Safrole	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
2,3,4,6-Tetrachlorophenol	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10
Thionazine	EPA 8270A	BDL	ug/l	500		ug/l	25		ug/l	25		ug/l	25
o-Toluidine	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
1,2,4-Trichlorobenzene	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
2,4,5-Trichlorophenol	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
2,4,6-Trichlorophenol	EPA 8270A	BDL	ug/l	100		ug/l	5		ug/l	5		ug/l	5
1,3,5-Trinitrobenzene	EPA 8270A	BDL	ug/l	200		ug/l	10		ug/l	10		ug/l	10

SURROGATE RECOVERIES Compound	Acceptance Limits				
2-Fluorophenol	21-110	30			
Phenol-d5	10-110	39			
Nitrobenzene-d5	35-114	55			
2-Fluorobiphenyl	43-116	76			
2,4,6-Tribromophenol	10-123	100			
Terphenyl-d14	33-141	94			

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 02-Aug-94 @ 14:03

PWC5090/14

Navy Public Works Center
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Autovon 922-4728/3642

Laboratory Report

Volatile Aromatics by Method 8260

Requester: NPWC Environmental
Address: Bldg. 3691
NAS Pensacola, Fl 32508
Phone #: 452-3094
Contact: Paul Semmes

Lab ID Number: 9506019 A
Sample Date: 30 May 95
Received Date: 31 May 95
Sample Site: Bronson Field
Job Order #: 168 4195

Sample ID#	Lab	1- 53096	2- 53097	3- 53098	4- 53099
Sample Name	Requester	MW10/1122	MW12/1140	MW16/1140	MW11/1121
Collector Name		JJ/DG	JJ/DG	JJ/DG	JJ/DG
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	30 May 95 @ 1636	30 May 95 @ 1650	30 May 95 @ 1705	30 May 95 @ 1727
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab
Analyst		J. Moore	J. Moore	J. Moore	J. Moore
Date of Analysis		31 May 95	31 May 95	31 May 95	31 May 95
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- 53096	units	Limit	2- 53097	units	Limit	3-	units	Limit	4-	units	Limit
Benzene	EPA 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Ethylbenzene	EPA 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Toluene	EPA 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Xylenes (Total)	EPA 8260	BDL	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		ug/l	1		ug/l	1		ug/l	1		ug/l	1

Surrogate Recoveries Compound	Acceptance Limits				
1,2-Dichloroethane-d4	76-114	96	99	96	111
Toluene-d8	88-110	101	99	101	104
Bromoflourobenzene	86-115	106	88	88	88

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 @ 10:57
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PWC 5090/14

Page 1 of 1

End of Report

Navy Public Works Center
Environmental Laboratory

Laboratory Report
PAH's by Method 8270A

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

Lab ID Number: 9506019 B
Sample Date: 30 May 95
Received Date: 31 May 95
Sample Site: Bronson Field
Job Order #: 168 4195

Sample ID#	Lab	1- 53096	2- 53097	3- 53098	4- 53099
Sample Name	Requester	MW10/1122	MW12/1140	MW16/1140	MW11/1121
Collector Name		JJ/DG	JJ/DG	JJ/DG	JJ/DG
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	30 May 95 @ 1636	30 May 95 @ 1650	30 May 95 @ 1705	30 May 95 @ 1727
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab
Analyst		J. Moore	J. Moore	J. Moore	J. Moore
Date of Analysis		5 Jun 95	5 Jun 95	5 Jun 95	5 Jun 95
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.
Polynuclear Aromatics (PAH's)	METHOD #	1- 53096	units	Limit	2- 53097	units	Limit	3- 53098	units	Limit	4- 53099	units	Limit
Acenaphthene	SW 8270A	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5
Acenaphthylene	SW 8270A	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5
Anthracene	SW 8270A	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2
Benzo(a)anthracene	SW 8270A	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
Benzo(a)pyrene	SW 8270A	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2
Benzo(b)fluoranthene	SW 8270A	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4
Benzo(g,h,i)perylene	SW 8270A	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
Benzo(k)fluoranthene	SW 8270A	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4
Chrysene	SW 8270A	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
Dibenzo(a,h)anthracene	SW 8270A	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
Fluoranthene	SW 8270A	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2
Fluorene	SW 8270A	BDL	ug/l	4	10	ug/l	4	5	ug/l	4	BDL	ug/l	4
Indeno(1,2,3-cd)pyrene	SW 8270A	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2
Naphthalene	SW 8270A	BDL	ug/l	7	13	ug/l	7	BDL	ug/l	7	BDL	ug/l	7
Phenanthrene	SW 8270A	BDL	ug/l	3	5	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
Pyrene	SW 8270A	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
1-Methylnaphthalene*	SW 8270A	BDL	ug/l	5	70	ug/l	5	20	ug/l	5	BDL	ug/l	5
2-Methylnaphthalene	SW 8270A	BDL	ug/l	7	90	ug/l	7	30	ug/l	7	BDL	ug/l	7

SURROGATE RECOVERIES Compound	Acceptance Limits				
Nitrobenzene-d5	35-114	60	62	57	64
2-Fluorobiphenyl	43-116	69	72	60	71
Terphenyl-d14	33-141	72	67	57	71

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: 09-Jun-95 @ 10:25
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PWC 5090/14

Navy Public Works Center
Environmental Laboratory

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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: 9603080 A
Sample Date: 21 Mar 96
Received Date: 22 Mar 96
Sample Site: Bronson Field, Bldg. 1122
Job Order #: 130 5001

Sample ID#		1- 61203			2- 61204			3- 61205			4- 61206		
Sample Name		MW-1			MW-2			MW-3			MW-4		
Collector Name		P. J. B./V. S.			P. J. B./V. S.			P. J. B./V. S.			P. J. B./V. S.		
Date/Time	Comp start												
Collected	Comp stop												
(Military)	Grab	21 Mar 96	@	1400	21 Mar 96	@	1100	21 Mar 96	@	1130	21 Mar 96	@	1200
Sample Type	Comp/Grab	Grab			Grab			Grab			Grab		
Analyst		J. Moore			J. Moore			J. Moore			J. Moore		
Date of Analysis		22 Mar 96			23 Mar 96			28 Mar 96			28 Mar 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- 61203	units	Limit	2- 61204	units	Limit	3- 61205	units	Limit	4- 61206	units	Limit
Benzene	SW 8260	BDL	ug/l	1	BDL	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	BDL	ug/l	1	BDL	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	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2

Surrogate Recoveries Compound	Acceptance Limits				
1,2-Dichloroethane-d4	76-114	103	103	100	106
Toluene-d8	88-110	100	100	101	103
Bromoflourobenzene	86-115	100	100	99	99

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 04-Apr-96 @ 14:56
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PWC 5090/14

D-13

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Navy Public Works Center
Environmental Laboratory

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Requester: **NPWC Environmental**
Address: Bldg. 3887
NAS Pensacola, FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Laboratory Report

601/602 Volatiles by Method 8260

Report Number: 9603081 A
Sample Date: 21 Mar 96
Received Date: 22 Mar 96
Sample Site: Bronson Field, Bldg. 1122
Job Order #: 130 5001

Sample ID#		1- 61207			2- 61208			3- 61209			4- 61210		
Sample Name		MW-5			MW-6			MW-7			MW-8		
Collector Name		P. J. B./V. S.			P. J. B./V. S.			P. J. B./V. S.			P. J. B./V. S.		
Date/Time	Comp start												
Collected	Comp stop												
(Military)	Grab	21 Mar 96	@	1230	21 Mar 96	@	1330	21 Mar 96	@	1430	21 Mar 96	@	1200
Sample Type	Comp/Grab	Grab			Grab			Grab			Grab		
Analyst		J. Moore			J. Moore			J. Moore			J. Moore		
Date of Analysis		28 Mar 96			26 Mar 96			28 Mar 96			28 Mar 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- 61207	units	Limit	2- 61208	units	Limit	3- 61209	units	Limit	4- 61210	units	Limit
Benzene	SW 8260	BDL	ug/l	1	BDL	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	BDL	ug/l	1	BDL	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	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2

Surrogate Recoveries Compound	Acceptance Limits				
1,2-Dichloroethane-d4	76-114	102	105	102	107
Toluene-d8	88-110	103	103	103	103
Bromoflourobenzene	86-115	100	99	99	106

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 04-Apr-96 @ 15:15
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PWC 5090/14

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D-14

Navy Public Works Center
Environmental Laboratory

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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: 9603082 A
Sample Date: 21 Mar 96
Received Date: 22 Mar 96
Sample Site: Bronson Field, Bldg. 1122
Job Order #: 130 5001

Sample ID#		1- 61211	2- 61212	3- 61213	4-
Sample Name		Eq. Blank	Duplicate	Trip Blank	
Collector Name		P. J. B./V. S.	P. J. B./V. S.	P. J. B./V. S.	
Date/Time Collected (Military)	Comp start				
	Comp stop				
	Grab	21 Mar 96 @ 1045	21 Mar 96 @ N/S	21 Mar 96 @ 0900	
Sample Type	Comp/Grab	Grab	Grab	Grab	
Analyst		J. Moore	J. Moore	J. Moore	
Date of Analysis		22 Mar 96	28 Mar 96	22 Mar 96	
Sample Matrix		Deionized water	Groundwater	Deionized water	
Dilution		Dilution X 1	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER Volatiles by GCMS (Capillary)	METHOD #	ID# 1- 61211	units	Det. Limit	ID# 2- 61212	units	Det. Limit	ID# 3- 61213	units	Det. Limit	ID# 4-	units	Det. Limit
Benzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Bromodichloromethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Bromoform	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Bromomethane	SW 8260	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2		ug/l	2
Carbon Tetrachloride	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Chlorobenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Chloroethane	SW 8260	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2		ug/l	2
2-Chloroethylvinyl ether	SW 8260	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3		ug/l	3
Chloroform	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Chloromethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Dibromochloromethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,2-Dichlorobenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,3-Dichlorobenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,4-Dichlorobenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Dichlorodifluoromethane	SW 8260	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2		ug/l	2
1,1-Dichloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,2-Dichloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,1-Dichloroethene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
trans-1,2-Dichloroethene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,2-Dichloropropane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
cis-1,3-Dichloropropene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
trans-1,3-Dichloropropene	SW 8260	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4		ug/l	4
Ethylbenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Methylene chloride	SW 8260	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5		ug/l	5
Methyl-tert-butyl Ether (MTBE)	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,1,2,2-Tetrachloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Tetrachloroethene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Toluene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,1,1-Trichloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,1,2-Trichloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Trichloroethene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Trichlorofluoromethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Vinyl Chloride	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Xylenes (Total)	SW 8260	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2		ug/l	2

Surrogate Recoveries Compound	Acceptance Limits				
1,2-Dichloroethane-d4	76-114	104	107	107	
Toluene-d8	88-110	100	105	99	
Bromoflourobenzene	86-115	99	107	97	

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.
N/S = Not Submitted.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 04-Apr-96 @ 15:12
Report Generated

PWC 5090/14

D-15

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

Laboratory Report
Total PAH's by Method 8270A

Requester: **NPWC Environmental**
Address: Bldg. 3887
NAS Pensacola, FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Report Number: 9603080 B
Sample Date: 21 Mar 96
Received Date: 22 Mar 96
Sample Site: Bronson Field, Bldg. 1122
Job Order #: 130 5001

Sample ID#	Lab	1- 61203	2- 61204	3- 61205	4- 61206
Sample Name	Requester	MW-1	MW-2	MW-3	MW-4
Collector Name		P. J. B./V. S.	P. J. B./V. S.	P. J. B./V. S.	P. J. B./V. S.
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	21 Mar 96 @ 1400	21 Mar 96 @ 1100	21 Mar 96 @ 1130	21 Mar 96 @ 1200
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab
Analyst		M. Chambers	M. Chambers	M. Chambers	M. Chambers
Date of Analysis		26 Mar 96	26 Mar 96	26 Mar 96	26 Mar 96
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Dilution		Dilution X 1	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER	ANALYSIS	ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Polynuclear Aromatics (PAH's)	METHOD #	1- 61203	units	Limit	2- 61204	units	Limit	3- 61205	units	Limit	4- 61206	units	Limit
Acenaphthene	SW846 8270	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5
Acenaphthylene	SW846 8270	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5
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	68	54	52	44
2-Fluorobiphenyl	43-116	59	51	46	43
Terphenyl-d14	33-141	63	62	51	43

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.

Approved by: Jerry Bees, Laboratory Director

Date/Time: 04-Apr-96 @ 15:18
Report Generated

End of Report

PWC 5090/14

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: 9603081 B
Sample Date: 21 Mar 96
Received Date: 22 Mar 96
Sample Site: Bronson Field, Bldg. 1122
Job Order #: 130 5001

Sample ID#	Lab	1- 61207	2- 61208	3- 61209	4- 61210
Sample Name	Requester	MW-5	MW-6	MW-7	MW-8
Collector Name		P. J. B./V. S.	P. J. B./V. S.	P. J. B./V. S.	P. J. B./V. S.
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	21 Mar 96 @ 1230	21 Mar 96 @ 1330	21 Mar 96 @ 1300	21 Mar 96 @ 1430
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab
Analyst		M. Chambers	M. Chambers	M. Chambers	J. Moore
Date of Analysis		28 Mar 96	28 Mar 96	28 Mar 96	2 Apr 96
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Dilution		Dilution X 1	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER	ANALYSIS	ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Polynuclear Aromatics (PAH's)	METHOD #	1- 61207	units	Limit	2- 61208	units	Limit	3- 61209	units	Limit	4- 61210	units	Limit
Acenaphthene	SW846 8270	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5
Acenaphthylene	SW846 8270	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5
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	99	81	82	88
2-Fluorobiphenyl	43-116	87	59	82	79
Terphenyl-d14	33-141	94	69	95	93

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.
Sample 61210 was extracted on 25 Mar 96 and analyzed on 28 Mar 96. The 2-Fluorobiphenyl surrogate recovered outside acceptance limits. The sample was reextracted on 2 Apr 96 and reanalyzed on 2 Apr 96. All surrogates in the reextracted sample were within acceptance limits.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 10-Apr-96 @ 15:11
Report Generated

End of Report

PWC 5090/14

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: 9603082 B
Sample Date: 21 Mar 96
Received Date: 22 Mar 96
Sample Site: Bronson Field, Bldg. 1122
Job Order #: 130 5001

Sample ID#	Lab	1- 61211	2- 61212	3- 61213	4-
Sample Name	Requester	Eq. Blank	Duplicate	Trip Blank	
Collector Name		P. J. B./V. S.	P. J. B./V. S.	P.J.B./V.S.	
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	21 Mar 96 @ 1045	21 Mar 96 @ N/S	21 Mar 96 0900	
Sample Type	Comp/Grab	Grab	Grab	Grab	
Analyst		J. Moore	J. Moore	J. Moore	
Date of Analysis		20 Mar 96	2 Apr 96	28 Mar 96	
Sample Matrix		Deionized water	Groundwater	Deionized Water	
Dilution		Dilution X 1	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER	ANALYSIS	ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Polynuclear Aromatics (PAH's)	METHOD #	1- 61211	units	Limit	2- 61212	units	Limit	3-	units	Limit	4-	units	Limit
Acenaphthene	SW846 8270	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5		ug/l	5
Acenaphthylene	SW846 8270	BDL	ug/l	5	BDL	ug/l	5	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	70	81	87	
2-Fluorobiphenyl	43-116	67	78	82	
Terphenyl-d14	33-141	84	88	93	

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.
N/S = Not Submitted.
Sample 61212 was extracted on 25 Mar 96 and analyzed on 28 Mar 96. The 2-Fluorobiphenyl surrogate recovered outside acceptance limits. The sample was reextracted on 2 Apr 96 and reanalyzed on 2 Apr 96. All surrogates in the reextracted sample were within acceptance limits.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 10-Apr-96 @ 15:07
Report Generated

PWC 5090/14

End of Report

Navy Public Works Center
Environmental Laboratory

Laboratory Report
TPH's by IR

Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone 904-452-3642/4728
Autovon 922-3642/4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3887, Code 910
NAS Pensacola, Fl 32508
Phone #: 452-3180
Contact: Greg Campbell

Report Number: 9603080 E
Sample Date: 21 Mar 96
Received Date: 22 mar 96
Sample Site: Bronson Field, Bldg 1122
Job Order #: 130 5001

Sample ID#	Lab	1- 61203			2- 61204			3- 61205			4- 61206		
Sample Name	Requester	MW-1			MW-2			MW-3			MW-4		
Collector Name		P.J.B./V.S.			P.J.B./V.S.			P.J.B./V.S.			P.J.B./V.S.		
Time/Date	Comp start												
Sample Collected	Comp stop												
(Military)	Grab	21 Mar 96 @ 1400			21 Mar 96 @ 1100			21 Mar 96 @ 1130			21 Mar 96 @ 1200		
Sample Type	Comp/Grab	Grab			Grab			Grab			Grab		
Analyst		Brent Jacquart			Brent Jacquart			Brent Jacquart			Brent Jacquart		
Date of Analysis		4 Apr 96			4 Apr 96			4 Apr 96			4 Apr 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.
Total Petroleum Hydrocarbons	METHOD #	1- 61203	units	Limit	2- 61204	units	Limit	3- 61205	units	Limit	4- 61206	units	Limit
TPH's by IR	EPA 418.1	BDL	mg/l	5	12	mg/l	5	BDL	mg/l	5	BDL	mg/l	5

Comments: mg/kg=milligrams per kilogram (ppm). BDL = Below Detection Limit.

Approved by: Jerry Dees, Laboratory Director

Date: 05-Apr-96 @ 13:51

PWC 5090/14

End of Report

Navy Public Works Center
Environmental Laboratory

Laboratory Report
TPH's by IR

Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone 904-452-3642/4728
Autovon 922-3642/4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3887, Code 910
NAS Pensacola, Fl 32508
Phone #: 452-3180
Contact: Greg Campbell

Report Number: 9603081 E
Sample Date: 21 Mar 96
Received Date: 22 mar 96
Sample Site: Bronson Field, Bldg 1122
Job Order #: 130 5001

Sample ID#	Lab	1- 61207	2- 61208	3- 61209	4- 61210
Sample Name	Requester	MW-5	MW-6	MW-7	MW-8
Collector Name		P.J.B./V.S.	P.J.B./V.S.	P.J.B./V.S.	P.J.B./V.S.
Time/Date	Comp start				
Sample Collected	Comp stop				
(Military)	Grab	21 Mar 96 @ 1230	21 Mar 96 @ 1330	21 Mar 96 @ 1300	21 Mar 96 @ 1430
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab
Analyst		Brent Jacquart	Brent Jacquart	Brent Jacquart	Brent Jacquart
Date of Analysis		4 Apr 96	4 Apr 96	4 Apr 96	4 Apr 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.
Total Petroleum Hydrocarbons	METHOD #	1- 61207	units	Limit	2- 61208	units	Limit	3- 61209	units	Limit	4- 61210	units	Limit
TPH's by IR	EPA 418.1	40 mg/l		5	BDL mg/l		5	BDL mg/l		5	64 mg/l		5

Comments: mg/kg=milligrams per kilogram (ppm). BDL = Below Detection Limit.

Approved by: Jerry Dees, Laboratory Director

Date: 05-Apr-96 @ 13:54

PWC 5090/14

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone 904-452-3642/4728
Autovon 922-3642/4728

Laboratory Report
TPH's by IR

Requester: NPWC Environmental Dept.
Address: Bldg. 3887, Code 910
NAS Pensacola, Fl 32508
Phone #: 452-3180
Contact: Greg Campbell

Report Number: 9603082 E
Sample Date: 21 Mar 96
Received Date: 22 mar 96
Sample Site: Bronson Field, Bldg 1122
Job Order #: 130 5001

Sample ID#	Lab	1- 61211	2- 61212	3-	4-
Sample Name	Requester	Eq. Blank	Duplicate		
Collector Name		P.J.B./V.S.	P.J.B./V.S.		
Time/Date	Comp start				
Sample Collected	Comp stop				
(Military)	Grab	21 Mar 96 @ 1045	21 Mar 96 @ N/S		
Sample Type	Comp/Grab	Grab	Grab		
Analyst		Brent Jacquart	Brent Jacquart		
Date of Analysis		4 Apr 96	4 Apr 96		
Sample Matrix		D.I. Water	Groundwater		
Dilution		Dilution X 1	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Total Petroleum Hydrocarbons	METHOD #	1- 61211	units	Limit	2- 61212	units	Limit	3-	units	Limit	4-	units	Limit
TPH's by IR	EPA 418.1	BDL	mg/l	5	63	mg/l	5		mg/l	5		mg/l	5

Comments: mg/kg=milligrams per kilogram (ppm). BDL = Below Detection Limit.

Approved by: Jerry Dees, Laboratory Director Date: 05-Apr-96 @ 13:56

PWC 5090/14

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508-5303
Phone (904) 452-4728/3642
DSN 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: 9603080 C
Sample Date: 21 Mar 96
Received Date: 22 Mar 96
Sample Site: Bronson Field, Bldg. 1122
Job Order #: 130 5001

Sample ID#	Lab	1- 61203			2- 61204			3- 61205			4- 61206		
Sample Name	Requester	MW-1			MW-2			MW-3			MW-4		
Collector Name		P. J. B./V. S.			P. J. B./V. S.			P. J. B./V. S.			P. J. B./V. S.		
Date/Time	Comp start												
Collected	Comp stop												
(Military)	Grab	21 Mar 96 @ 1400			21 Mar 96 @ 1100			21 Mar 96 @ 1130			21 Mar 96 @ 1200		
Sample Type	Comp/Grab	Grab			Grab			Grab			Grab		
Analyst		B. Jacquart			B. Jacquart			B. Jacquart			B. Jacquart		
Date of Analysis		23 Mar 96			23 Mar 96			23 Mar 96			23 Mar 96		
Sample Matrix		Groundwater			Groundwater			Groundwater			Groundwater		
Dilution		Dilution X 2			Dilution X 2			Dilution X 2			Dilution X 2		
PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Volatiles by GCMS (Capillary)	METHOD #	1- 61203	units	Limit	2- 61204	units	Limit	3- 61205	units	Limit	4- 61206	units	Limit
Ethylene Dibromide	EPA 504	BDL	ug/l	0.04	BDL	ug/l	0.04	BDL	ug/l	0.04	BDL	ug/l	0.04

SURROGATE RECOVERIES Compound	Acceptance Limits				
2,4,5,6-Tetrachloro-m-xylene	60-140	44*	42*	47*	50*

Comments: ug/l=micrograms per liter. BDL=Below Detection Limit. * = Surrogte recovered outside acceptance limits.
Surrogate addition is not required by Method 504; therefore, no further action taken.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 03-Apr-96 @ 08:18
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PWC 5090/14

Page 1 of 1

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, Fl 32508-5303
Phone (904) 452-4728/3642
DSN 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: 9603081 C
Sample Date: 21 Mar 96
Received Date: 22 Mar 96
Sample Site: Bronson Field, Bldg. 1122
Job Order #: 130 5001

Sample ID#	Lab	1- 61207			2- 61208			3- 61209			4- 61210		
Sample Name	Requester	MW-5			MW-6			MW-7			MW-8		
Collector Name		P. J. B./V. S.			P. J. B./V. S.			P. J. B./V. S.			P. J. B./V. S.		
Date/Time	Comp start												
Collected	Comp stop												
(Military)	Grab	21 Mar 96 @ 1230			21 Mar 96 @ 1330			21 Mar 96 @ 1300			21 Mar 96 @ 1430		
Sample Type	Comp/Grab	Grab			Grab			Grab			Grab		
Analyst		B. Jacquart			B. Jacquart			B. Jacquart			B. Jacquart		
Date of Analysis		23 Mar 96			23 Mar 96			23 Mar 96			23 Mar 96		
Sample Matrix		Groundwater			Groundwater			Groundwater			Groundwater		
Dilution		Dilution	X	2	Dilution	X	2	Dilution	X	1	Dilution	X	1
PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Volatiles by GCMS (Capillary)	METHOD #	1- 61207	units	Limit	2- 61208	units	Limit	3- 61209	units	Limit	4- 61210	units	Limit
Ethylene Dibromide	EPA 504	BDL	ug/l	0.04	BDL	ug/l	0.04	BDL	ug/l	0.02	BDL	ug/l	0.02

SURROGATE RECOVERIES Compound	Acceptance Limits				
2,4,5,6-Tetrachloro-m-xylene	60-140	41*	42*	68	127

Comments: ug/l=micrograms per liter. BDL=Below Detection Limit. * = Surrogate recovered outside acceptance limits.
Surrogate addition is not required by Method 504; therefore, no further action taken.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 03-Apr-96 @ 08:21
Report Generated

PWC 5090/14

Page 1 of 1

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508-5303
Phone (904) 452-4728/3642
DSN 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: 9603082 C
Sample Date: 21 Mar 96
Received Date: 22 Mar 96
Sample Site: Bronson Field, Bldg. 1122
Job Order #: 130 5001

Sample ID#	Lab	1- 61211	2- 61212	3-	4-
Sample Name	Requester	Eq. Blank	Duplicate		
Collector Name		P. J. B.	P. J. B.		
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	21 Mar 96 @ 1045	21 Mar 96 @ N/S		
Sample Type	Comp/Grab	Grab	Grab		
Analyst		B. Jacquart	B. Jacquart		
Date of Analysis		23 Mar 96	23 Mar 96		
Sample Matrix		Deionized water	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- 61211	units	Limit	2- 61212	units	Limit	3-	units	Limit	4-	units	Limit
Ethylene Dibromide	EPA 504	BDL	ug/l	0.02	BDL	ug/l	0.02		ug/l	0.02		ug/l	0.02

SURROGATE RECOVERIES Compound	Acceptance Limits				
2,4,5,6-Tetrachloro-m-xylene	60-140	96	98		

Comments: ug/l=micrograms per liter. BDL=Below Detection Limit.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 03-Apr-96 @ 08:22
Report Generated

PWC 5090/14

Page 1 of 1

End of Report

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 829
NAS Pensacola, FL 32508-5500

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 #:

Report Required? (Yes) No DEP? Yes _ No
Lab ID Number:
Sample Date: 3.21.96
Received Date: 3.22.96 PJB
Sample Site: 1122 Bronson Field
Lab Due Date:

Sample ID #	Lab	#1- 61203	#2- 61204	#3- 61205	#4- 61206	Notes:
Sample Name or Location	----------	MW-1	MW-2	MW-3	MW-4	XAG
Sampled by	----------	PJB/US	PJB/US	PJB/US	PJB/US	
Composite Date/Time Collected	Begin / Frequency / End					
Grab Time	----------	1400	1100	1130	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/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									8	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									15	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	X	1 Pb	X	1 Pb	X	1 Pb	X	1 Pb		250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: [signature]
Date/Time: 3.22.96 / 0815

Received by: [signature]
Date/Time: 3/22/96 0815

PWC 9510/8

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, FL 32508-5500

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 #:

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 3.21.96
Received Date: 3.22.96 PJB
Sample Site: 1122 Bronson Field
Lab Due Date:

Sample ID #	Lab	#1- 61207	#2- 61208	#3- 61209	#4- 61210	Notes:
Sample Name or Location	----------	MW-5	MW-6	MW-7	MW-8	XAG
Sampled by	----------	PJB/US	PJB/US	PJB/US	PJB/US	
Composite Date/Time Collected	Begin					
	Frequency					
	End					
Grab Time	----------	1230	1330	1300	1430	
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									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									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									10	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	X	1 Pb	X	1 Pb	X	1 Pb	X	1 Pb		250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: [signature]
Date/Time: 3.22.96 / 0815

Received by: [signature]
Date/Time: 3/22/96 0815

PWC 5510/6

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 #:

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 3.21.96
Received Date: 3.22.96 PJB
Sample Site: 1122 Bronson Field
Lab Due Date:

Sample ID #	Lab	#1- 61211	#2- 61212	#3- 61213	#4-
Sample Name or Location	----------	EQ. BLANK	Duplicate	Trip Blank	
Sampled by	----------	PJB/US	PJB/US	PJB/US	
Composite Date/Time Collected	Begin				
	Frequency				
	End				
Grab Time	----------	1045	—	0900	
Sample Matrix	----------	DI	GW	DI	

Notes: KAG

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	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 2 PJB			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									18	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310	X	2 PAH	X	2 PAH	~~X~~	~~2 P~~ PJB				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	X	1 Pb	X	2 TPH						250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: [signature]
Date/Time: 3.22.96 / 0815

Received by: [signature]
Date/Time: 3/22/96 0815

PWC 9510/8

Navy Public Works Center
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
SN 922-4728/3642

Client: NPWC Environmental
Address B-3887
NAS Pensacola, FL 32508
Phone 452-4728
Contact Greg Campbell

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 61668
Sample Date: 04/24/96
Received Date: 04/24/96
Sample Site: BF 1122
Job Order No.: 130 5001

LAB Sample ID#	1- 61668
Sample Name / Location	MW-8 Bronson Field 1122
Collector's Name	P. Brown
Date & Time Collected	04/24/96 @ 1330
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	04/29/1996 / JJ
Date of Analysis	05/15/96
Sample Matrix	Groundwater
Dilution	X 1

COMPOUND NAME	1- 61668	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
Flourene	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	66
2-Flourobiphenyl	43-116	57
Terphenyl -d14	33-141	62

COMMENTS : This is a resample of the well. The original sample (Lab ID number 61210) had surrogate recoveries that were outside control limits. This report should be used in place of the original report.

BDL = Below detection limit. UG/L = Microgram per liter

Approved by : Date: 6/18/96

D-28

Navy Public Works Center
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
SN 922-4728/3642

Client: NPWC Environmental
Address B-3887
NAS Pensacola, FL 32508
Phone 452-4728
Contact Greg Campbell

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 61668
Sample Date: 04/24/96
Received Date: 04/24/96
Sample Site: BF 1122
Job Order No.: 130 5001

LAB Sample ID#	1- 61669
Sample Name / Location	Field Duplicate for Bronson Field Site 1122
Collector's Name	P. Brown
Date & Time Collected	04/24/96 @ NS
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	04/29/1996 / JJ
Date of Analysis	05/15/96
Sample Matrix	Groundwater
Dilution	X 1

COMPOUND NAME	1- 61669	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
Flourene	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	68
2-Flourobiphenyl	43-116	63
Terphenyl -d14	33-141	63

COMMENTS : This is a resample of the well. The original sample (Lab ID number 61212) had surrogate recoveries that were outside control limits. This report should be used in place of the original report.

BDL = Below detection limit. UG/L = Microgram per liter.

Approved by : Date: 6/18/96

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, FL 32508-5500

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 #:

Report Required? Yes No DEPT Yes No
Lab ID Number:
Sample Date: 4.24.96
Received Date: 4.24.96
Sample Site: BF 1122
Lab Due Date:

Sample ID #	Lab	#1- 6-1668	#2- 6-1669	#3-	#4-
Sample Name	----------	MW-8	Duplicate		
or Location	----------				
Sampled by	----------	ATB	ATB		
Composite	Begin				
Date/Time	Frequency				
Collected	End				
Grab Time	----------	1330	—		
Sample Matrix	----------	GW	GW		

Notes: Resample for PAH due to surrogate failure.

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									18	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310	X	2 PAH	X	1 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 4/25/96	X	1 TPH 4/25/96						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: Robert L. Ron WES, Inc.
Date/Time: 4.24.96 1445

Received by: [illegible]
Date/Time: 4/24/96 1445

PWC 9510/8

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: 9606063
Sample Date: 17 May 96
Received Date: 21 May 96
Sample Site: Bronson Field Site 1122
Job Order #: 130 5001

Sample ID#	Lab	1- 62252	2- 62253	3- 62254	4- 62255	Analyst(s):
Sample Name	Requester	MW-1	MW-4	MW-7	MW-8	ICP - Brian Nelson
Collector Name		RDH	RDH	RDH	RDH	
Date/Time Collected (Military)	Comp start					
	Comp stop					Date(s) of analysis:
	Grab	17 May 96 @ 1745	17 May 96 @ 1740	17 May 96 @ 1813	17 May 96 @ 1822	ICP - 13 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- 62252	units	Limit	2- 62253	units	Limit	3- 62254	units	Limit	4- 62255	units	Limit	Preservative(s)
Lead(Pb)	SW 6010A	X BDL	mg/l	0.05	BDL	mg/l	0.05	BDL	mg/l	0.05	BDL	mg/l	0.05	None

Comments: mg/kg=milligrams per kilogram. mg/l=milligrams per liter. BDL=Below Detection Limit.

D-31

Approved by: Jerry Dees, Laboratory Director

Date/Time: 26-Sep-96 13:30

End of Report

PWC 5090/14

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DSN 922-4728
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Laboratory Report
Total Lead

Requester: NPWC Environmental
Address: Bldg. 3887, NAS Pensacola, FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Report Number: 9606062
Sample Date: 17 May 96
Received Date: 21 May 96
Sample Site: Bronson Field Site 1122
Job Order #: 130 5001

Sample ID#	Lab	1- 62248	2- 62249	3- 62250	4- 62251	Analyst(s):
Sample Name	Requester	MW-6	MW-2	MW-3	MW-5	ICP - Brian Nelson
Collector Name		RDH	RDH	RDH	RDH	
Date/Time	Comp start					
Collected	Comp stop					Date(s) of analysis:
(Military)	Grab	17 May 96 @ 1625	17 May 96 @ 1626	17 May 96 @ 1710	17 May 96 @ 1701	ICP - 13 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- 62248	units	Limit	2- 62249	units	Limit	3- 62250	units	Limit	4- 62251	units	Limit	Preservative(s)
Lead(Pb)	SW 6010A	X BDL	mg/l	0.05	BDL	mg/l	0.05	BDL	mg/l	0.05	BDL	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 14:02

End of Report

PWC 5090/14

D-32

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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: 62329
Sample Date: 05/22/96
Received Date: 05/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62329
Sample Name / Location	MW-1 BF1122
Collector's Name	RDH
Date & Time Collected	5/22/96 @ 2115
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- 62329	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	107
Toluene-d8	86-119	108
Bromoflourobenzene	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

Date: 6/23/96
Report Generated

D-33

Navy Public Works Center
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Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 62329
Sample Date: 05/22/96
Received Date: 05/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62329**		
Sample Name / Location	MW-1 BF1122		
Collector's Name	RDH		
Date & Time Collected	5/22/96 @ 2115		
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- **62329**	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
Flourene	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	73
2-Flourobiphenyl	43-116	79
Terphenyl -d14	33-141	86

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Date/Time : 6/24/96 1100

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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: 62519
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62519			
Sample Name / Location	MW-9 BF-1122			
Collector's Name	PJB			
Date & Time Collected	6/4/96 @ 1400			
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- 62519**	**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	108
Toluene-d8	86-119	103
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
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Page 1 of 1 End of Report

D-35

Navy Public Works Center
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Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 62519
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62519**
Sample Name / Location	MW-9 BF-1122
Collector's Name	PJB
Date & Time Collected	6/4/96 @ 1400
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	6/10/96; JJ
Date of Analysis	6/12/96
Sample Matrix	GW
Dilution	X 1.2

COMPOUND NAME	1- **62519**	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
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	
Nitrobenzene- d5	35-114	57
2-Flourobiphenyl	43-116	62
Terphenyl -d14	33-141	73

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Date/Time : 6/25/96 1600

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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: 62519 A
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62519			
Sample Name / Location	MW-9 BF-1122			
Collector's Name	PJB			
Date & Time Collected	6/4/96 @ 1400			
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- 62519**	**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	108 %

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
JN 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

TPH by Method EPA 418.1

Lab Report Number: 62519
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62519**			
Sample Name / Location	MW-9 BF-1122			
Collector's Name	PJB			
Date & Time Collected	6/4/96 @ 1400			
Sample Type (composite or grab)	GRAB			
Analyst	B.Jacquart			
Date of Extraction / Initials	6/21/96 / BJ			
Date of Analysis	6/21/96			
Sample Matrix	GW			
Dilution	X 1			
COMPOUND NAME	**62519**	**units**	**Det. Limit**	**flags**
Total Petroleum Huydrocarbons (TPH)	BDL	mg/L	7	

COMMENTS :

BDL = Below Detection Limit. **mg/L = Milligram 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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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: 62520
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62520
Sample Name / Location	MW-10 BF-1122
Collector's Name	PJB
Date & Time Collected	6/4/96 @ 1415
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- 62520	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	107
Toluene-d8	86-119	106
Bromoflourobenzene	85-116	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: 6/24/96
Report Generated

Navy Public Works Center
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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: 62520
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62520**
Sample Name / Location	MW-10 BF-1122
Collector's Name	PJB
Date & Time Collected	6/4/96 @ 1415
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	6/10/96; JJ
Date of Analysis	6/12/96
Sample Matrix	GW
Dilution	X 1.1

COMPOUND NAME	1- **62520**	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
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	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	59
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 1600

D-40

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: 62520 A
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62520			
Sample Name / Location	MW-10 BF-1122			
Collector's Name	PJB			
Date & Time Collected	6/4/96 @ 1415			
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- 62520**	**units**	**Det. Limit**	**Flags**
Ethylene Dibromide (EDB)	0.03	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: 6/26/96
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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
;N 922-4728/3642

Analytical Report

TPH by Method EPA 418.1

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 62520
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62520**		
Sample Name / Location	MW-10 BF-1122		
Collector's Name	PJB		
Date & Time Collected	6/4/96 @ 1415		
Sample Type (composite or grab)	Grab		
Analyst	B.Jacquart		
Date of Extraction / Initials	6/21/96 / BJ		
Date of Analysis	6/21/96		
Sample Matrix	GW		
Dilution	X 1		
COMPOUND NAME	**62520**	units	Det. Limit
Total Petroleum Huydrocarbons (TPH)	BDL	mg/L	7

COMMENTS :

BDL = Below Detection Limit. mg/L = Milligram 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
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: 62521
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62521			
Sample Name / Location	MW-11 BF-1122			
Collector's Name	PJB			
Date & Time Collected	6/4/96 @ 1430			
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- 62521**	**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	110
Toluene-d8	86-119	102
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
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 End of Report

D-43

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
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 62521
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62521**		
Sample Name / Location	MW-11 BF-1122		
Collector's Name	PJB		
Date & Time Collected	6/4/96 @ 1430		
Sample Type (composite or grab)	Grab		
Analyst	M. Chambers		
Date of Extraction / Initials	6/10/96; JJ		
Date of Analysis	6/12/96		
Sample Matrix	GW		
Dilution	X 1.1		
COMPOUND NAME	1- **62521**	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
Flouranthene	BDL	UG/L	2
'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	52
2-Flourobiphenyl	43-116	57
Terphenyl -d14	33-141	72

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter * = FL HRS certification pending

Approved by : Date/Time : 6/25/96 1600

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: 62521 A
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62521			
Sample Name / Location	MW-11 BF-1122			
Collector's Name	PJB			
Date & Time Collected	6/4/96 @ 1430			
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- 62521**	**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	97 %

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

TPH by Method EPA 418.1

Lab Report Number: 62521
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62521**		
Sample Name / Location	MW-11 BF-1122		
Collector's Name	PJB		
Date & Time Collected	6/4/96 @ 1430		
Sample Type (composite or grab)	Grab		
Analyst	B.Jacquart		
Date of Extraction / Initials	6/21/96 / BJ		
Date of Analysis	6/21/96		
Sample Matrix	GW		
Dilution		X	1
COMPOUND NAME	**62521**	units	Det. Limit
Total Petroleum Huydrocarbons (TPH)	BDL	mg/L	7

COMMENTS :

BDL = Below Detection Limit. mg/L = Milligram 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
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: 62522
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62522
Sample Name / Location	DMW-12 BF-1122
Collector's Name	PJB
Date & Time Collected	6/4/96 @ 1445
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- 62522	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	3	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	113
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: 6/25/96
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
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 62522
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62522**		
Sample Name / Location	DMW-12 BF-1122		
Collector's Name	PJB		
Date & Time Collected	6/4/96 @ 1445		
Sample Type (composite or grab)	Grab		
Analyst	M. Chambers		
Date of Extraction / Initials	6/10/96; JJ		
Date of Analysis	6/12/96		
Sample Matrix	GW		
Dilution	X 1		
COMPOUND NAME	1- **62522**	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
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	53
2-Flourobiphenyl	43-116	55
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 1600

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: 62522 A
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62522			
Sample Name / Location	DMW-12 BF-1122			
Collector's Name	PJB			
Date & Time Collected	6/4/96 @ 1445			
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- 62522**	**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	108 %

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 6/25/96
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
GN 922-4728/3642

Analytical Report
TPH by Method EPA 418.1

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 62522
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62522**		
Sample Name / Location	DMW-12 BF-1122		
Collector's Name	PJB		
Date & Time Collected	6/4/96 @ 1445		
Sample Type (composite or grab)	Grab		
Analyst	B.Jacquart		
Date of Extraction / Initials	6/21/96 / BJ		
Date of Analysis	6/21/96		
Sample Matrix	GW		
Dilution	X 1		
COMPOUND NAME	**62522**	units	Det. Limit
Total Petroleum Huydrocarbons (TPH)	BDL	mg/L	7

COMMENTS :

BDL = Below Detection Limit. **mg/L = Milligram 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
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: 62523
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62523
Sample Name / Location	Duplicate BF-1122
Collector's Name	PJB
Date & Time Collected	6/4/96 @ Not Submitted
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- 62523	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	3	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	111
Toluene-d8	86-119	102
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

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
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 62523
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62523**		
Sample Name / Location	Duplicate BF-1122		
Collector's Name	PJB		
Date & Time Collected	6/4/96 @		
Sample Type (composite or grab)	Grab		
Analyst	M. Chambers		
Date of Extraction / Initials	6/10/96; JJ		
Date of Analysis	6/12/96		
Sample Matrix	GW		
Dilution	X 1		
COMPOUND NAME	1- **62523**	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
lourene	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	61
Terphenyl -d14	33-141	78

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by : Date/Time : 6/25/96 1600

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: 62523 A
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62523			
Sample Name / Location	Duplicate BF-1122			
Collector's Name	PJB			
Date & Time Collected	6/4/96 @ Not Submitted			
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- 62523**	**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 : 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
,N 922-4728/3642

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

TPH by Method EPA 418.1

Lab Report Number: 62523
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62523**		
Sample Name / Location	Duplicate BF-1122		
Collector's Name	PJB		
Date & Time Collected	6/4/96 @ Not Submitted		
Sample Type (composite or grab)	Grab		
Analyst	B.Jacquart		
Date of Extraction / Initials	6/21/96 / BJ		
Date of Analysis	6/21/96		
Sample Matrix	GW		
Dilution	X 1		
COMPOUND NAME	**62523**	units	Det. Limit
Total Petroleum Huydrocarbons (TPH)	BDL	mg/L	7

COMMENTS :

BDL = Below Detection Limit. mg/L = Milligram 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
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: 62524
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62524
Sample Name / Location	Equipment Blank BF-1122
Collector's Name	PJB
Date & Time Collected	6/4/96 @ 1345
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/5/96 / JM
Date of Analysis	06/5/96
Sample Matrix	DI Water
Dilution	X 1

Compound Name	1- 62524	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	100
Toluene-d8	86-119	100
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

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
Addres Bldg 3887
NAS Pensacola, Fl 32508
Phone 452-4728
Contac Greg Campbell

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 62524
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62524**
Sample Name / Location	Equipment Blank BF-1122
Collector's Name	PJB
Date & Time Collected	6/4/96 @ 1345
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	6/10/96; JJ
Date of Analysis	6/12/96
Sample Matrix	DI Water
Dilution	X 1

COMPOUND NAME	1- **62524**	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
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	55
2-Flourobiphenyl	43-116	59
Terphenyl -d14	33-141	80

COMMENTS :

BDL = Below detection limit. UG/L = Microgram per liter. * = FL HRS certification pending

Approved by: Date/Time : 6/25/96 1600

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: 62524 A
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62524			
Sample Name / Location	Equipment Blank BF-1122			
Collector's Name	PJB			
Date & Time Collected	6/4/96 @ 1345			
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	DI Water			
Dilution	X 1			
Compound Name	**1- 62524**	**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	112 %

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
N 922-4728/3642

Analytical Report

TPH by Method EPA 418.1

Client: NPWC Environmental
Address: Bldg 3887
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 62524
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62524**		
Sample Name / Location	Equipment Blank BF-1122		
Collector's Name	PJB		
Date & Time Collected	6/4/96 @ 1345		
Sample Type (composite or grab)	Grab		
Analyst	B.Jacquart		
Date of Extraction / Initials	6/21/96 / BJ		
Date of Analysis	6/21/96		
Sample Matrix	GW		
Dilution	X 1		
COMPOUND NAME	**62524**	units	Det. Limit
Total Petroleum Huydrocarbons (TPH)	BDL	mg/L	7

COMMENTS :

BDL = Below Detection Limit. mg/L = Milligram 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
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: 62525
Sample Date: 06/4/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62525
Sample Name / Location	Trip Blank BF-1122
Collector's Name	PJB
Date & Time Collected	6/4/96 @ AM
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/5/96 / JM
Date of Analysis	06/5/96
Sample Matrix	DI Water
Dilution	X 1

Compound Name	1- 62525	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	108
Toluene-d8	86-119	105
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

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Joe

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 #:

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 6.4.96
Received Date: 6.5.96
Sample Site: BF 1122
Lab Due Date:

Sample ID #	Lab	#1 62519	#2 - 62520	#3 - 62521	#4 - 62522	Notes:
Sample Name or Location	----------	MW-9	MW-10	MW-11	DMW-12	
Sampled by	----------	PJB	PJB	PJB	PJB	
Composite Date/Time Collected	Begin					X AG
	Frequency					
	End					
Grab Time	----------	1400	1415	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	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: Patrick J. Bu / WES, Inc.
Date/Time: 6/5/96 0925

Received by: Jason T. Jenny
Date/Time: 6/5/96 0925

PWC 9510/8

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 #:

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 6·4·96
Received Date: 6·5·96
Sample Site: BF 1122
Lab Due Date:

Sample ID #	Lab	#1- 62523	#2- 62524	#3- 62525	#4-	Notes:
Sample Name or Location	----------	Duplicate	EQ. Blank	Trip blank		
Sampled by	----------	PJB	PJB	PJB		
Composite Date/Time Collected	Begin					
	Frequency					
	End					
Grab Time	----------	—	1345	AM		
Sample Matrix	----------	GW	DI	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	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: [signature] / WES, Inc.
Date/Time: 6/5/96 0925

Received by: [signature]
Date/Time: 6/5/96 0925

PWC 8510/8

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:	9607107 A
Sample Date:	27 Jun 96
Received Date:	08 Jul 96
Sample Site:	Bronson Field Site 1122
Job Order #:	130 5001

Sample ID#	Lab	1- 62867	2- 62868	3- 62869	4- 62870	Analyst(s):
Sample Name	Requester	Site 1122 DMW-1,2	Site 1122 MW-9	Site 1122 MW-10	Site 1122 MW-11	ICP- Brian Nelson
Collector Name		W.W.P.	T.H.	T.H.	T.H.	
Date/Time	Comp start					
Collected	Comp stop					Date(s) of analysis:
(Military)	Grab	27 Jun 96 @ 1440	27 Jun 96 @ 1405	27 Jun 96 @ 1505	27 Jun 96 @ 1645	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- 62867	units	Limit	2- 62868	units	Limit	3- 62869	units	Limit	4- 62870	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

Sample ID#	Lab	5- 62871	6-	7-	8-	Analyst(s):
Sample Name	Requester	Site 1122 FD-1				ICP- Brian Nelson
Collector Name		N/S				
Date/Time	Comp start					
Collected	Comp stop					Date(s) of analysis:
(Military)	Grab	27 Jun 96 @ N/S				ICP- 22 Jul 96
Sample Type	Comp/Grab	Grab				
Sample Matrix		Groundwater				

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.	
Metals:	**METHOD #**	5- 62871	units	Limit	6-	units	Limit	7-	units	Limit	8-	units	Limit	**Preservative(s)**
Lead(Pb)	SW 6010	X BDL	mg/l	0.05			0.05			0.05			0.05	HNO_3

D-62

Comments: mg/l=milligrams per liter. N/S=Not Submitted.

Approved by: JA Moore Chemist for Jerry Dees, Laboratory Director **Date/Time:** 25-Jul-96 12:50

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
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

601/602 Volatiles by Method 8260

Lab Report Number: 63660
Sample Date: 08/23/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 63660
Sample Name / Location	MW-13 BF-1122
Collector's Name	P. Brown
Date & Time Collected	08/23/96 @ 0800
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- 63660	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	114
Toluene-d8	86-119	101
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

Date: 9/17/96
Report Generated

D-63

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: 63660
Sample Date: 08/23/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **63660**
Sample Name / Location	MW-13 BF-1122
Collector's Name	P. Brown
Date & Time Collected	08/23/96 @ 0800
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- 63660	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	70
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: 9/17/96
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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
NAS Pensacola, Fl 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 63660
Sample Date: 08/23/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 63660			
Sample Name / Location	MW-13 BF-1122			
Collector's Name	P. Brown			
Date & Time Collected	08/23/96 @ 0800			
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- 63660	units	Det. Limit	Flags
Ethylene Dibromide (EDB)	0.46	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

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
Petroleum Range Organics by FLPRO

Lab Report Number: 63660
Sample Date: 08/23/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 63660		
Sample Name / Location	MW-13 BF-1122		
Collector's Name	P. Brown		
Date & Time Collected	08/23/96 @ 0800		
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- 63660	units	Det. Limit
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 *	**

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 = Milligram 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: 63661
Sample Date: 08/23/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 63661
Sample Name / Location	Trip Blank BF-1122
Collector's Name	P. Brown
Date & Time Collected	08/23/96 @ AM
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- 63661	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	105
Toluene-d8	86-119	100
Bromoflourobenzene	85-116	97

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

D-67

Approved by : Jerry Dees, Laboratory Director

Date: 9/17/96
Report Generated

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 001

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 8.23.96
Received Date: 8.23.96
Sample Site: BF 1122
Lab Due Date:

Sample ID #	Lab	#1- 103659	#2- 103660	#3- 103661	#4-
Sample Name or Location	----------	EQ. BLANK	MW-13	Trip BLANK	
Sampled by	----------	RJB	RJB	RJB	
Composite Date/Time Collected	Begin				
	Frequency				
	End				
Grab Time	----------	0740	0800	AM	
Sample Matrix	----------	DI	GW	DI	

Notes: K.A.O. (Cress PO)

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	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	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									6	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						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	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: [illegible] / WES, Inc.
Date/Time: 8.23.96 / 0945

Received by: Kathy Bennett
Date/Time: 8/23/96 0945

PWC 9510/6

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: 63659
Sample Date: 08/23/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 63659
Sample Name / Location	Equipment Blank BF-1122
Collector's Name	P. Brown
Date & Time Collected	08/23/96 @ 0740
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- 63659	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	4.3	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)	3.3	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	107
Toluene-d8	86-119	100
Bromoflourobenzene	85-116	97

COMMENTS :

BDL = Below Detection Limit. ug/L = Microgram per liter. ug/Kg = Microgram per kilogram. * = FL HRS certification pending.

Approved by : D-69
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: 63659
Sample Date: 08/23/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 63659			
Sample Name / Location	Equipment Blank BF-1122			
Collector's Name	P. Brown			
Date & Time Collected	08/23/96 @ 0740			
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- 63659	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	64
2-Flourobiphenyl	43-116	67
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: 63659
Sample Date: 08/23/96
Received Date: 08/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 63659			
Sample Name / Location	Equipment Blank BF-1122			
Collector's Name	P. Brown			
Date & Time Collected	08/23/96 @ 0740			
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- 63659	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	97

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
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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:	63659
Sample Date:	08/23/96
Received Date:	08/23/96
Sample Site:	Bronson Field
Job Order No.:	130 5001

LAB Sample ID#	1- 63659		
Sample Name / Location	Equipment Blank BF-1122		
Collector's Name	P. Brown		
Date & Time Collected	08/23/96 @ 0740		
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- 63659	units	Det. Limit
Petroleum Range Organics by FLPRO	BDL	mg/L	0.25

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	107
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, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

Analytical Report

601/602 Volatiles by Method 8260

Lab Report Number: 65003
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65003
Sample Name / Location	BF-1122 Eq Blank
Collector's Name	PJB
Date & Time Collected	12/12/96 @ 1145
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- 65003	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 :

D-73

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Deal, Laboratory Director

Date: 1/2/97
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: 65003
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65003			
Sample Name / Location	BF-1122 Eq. Blank			
Collector's Name	PJB			
Date & Time Collected	12/12/96 @ 1145			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	12/13/96 JJ			
Date of Analysis	12/21/96			
Sample Matrix	DI			
Dilution	X 1			
Compound Name	1- 65003	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	63
2-Fluorobiphenyl	43-116	65
Terphenyl -d14	33-141	58

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

Date: 1/2/97
Report Generated

D-74

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: 65003
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65003			
Sample Name / Location	BF-1122 Eq. Blank			
Collector's Name	PJB			
Date & Time Collected	12/12/96 @ 1145			
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- 65003	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	119

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/2/97
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
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

Lab Report Number: 65003
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65003			
Sample Name / Location	BF-1122 Eq. Blank			
Collector's Name	PJB			
Date & Time Collected	12/12/96 @ 1145			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	12/31/96 JM			
Date of Analysis	12/31/96			
Sample Matrix	DI			
Dilution	x 1			
Parameter	1- 65003	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 *	112

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 Deds, Laboratory Director

Date: 1/2/97

D-76

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: 65004
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65004
Sample Name / Location	BF-1122 MW-14
Collector's Name	PJB
Date & Time Collected	12/12/96 @ 1200
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- 65004	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	1	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)	3	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	99
Toluene-d8	86-119	100
Bromofluorobenzene	85-116	99

COMMENTS :

D-77

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Deets, Laboratory Director

Date: 1/2/97
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: 65004
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65004			
Sample Name / Location	BF-1122 MW-14			
Collector's Name	PJB			
Date & Time Collected	12/12/96 @ 1200			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	12/13/96 JJ			
Date of Analysis	12/31/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 65004	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	61
Terphenyl -d14	33-141	55

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: 1/2/97
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 #: 452-3180
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 65004
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65004			
Sample Name / Location	BF-1122 MW-14			
Collector's Name	PJB			
Date & Time Collected	12/12/96 @ 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- 65004	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	63

COMMENTS :

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram.

Approved by : Jerry Bees, Laboratory Director

Date: 1/2/97
Report Generated

D-79

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: 65004
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65004			
Sample Name / Location	BF-1122 MW-14			
Collector's Name	PJB			
Date & Time Collected	12/12/96 @ 1200			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	12/31/96 JM			
Date of Analysis	12/31/96			
Sample Matrix	GW			
Dilution	x 1			
Parameter	1- 65004	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 *	121
Nonatriacontane (C-39)	42-193 *	133

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 Deos, Laboratory Director

Date: 1/2/97

D-80

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: 65005
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65005
Sample Name / Location	Trip Blank
Collector's Name	PJB
Date & Time Collected	12/12/96 @ 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- 65005	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	101

COMMENTS :

D-81

BDL = Below Detection Limit. ug/L = microgram per Liter. ug/Kg = microgram per Kilogram. * = FL HRS certification pending.

Approved by : Jerry Does, Laboratory Director

Date: 1/2/97
Report Generated

1·1

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-5500

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: 12.12.96
Received Date: 12.12.96
Sample Site: BF 1122
Lab Due Date:

Sample ID #	Lab	#1- 6-5003	#2- 6-5004	#3- 6-5005	#4-
Sample Name or Location	---------- / ----------	EQ. Blank	MW-14	Trip Blank	
Sampled by	----------	PJB	PJB	PJB	
Composite Date/Time Collected	Begin / Frequency / End				
Grab Time	----------	1145	1200	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	HCV4° C
Purg. Aromatics/GC	EPA 602									3	40 ml VOA Vial x 2	HCV4° C
Purg. H[illegible] & Aro./GC	EPA 601/602	X	4 VOA	X	4 VOA	X	3 VOA			6	40 ml VOA Vial x 2	HCV4° C
Polyr. [illegible]romatics/HPLC	EPA 610									7	1L Amber x 2	4° C
Purgeables/GCMS	EPA 624									8	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						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~~ PVO	Y	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										250mV4 oz.	HNO/None
Other:												

Comments:

Relinquished by: [illegible] / WES, Inc.
Date/Time: 12.12.96 / 1425

Received by: [illegible]
Date/Time: 12/12/96 1425

PWC 9310/9

Navy Public Works Center
Environmental Laboratory

Bldg.3887, Code 440
NAS Pensacola, FL 32508-5303
Phone (850) 452-3180/3642
DSN 922-3180

Laboratory Report

Total Lead in Water by Method 239.2

Requester: NPWC Engineering
Address: Bldg. 458
NAS Pensacola, FL 32508
Phone #: 452-4315
Contact: Greg Campbell

Report Number: 9709030
Sample Date: 4 Sep 97
Received Date: 5 Sep 97
Sample Site: Bronson Field Site 1122
Job Order #: 130 5001

Sample ID#	Lab	1- 73853	2-	3-	4-	Analyst(s):
Sample Name	Requester	Site 1122 MW #13				Brian Nelson
Collector Name		R. Gonzalez				
Date/Time	Comp start					
Collected	Comp stop					Date(s) of analysis:
(Military)	Grab	4 Sep 97 @ 1445				11 Sep 97
Sample Type	Comp/Grab	Grab				
Sample Matrix		Groundwater				

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.	
Metals:	**METHOD #**	1- 73853	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-83

Comments: mg/l=milligrams per liter.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 18-Sep-97 13:29

PWC 5090/14

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg.3887, Code 440
NAS Pensacola, FL 32508
Phone (850) 452-3180/3642
DSN 922-3180

Laboratory Report

Total Lead in Water by Method 239.2

Requester: NPWC Engineering
Address: Bldg. 458
NAS Pensacola, FL 32508
Phone #: 452-4315
Contact: Greg Campbell

Report Number: 9709031
Sample Date: 4 Sep 97
Received Date: 5 Sep 97
Sample Site: Bronson Field Site 1122
Job Order #: 130 5001

Sample ID#	Lab	1- 73854	2-	3-	4-	Analyst(s):
Sample Name	Requester	Site 1122 MW #14				Brian Nelson
Collector Name		R. Gonzalez				
Date/Time	Comp start					
Collected	Comp stop					Date(s) of analysis:
(Military)	Grab	4 Sep 97 @ 1532				11 Sep 97
Sample Type	Comp/Grab	Grab				
Sample Matrix		Groundwater				

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.	
Metals:	**METHOD #**	1- 73854	units	Limit	2-	units	Limit	3-	units	Limit	4-	units	Limit	**Preservative(s)**
Lead(Pb)	EPA 239.2	X 0.003	mg/l	0.003		mg/l	0.003		mg/l	0.003		mg/l	0.003	None

D-84

Comments: **mg/l=milligrams per liter.**

Approved by: Jerry Dees, Laboratory Director **Date/Time:** 24-Sep-97 09:15

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

Repeat Required? Yes No QC Required? Yes No

Requester: NPWC Eng.
Address: B. 458 NAS Pensacola FL
Phone #: 452-4315
Contact: Greg Campbell
Job Order #: 01305001

Lab ID Number:
Sample Date: 9/5/97
Received Date: 9/5/97
Sample Site: Bernson Fld Site 1122
Lab Due Date:

Sample ID #	Lab	#1-73853	#2-73854	#3-	#4-	Notes:
Sample Name or Location	----------	Site 1122 MW#13	Site 1122 MW#14			
Sampled by	----------					
Composite Date/Time Collected	Begin					
	Frequency	9/4/97	9/4/97			
	End					
Grab Time	----------	1445	1532			
Sample Matrix	----------	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. 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/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°
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									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		X						1	250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by:
Date/Time:

Received by: Kathy Bevels
Date/Time: 9/5/97 1530

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