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SITE ASSESSMENT REPORT FOR UNDERGROUND STORAGE TANK SITE 1120 OUTLYING LANDING FIELD BRONSON NAS PENSACOLA FL

03/01/1998

NAVY PUBLIC WORKS CENTER

SITE ASSESSMENT REPORT
FDEP REGISTERED NUMBER 179300938

U.S. NAVY OUTLYING LANDING FIELD (OLF) BRONSON
SITE 1120
PENSACOLA, FLORIDA

PREPARED BY:

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

AUTHOR: GREG CAMPBELL, P.E.
MARCH 1998

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

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TABLE OF CONTENTS

Site Assessment Report
U.S. Navy Outlying Landing Field (OLF) Bronson
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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	13
	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 Site Specific Hydrogeology	28
	2.5 Soil Assessment	31
	2.6 Surface Water Assessment	31
	2.7 Groundwater Quality Assessment	31
3.0	**CONCLUSIONS AND RECOMMENDATIONS**	
	3.1 Conclusions	59
	3.2 Recommendations	60
4.0	**PROFESSIONAL REVIEW CERTIFICATION**	62
5.0	**REFERENCES**	63
APPENDICES		

LIST OF FIGURES

Site Assessment Report
U.S. Navy Outlying Landing Field (OLF) Bronson
Site 1120
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 1120	8
1-8	OLF Bronson Soil Map	15
1-9	Cross Sections and Wells Used in Report	17
1-10	Geologic Cross Section B-B', Section Parallels the Regional Dip	18
1-11	Geologic Section Q-Q', Showing Formations along the Gulf Coast of Western Florida	19
1-12	Geologic Section C-C' Across Escambia & Santa Rosa Counties	20
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	26
2-2	Monitoring Well Location Map	27
2-3	Groundwater Flow Direction Map	30
2-4	Soil Contamination Distribution Map	44
2-5	Total Xylene Contamination Distribution Map	53
2-6	Naphthalene Contamination Distribution Map	54
2-7	TPH Contamination Distribution Map	55

LIST OF TABLES

Site Assessment Report
U.S. Navy Outlying Landing Field (OLF) Bronson
Site 1120
Pensacola, Florida

Table	Title	Page No.
1-1	Summary of Volatile and Semi-Volatile Organics Analytical Results for Soil Samples	10
1-2	Summary of BNA Extratables Analytical Results for Soil Samples	11
1-3	Summary of Total Petroleum Hydrocarbons Analytical Results for Soil Samples	12
1-4	Summary of Polynuclear Aromatic Hydrocarbons Analytical Results for Groundwater Sample Monitoring Well MW-7	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 Vapor Concentrations in Soil Analytical Results for Groundwater Samples Soil Borings SB-1 thru SB-14 Soil Borings SB-101 thru SB-106 Monitoring Wells MW-2 thru DMW-34	32
2-3	Summary of Volatile Organic Compounds Analytical Results for Groundwater Samples Monitoring Wells MW-1 thru DMW-34	46
2-4	Summary of Polynuclear Aromatic Hydrocarbons Analytical Results for Groundwater Samples Monitoring Wells MW-1 thru DMW-34	48
2-5	Summary of TPH, Lead, and EDB Analytical Results for Groundwater Samples Monitoring Wells MW-1 thru DMW-34	50

LIST OF APPENDICES

Site Assessment Report
U.S. Navy Outlying Landing Field (OLF) Bronson
Site 1120
Pensacola, Florida

Appendices	Title	Page No.
APPENDIX A:	Monitoring Well Construction Diagrams	
APPENDIX B:	Slug Test Data, Graphs, and Calculations	
APPENDIX C:	Lithologic Logs	
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 site assessment and remediation plan (if warranted) at the U.S. Navy Outlying Landing Field (OLF) Bronson, Site 1120, Pensacola Naval Air Station, Pensacola, Florida.

The findings and conclusions of the field investigation for the Site Assessment Report (SAR) for OLF Bronson Site 1120 are presented herein.

1.2 SITE LOCATION AND AREA OF INVESTIGATION

Site 1120 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 the 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 areas are 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.

Specifically, Site 1120 is located at latitude 30°23'04" N, longitude 87°25'10" W. The tanks removed from the site were located on the southwest side of the remains of building 1120. To the north, east, and west of the site are dense woods, and to the south is a dirt road running east to west. Concrete risers and old building debris are located to the north and east of the site. Site location maps are included in Figures 1-6 and 1-7 which show locations of buildings, facility boundaries, and tanks. No utilities are located at the site. The locations of the former fuel oil and butane tanks are shown in Figure 1-7.

1.3 SITE HISTORY AND OPERATIONS

Petroleum contamination was observed at the site on June 27, 1994 during the removal of three (3) underground concrete fuel oil tanks (1,500 gallon capacity) and one (1) underground steel butane underground tank (250 gallon capacity) from building 1120 by Public Works Center (PWC) Pensacola personnel (see Figure 1-7 for tank locations). The underground tanks,

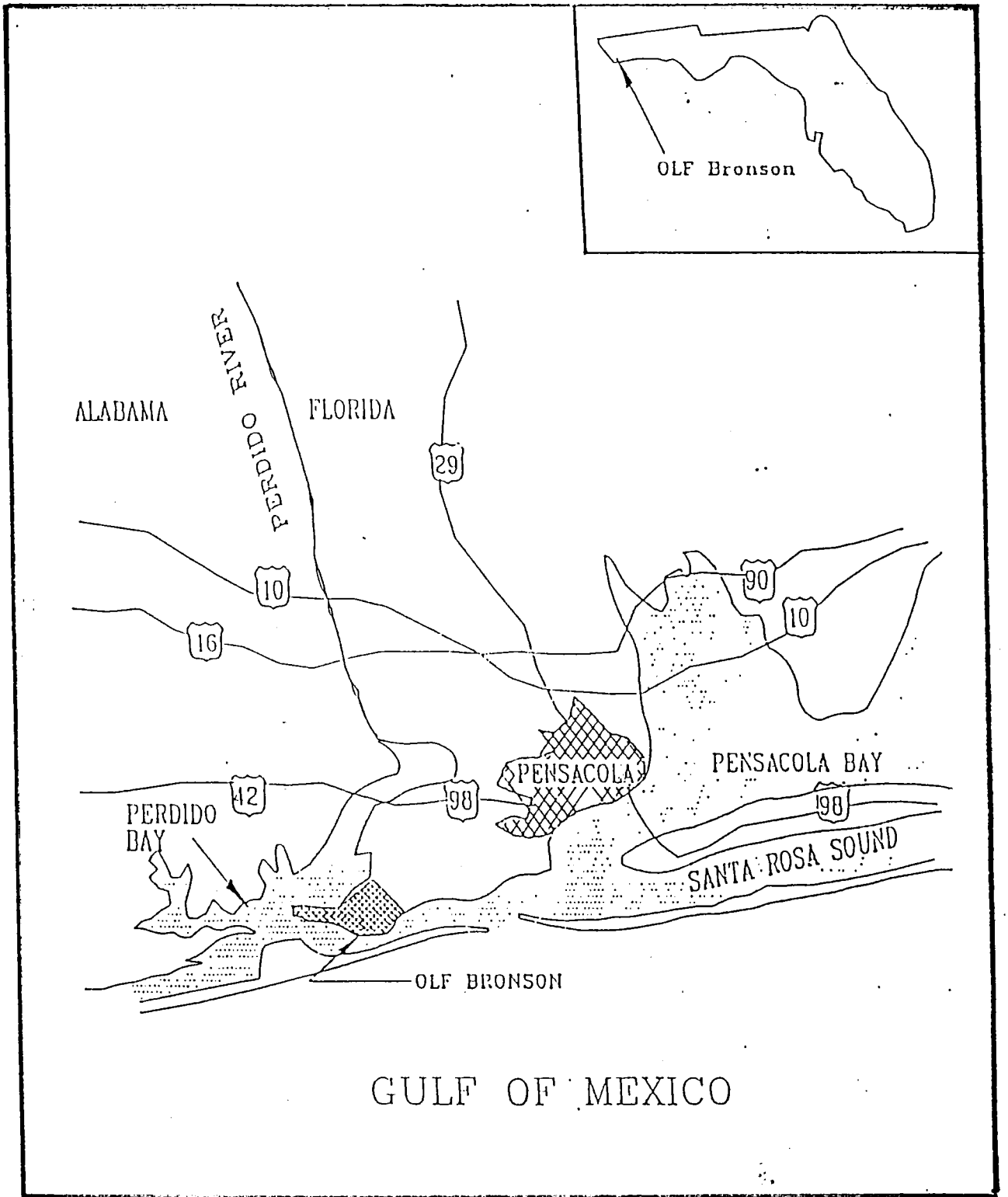


FIGURE 1-1.
OLF Bronson
VICINITY MAP

Key:

Highway

Water Way

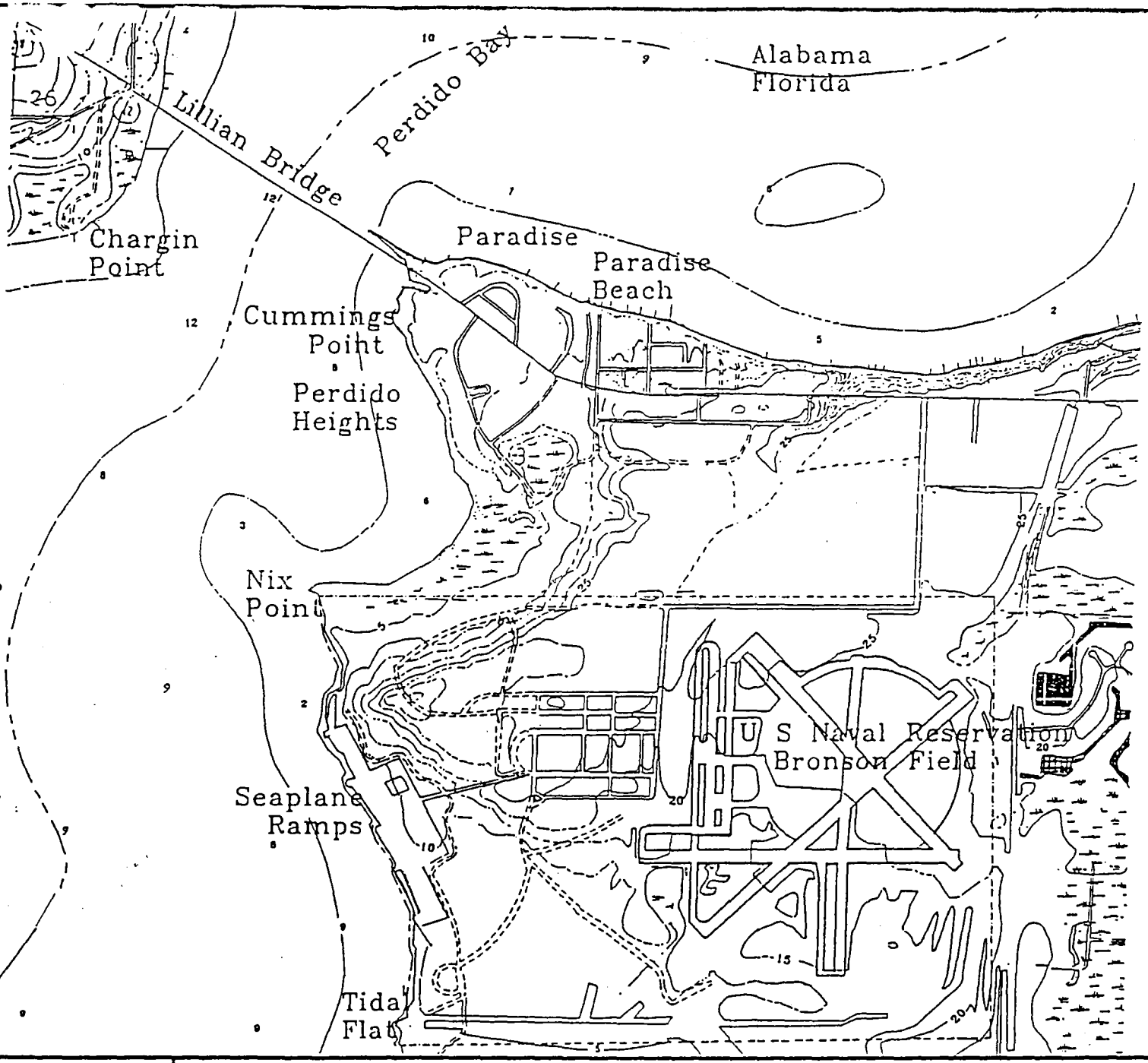


Figure 1-2
OLF Bronson
Topographic Map

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

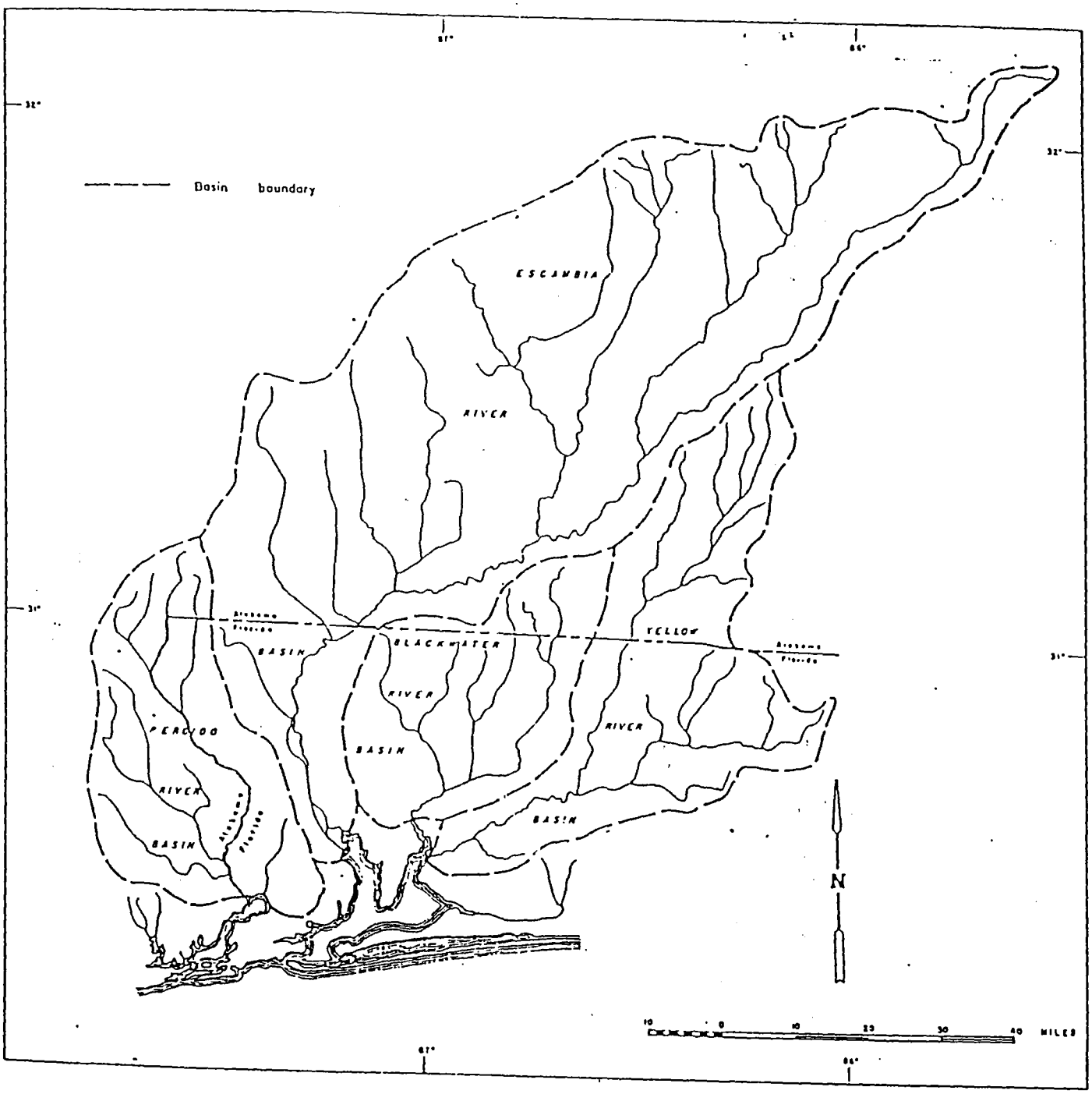


Figure 1-3
OLF BRONSON

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

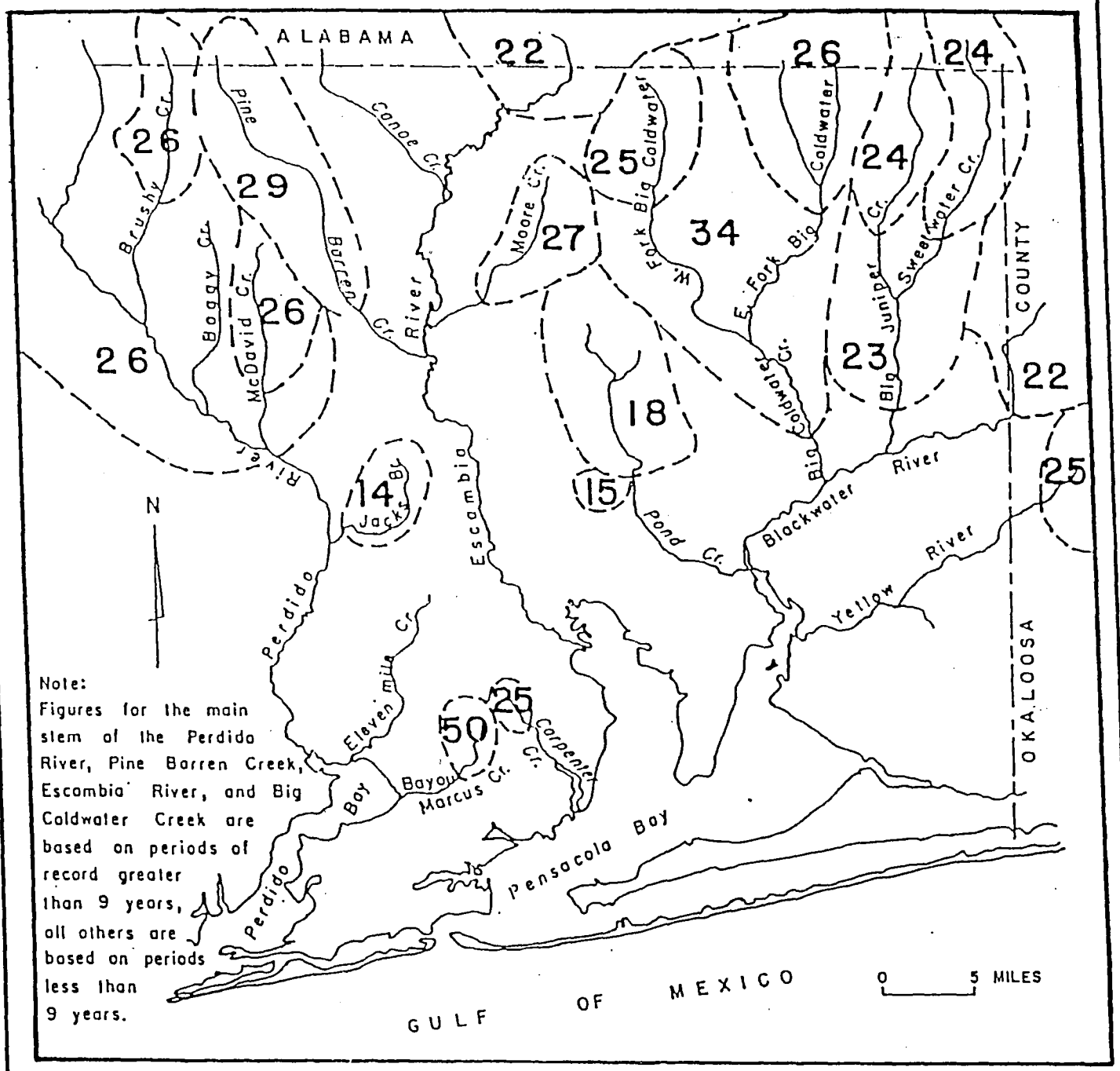


Figure 1-4
OLF BRONSON

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

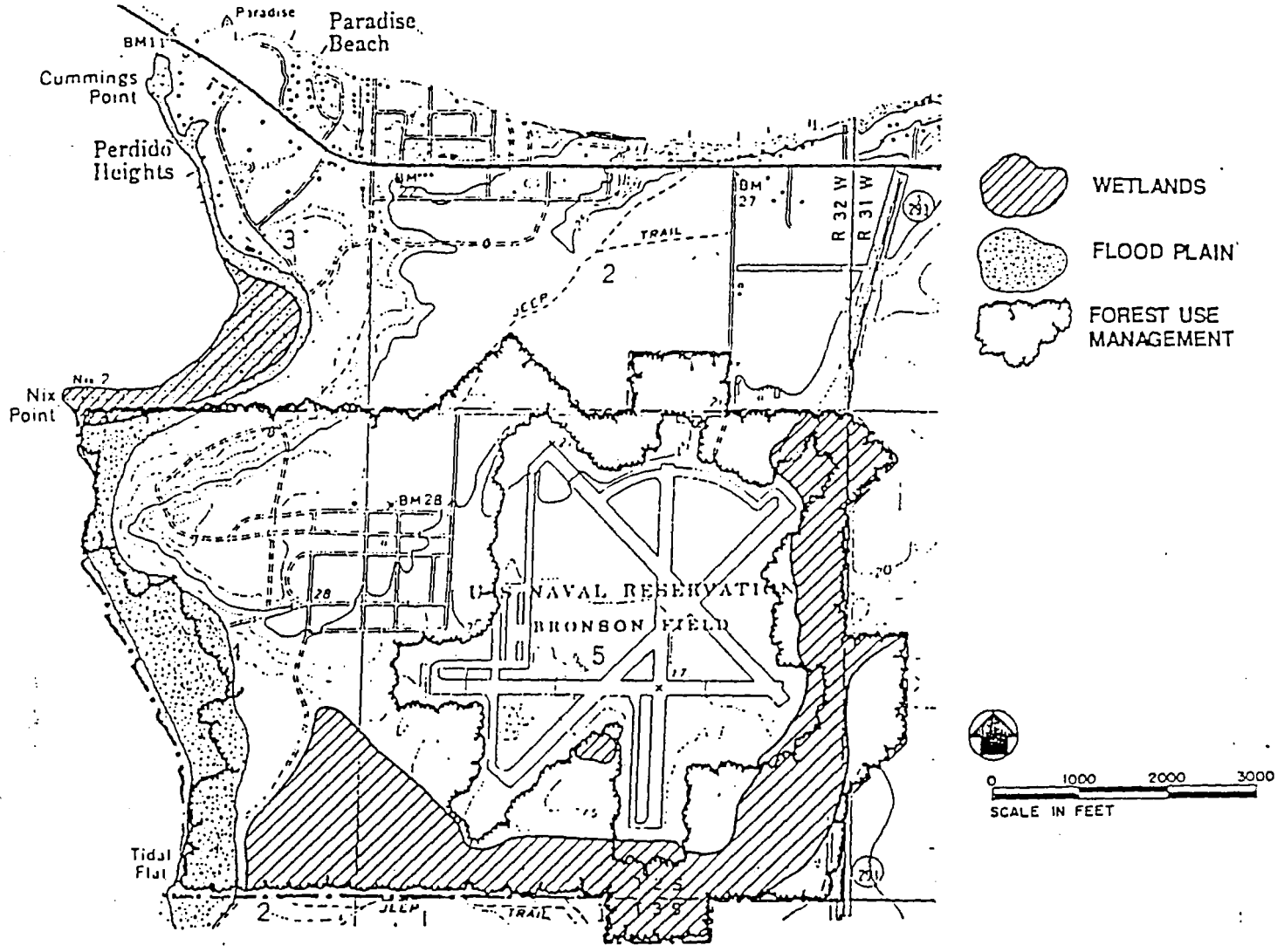


Figure 1-5
OLF Bronson
Flood Plain Area

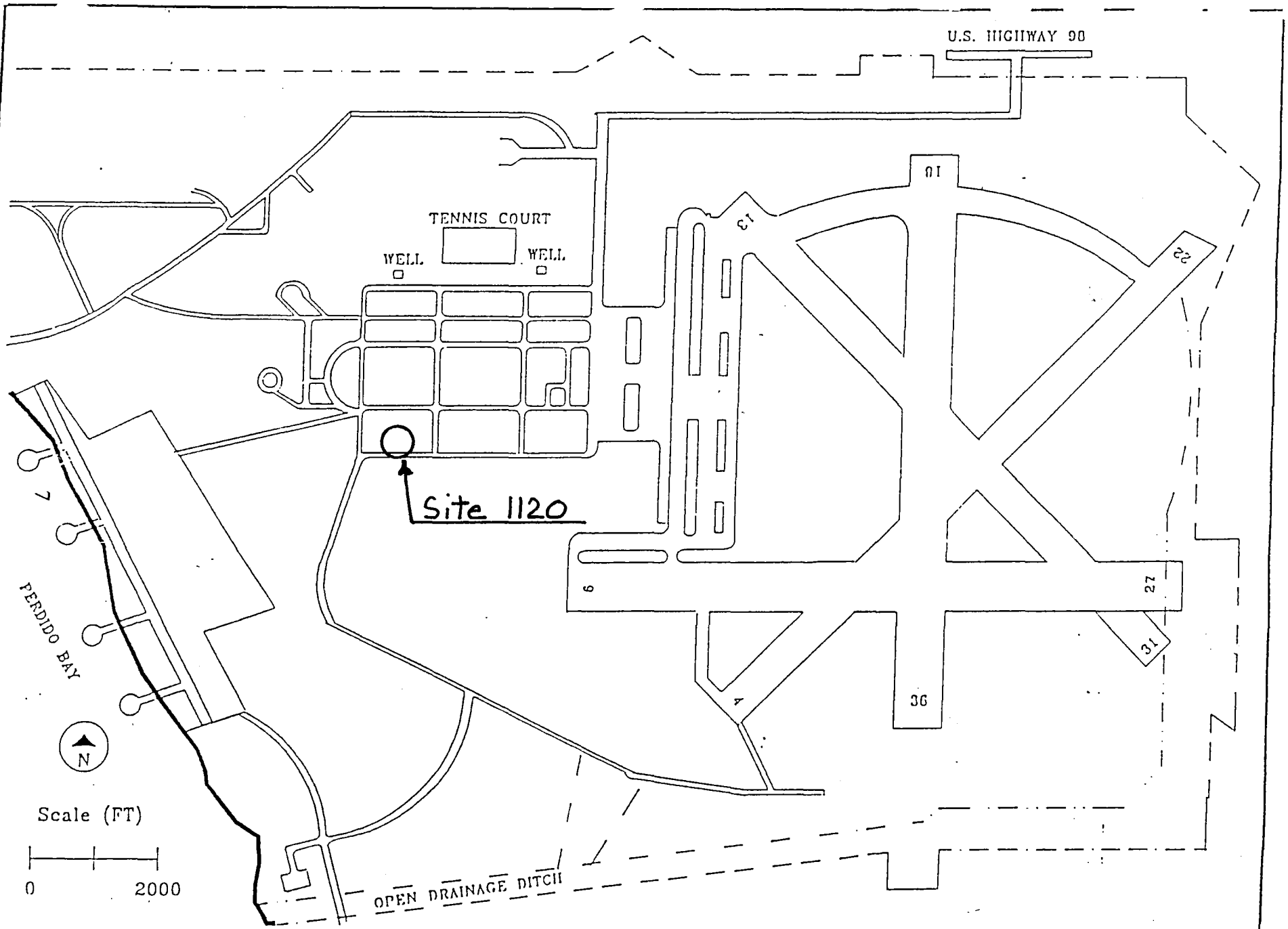


FIGURE 1-6
OLF BRONSON BASE MAP

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

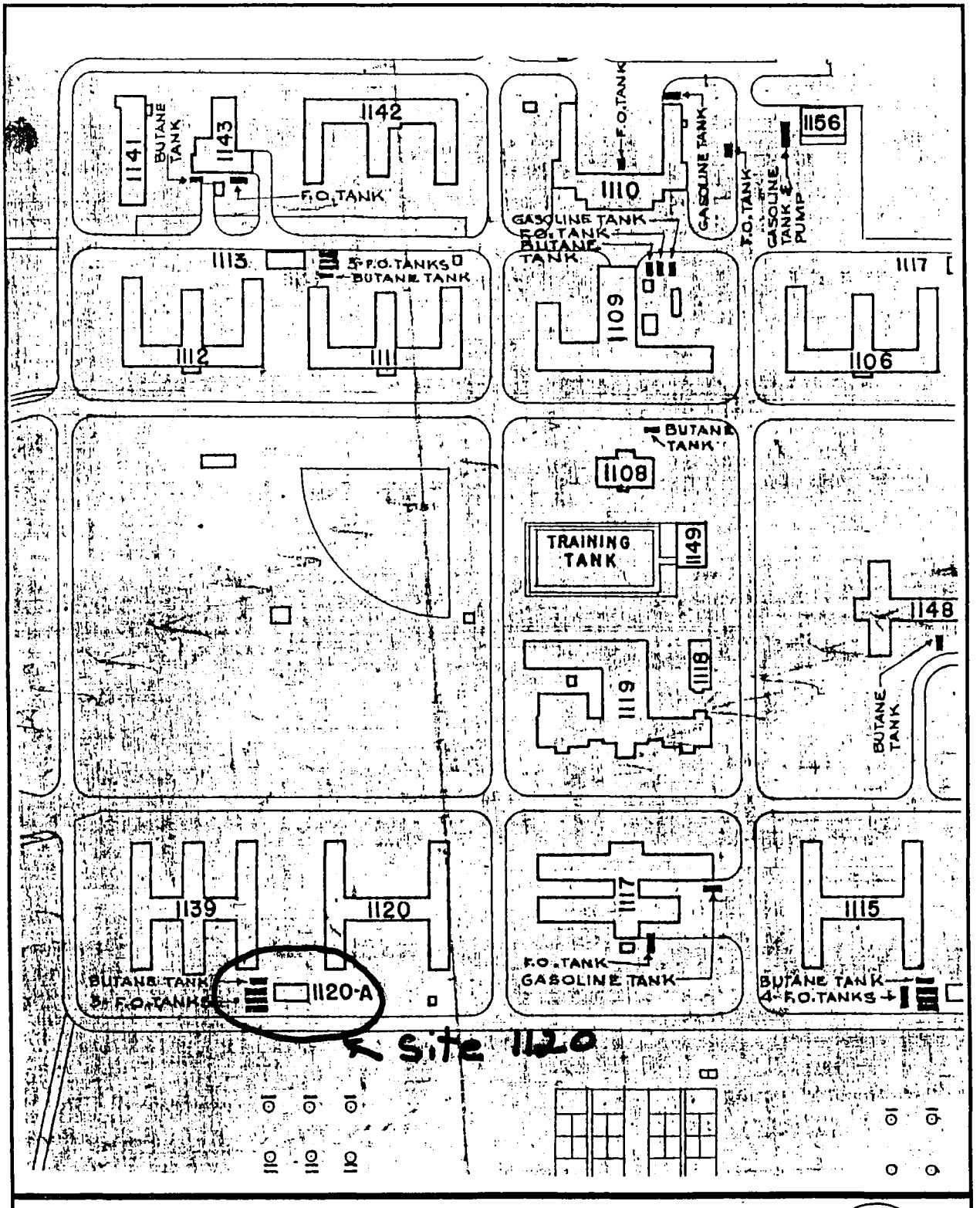


Figure 1-7
OLF Bronson
Site 1120

N

approximately 50 years old, were used to store heating fuel oil and butane. The Closure Assessment Form for Site 1120 documents petroleum hydrocarbon vapor levels in the soils greater than 50 parts per million for diesel/kerosene; and analytical laboratory results of the groundwater sample collected from the monitoring well indicated petroleum contaminant levels at the site 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. Presently, all the runways are inactive. Helicopters from Combat Support Squadron 16 used the area for occasional training until the squadron was dismantled in 1995. 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 1120-A was designated as a Boiler House. The only current employees at Bronson are Morale Recreation and Welfare (MWR) personnel. Duties of MWR personnel at OLF Bronson include operating the campground, minor maintenance of the facility, and teaching sailing and windsurfing.

1.4 INITIAL REMEDIAL ACTION

Navy Public Works Center personnel observed contamination at Site 1120 during the removal of three (3) underground concrete fuel oil tanks (1,500 gallon capacity) and one (1) underground steel butane underground tank (250 gallon capacity) located at the site. The contaminated soil (approximately 200 cubic yards) was removed from the excavation and stockpiled on-site for future remediation. The excavated soil was tested and the results are shown on Tables 1-1, 1-2, and 1-3. The contaminated soil stockpiled on-site was eventually transported and disposed in a permitted thermal treatment facility by HUDSCO, Inc.

1.5 RESULTS OF PREVIOUS INVESTIGATIONS

A closure assessment was performed during the removal of the (4) four underground tanks which consisted of collecting soil and groundwater samples. The samples were analyzed for volatile and semi-volatile organics, BNA extractables, TPHs, and TCLP metals. Copies of all laboratory reports are included in Appendix D.

Soil samples were collected from the site on July 6, 1994 and analyzed for volatile organic aromatics (VOAs), BNA Extractables, total petroleum hydrocarbons (TPHs), and TCLP Metals utilizing EPA methods 8260, 8270A, 418.1, and SW-846, respectfully. Additional soil samples were collected from the site on July 19, 1994 and analyzed for volatile organic aromatics (VOAs) utilizing EPA method 8260. Groundwater samples were collected from the site on May 30, 1995 and analyzed for volatile organic aromatics (VOAs) and polynuclear aromatic hydrocarbons (PAHs) using EPA methods 8260 and 8270A, respectfully. Copies of laboratory reports are included in Appendix D.

On July 6, 1994, soil samples collected and analyzed for VOAs from "small pile," and "large

TABLE 1-1
SUMMARY OF VOLATILE AND SEMI-VOLATILE ORGANICS ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM THE HOLE, DISPOSAL, AND PILES U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1120

PARAMETER: VOLATILES BY GCMS	B1120 CENTER	B1120 SOUTH	B1120 EAST	B1120 WEST	B1120 NORTH	B1120 DISPOS NORTH	B1120 DISPOS SOUTH	B1120 SMALL PILE	B1120 LARGE PILE
n-Butylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	3
Naphthalene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	5	90
1,2,4-Trimethylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	13
1,3,5-Trimethylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	5

NOTES: BDL = Below detection limits
Soil samples on sites Small Pile and Large Pile were collected on July 6, 1994.
Soil samples on sites Center, South, East, West, North, Dispos North, and Dispos South were collected on July 19, 1994.
All results are reported in parts per billion (ppb) unless otherwise noted.

TABLE 1-2
SUMMARY OF BNA EXTRACTABLES
ANALYTICAL RESULTS FOR SOIL SAMPLES
COLLECTED FROM THE LARGE AND SMALL PILES
U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1120

PARAMETER: BNA Extr.	B1120 SMALL PILE	B1120 LARGE PILE
2-Methylnaphthalene	BDL	460

Notes: BDL = Below detection limits
Soil samples were collected on July 6, 1994.
All results are reported in parts per billion (ppb) unless otherwise noted.

TABLE 1-3
SUMMARY OF TPH
ANALYTICAL RESULTS FOR SOIL SAMPLES
COLLECTED FROM THE LARGE AND SMALL PILES
U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1120

PARAMETER: TPH'S	B1120 SMALL DIRT PILE	B1120 LARGE DIRT PILE
TOTAL PETROLEUM HYDROCARBONS	35 ppm	67 ppm

NOTES: BDL = Below detection limits
Soil samples were collected on July 6, 1994.
All results are reported in parts per million (ppm) unless otherwise noted.

pile" indicated the "small pile" had naphthalene contamination levels of 5 ppb and the "large pile" had n-butylbenzene, naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene contamination levels of 3 ppb, 90 ppb, 13 ppb, and 5 ppb, respectively. Soil samples analyzed for BNA Extractables indicated contamination levels were below detection limits on the "small pile" and 2-methylnaphthalene contamination levels of 460 ppb were detected in the "large pile." TPHs were detected in the soil samples from "small pile" and "large pile" at levels of 35 ppm and 67 ppm, respectively. Analyses of soil samples for TCLP Metals collected from both piles indicated contamination levels were below detection limits. Summary tables of laboratory results are found in Tables 1-1, 1-2, and 1-3.

Soil samples collected July 19, 1994 from the sides and bottom of the excavation site and from "disposal north," and "disposal south" and analyzed for VOAs indicated contamination levels at all sites were below detection limits.

The Closure Assessment included the installation of one groundwater monitoring well (MW-7) at Site 1120 on May 24, 1995 by FGS, Inc. The well was installed in the center of the former location of the underground tanks. The well was set at 17 feet below land surface (BLS) with 10.0 feet of 0.010-inch slotted screen with 7 feet of riser casing. A filter sand pack (16 to 40 silica sand) was extended approximately one foot above the top of the well screen. A one to two foot bentonite seal was placed above the sand pack, and the remaining annular space was filled with cement grout (3-5% Bentonite Mix). An aboveground steel protective cover and lock cap was installed to complete the monitoring well installation. The well was developed by a combination of surge pumping (formation water only), overpumping, and pumping. Monitoring well location is shown in Figure 2-2. A typical monitoring well construction diagram is shown in Appendix A. The lithological log for monitoring well MW-7 is shown in Appendix C.

A groundwater sample was collected from monitoring well MW-7 on May 30, 1995 and analyzed for volatile organic aromatics (VOAs) utilizing EPA method 8260 and polynuclear aromatic hydrocarbons (PAHs) utilizing EPA method 8270A. A summary of the analytical results for the groundwater sample is shown in Table 1-4. No VOAs were detected in the groundwater sample. Acenaphthene, fluorene, phenanthrene, 1-methylnaphthalene, and 2-methylnaphthalene were detected at concentrations of 18 ppb, 5 ppb, 4 ppb, 36 ppb, and 37 ppb, respectively. No PAHs detected in the groundwater sample exceeded FDEP groundwater cleanup target levels.

1.6 REGIONAL GEOLOGY AND HYDROGEOLOGY

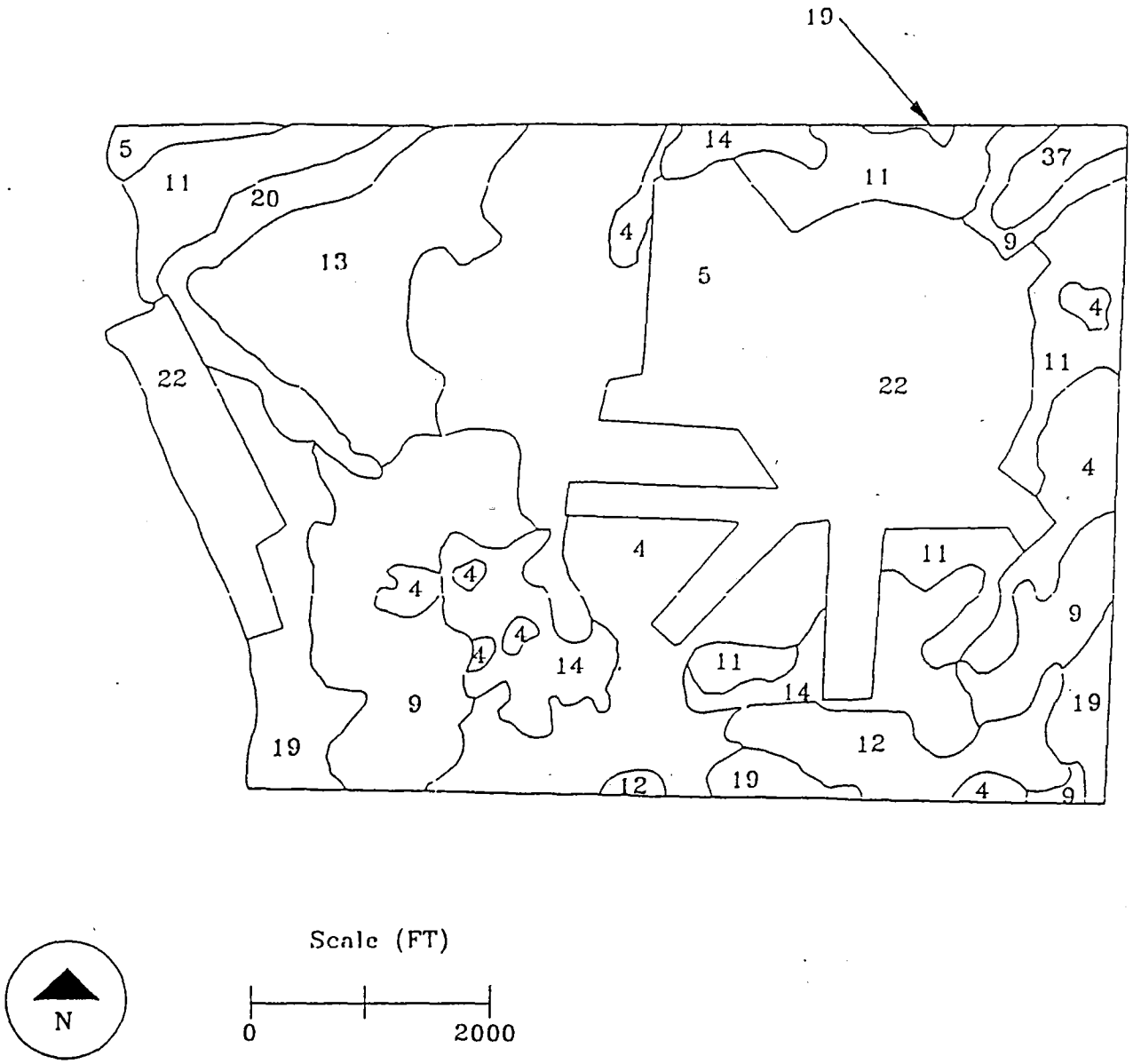
Figure 1-8 displays the soil configuration map as of 1991. Surface sediments in the Bronson Field area are classified with the Croatan, Foxworth, Hurricane, Lakeland, Leon, Pickney, Pottsburg, and Urban Land associations.

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

TABLE 1-4
SUMMARY OF POLYNUCLEAR AROMATIC HYDROCARBONS ANALYTICAL RESULTS FOR GROUNDWATER SAMPLE COLLECTED FROM MONITORING WELL MW-7 OUTLYING LANDING FIELD BRONSON, SITE 1120

POLYNUCLEAR AROMATICS (PAH'S)	
PARAMETER: PAH'S	**B1120 MW-7**
Acenaphthene	18
Acenaphthylene	BDL
Anthracene	BDL
Benzo(a)anthracene	BDL
Benzo(a)pyrene	BDL
Benzo(b)fluoranthene	BDL
Benzo(g,h,i)perylene	BDL
Benzo(k)fluoranthene	BDL
Chrysene	BDL
Dibenzo(a,h)anthracene	BDL
Fluoranthene	BDL
Fluorene	5
Indeno(1,2,3-cd)pyrene	BDL
Naphthalene	BDL
Phenanthrene	4
Pyrene	BDL
1-Methylnaphthalene	36
2-Methylnaphthalene	37

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



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

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

beds of sand, silt, limestone, and clay that dip gently seaward. Most of these sediments were deposited during higher stands of the sea as the Mississippi River system transported eroded debris southward. The Gulf Coast region of the United States is the landward side of the most active geosyncline in North America. The formations which make up the landward side of the geosyncline are all wedge-shaped, thickening rapidly from the outcrop gulfward to the south.

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

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

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

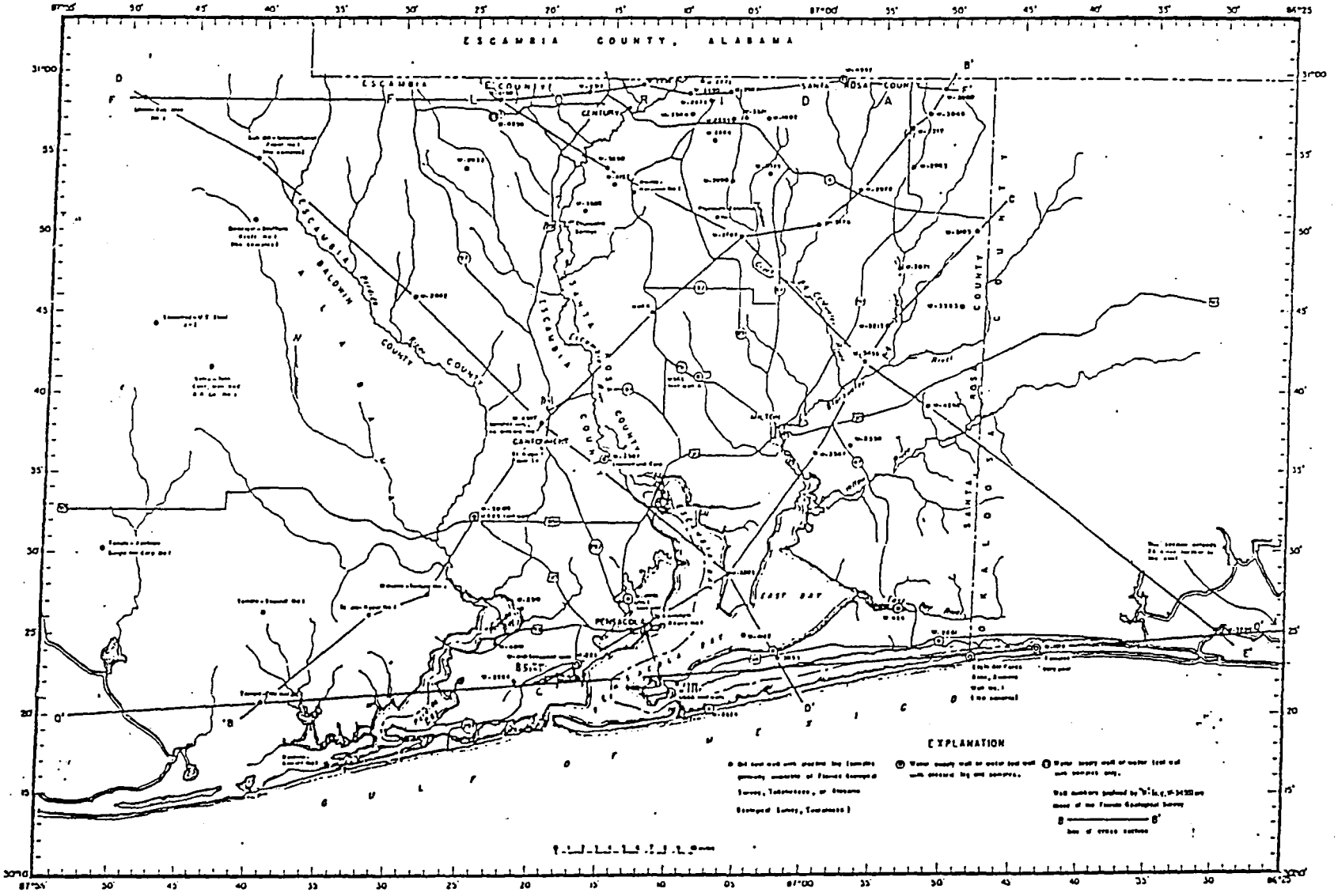


Figure 1-9
OLF Bronson

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

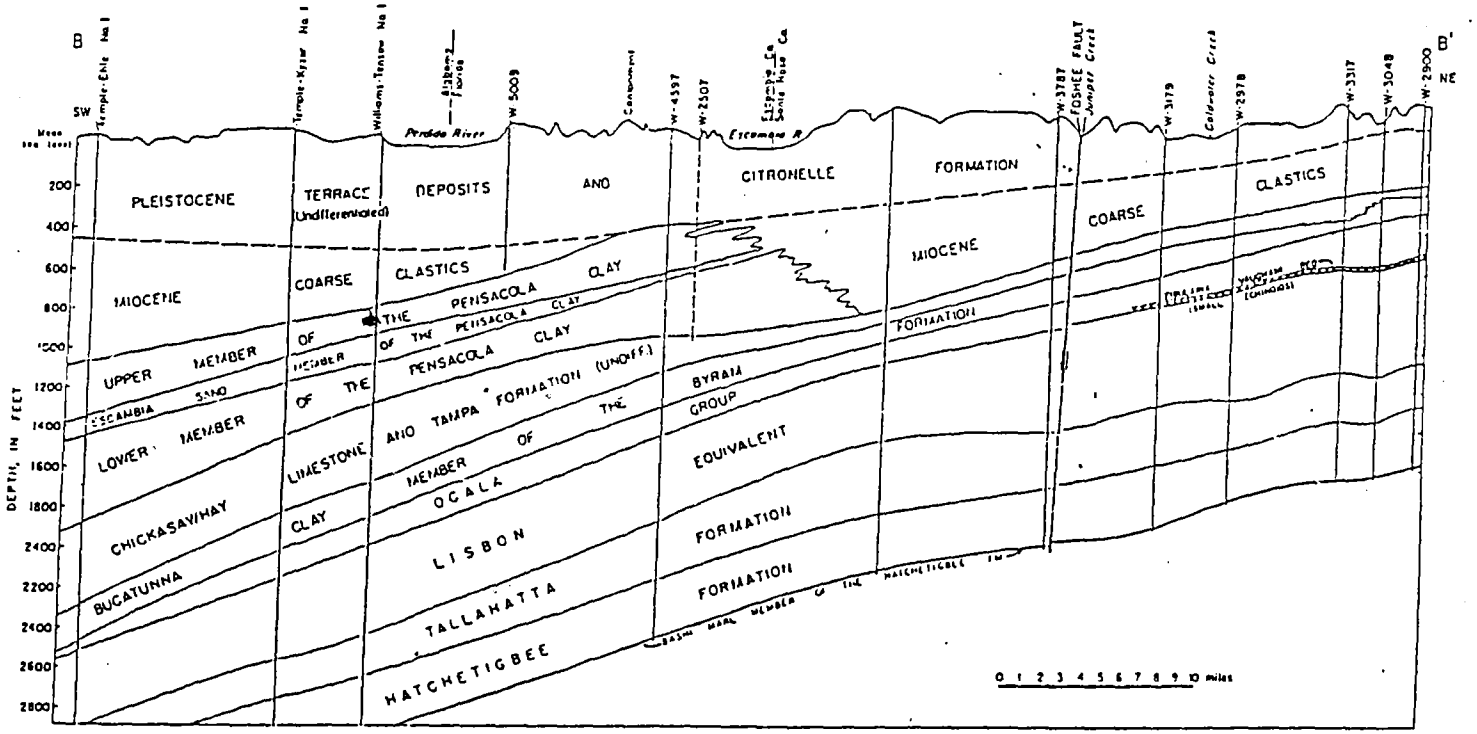


Figure 1-10
OLF Bronson

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

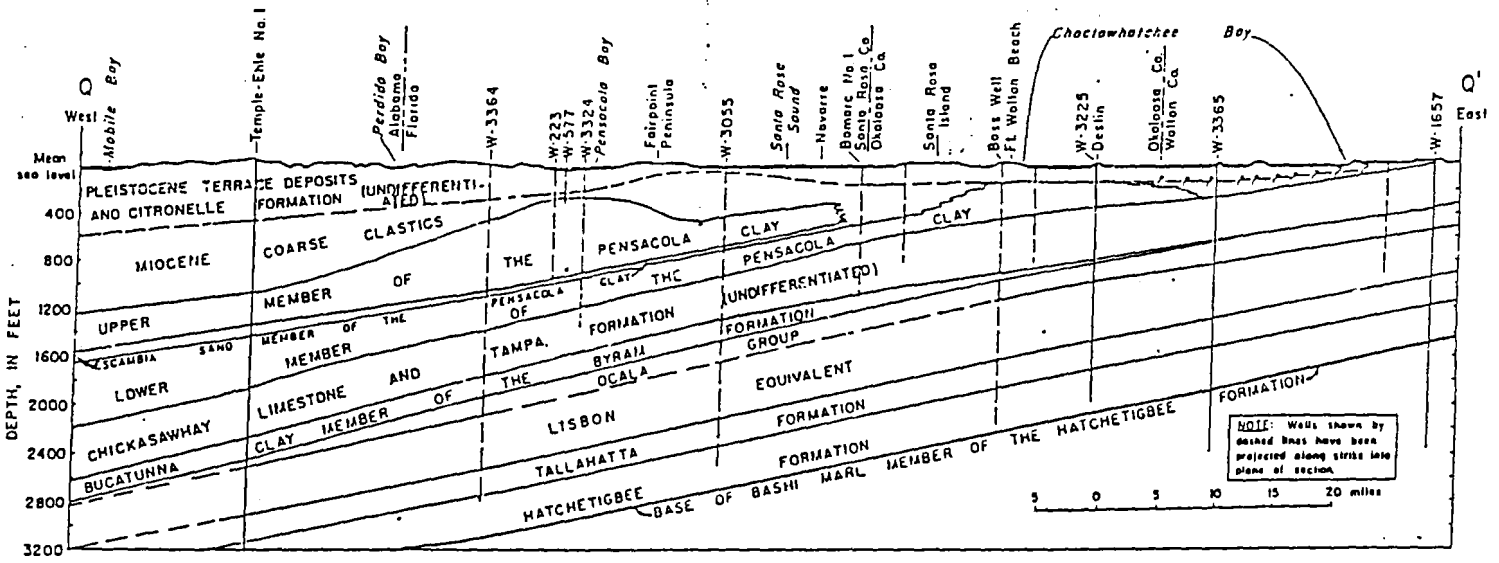


Figure 1-11
OLF Bronson

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

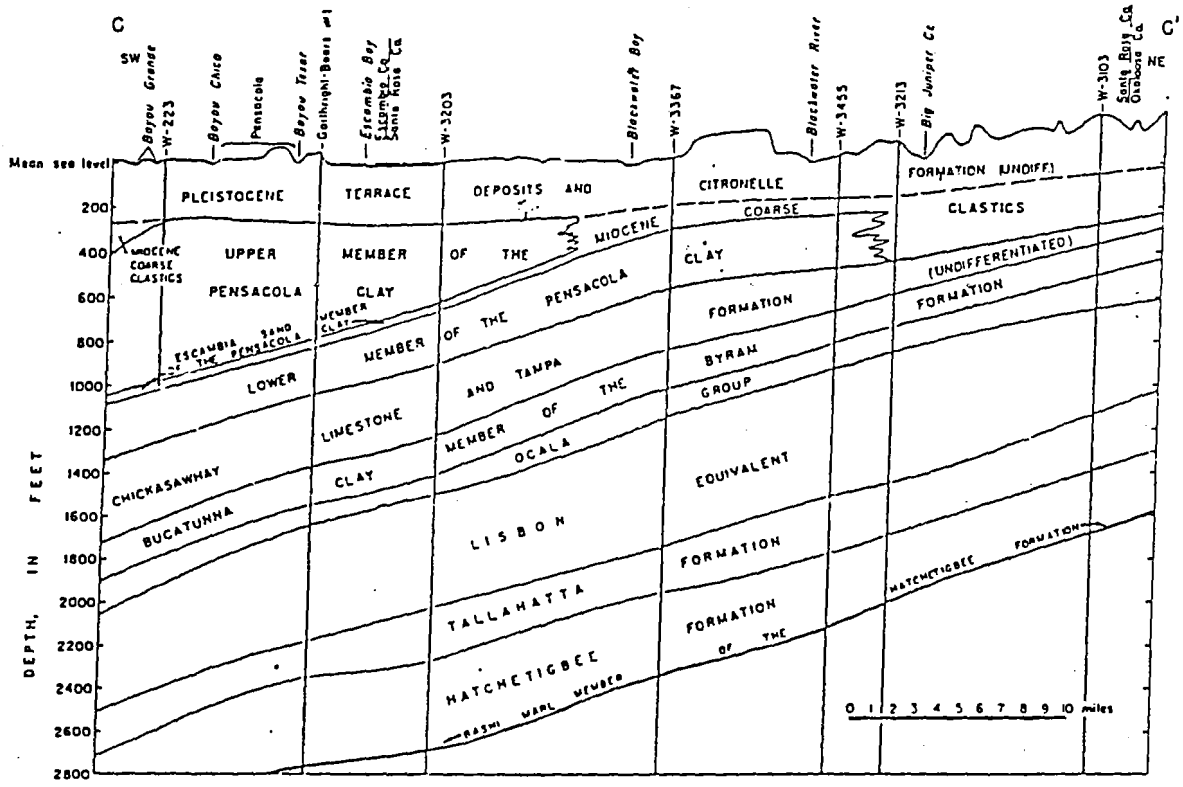


Figure 1-12
OLF Bronson

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

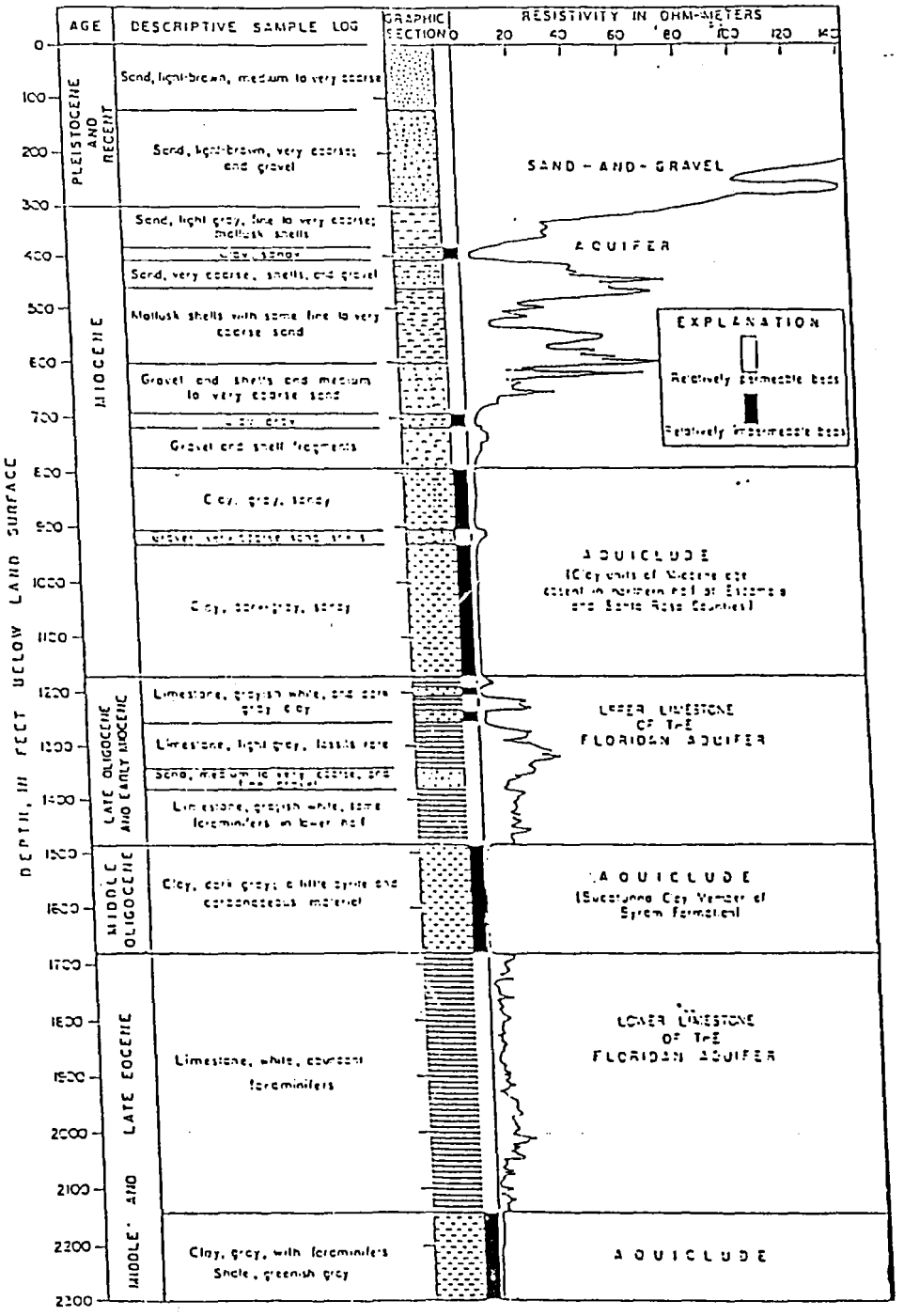


Figure 1-13
OLF Bronson

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

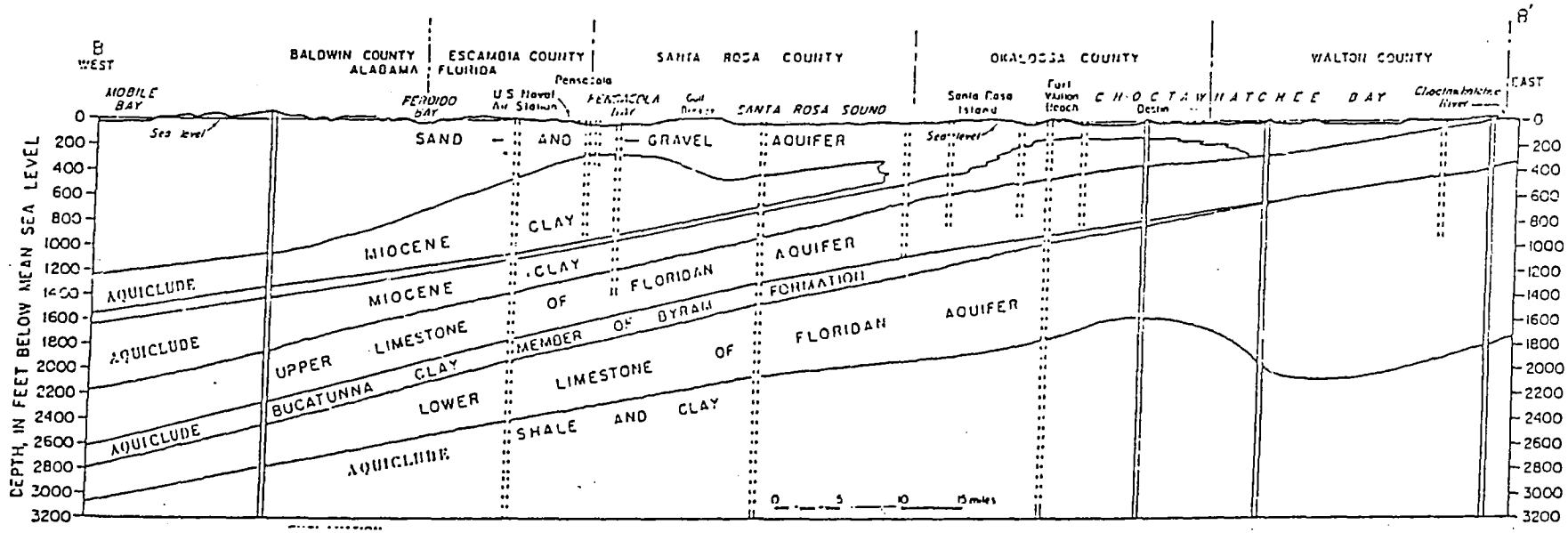


Figure 1-14
OLF Bronson

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

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

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

With few exceptions, the sum of the mineral constituents in the groundwater of the sand-and gravel aquifer is very low, ranging from 12 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. The active potable water well #2 is located within a 0.34 mile radius of the site.

2.0 SITE ASSESSMENT

2.1 SOIL BORING AND MONITORING WELL CONSTRUCTION DETAILS

Twenty soil borings were installed at the site on February 6, 1996 and September 18, 1996 by W.E.S., Inc. to a depth of approximately 14-19 feet below land surface (BLS). The soil borings were installed using a hollow stem auger. Soil samples were collected from SB-1 thru SB-14 at 1, 4, 7, 10, 13, and 14 feet BLS and from SB-101 thru SB-106 at 1, 4, 7, 10, 13, 16, and 19 feet BLS. Soil samples were also collected from each of the boreholes during the installation of

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

shallow monitoring wells MW-2 thru MW-33 and deep monitoring well DMW-34. Soil samples were collected at depths starting at 1' BLS and collected every 3' thereafter and ending at 1' above groundwater level. Soil samples were collected at depths ranging from 1' to 19' BLS. Each soil sample collected was analyzed for volatile organic vapors using an organic vapor analyzer (OVA) with a flame ionization detector. Location maps of the soil borings and monitoring wells are provided in Figures 2-1 and 2-2, respectfully. Monitoring well construction diagrams for monitoring wells MW-1 thru MW-33 are shown in Appendix A. Lithological logs for monitoring wells MW-2 thru MW-33 are shown in Appendix C. Monitoring well MW-1 (formerly designated MW-7) was installed during the Closure Assessment of the underground tanks. A well construction diagram for this well is found in Appendix A.

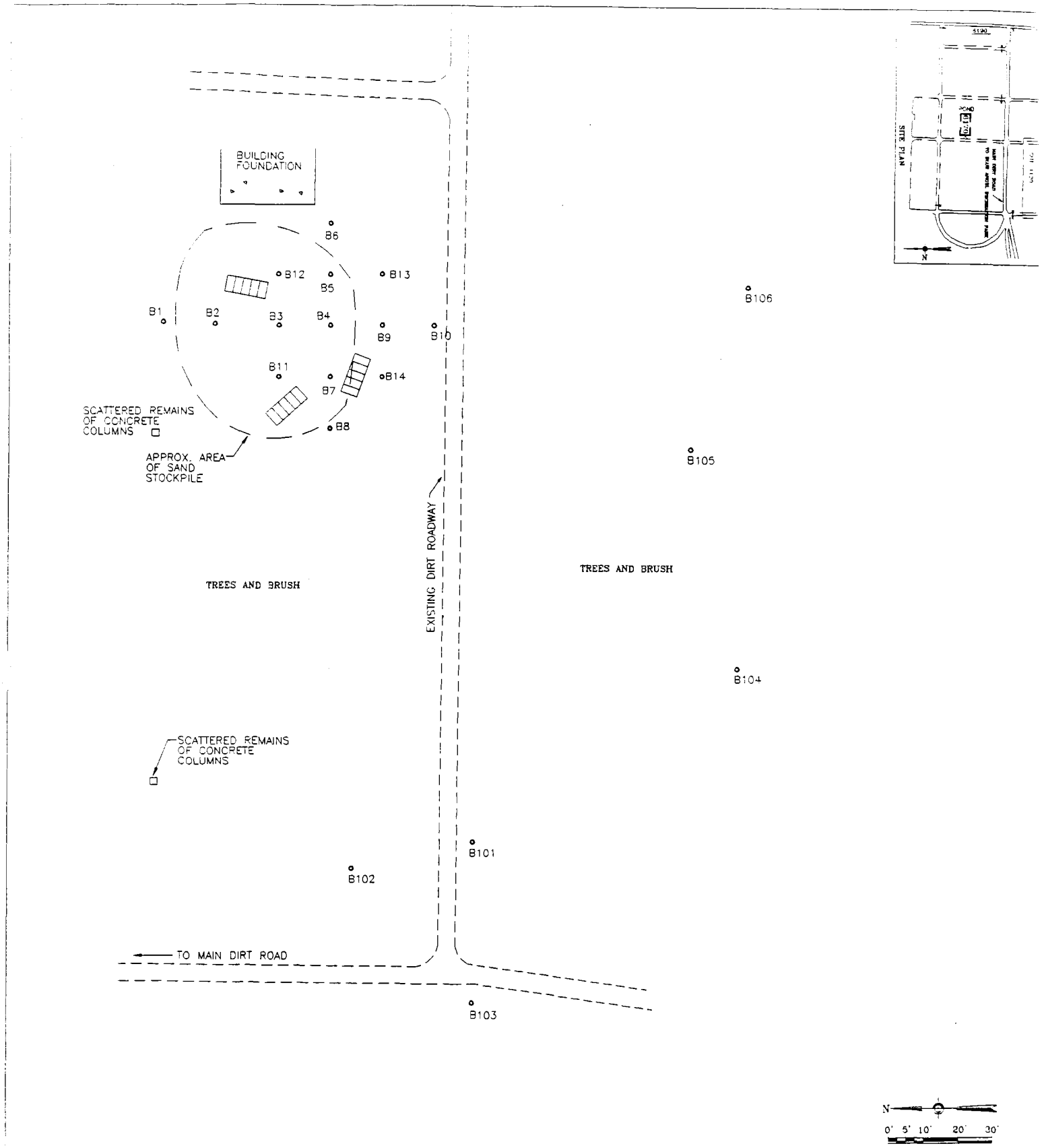
Five 23-24 ft. monitoring wells (MW-2 thru MW-6) were installed at the site by W.E.S., Inc. on March 29, 1996. Monitoring wells MW-2 thru MW-6 consist of a 2-inch diameter by 10 feet of 0.010-inch slotted schedule 40 PVC pipe, threaded to 12.5-13.5 feet of solid PVC riser casing. The wells were completed in approximately 8-inch diameter boreholes approximately 23-24 feet in depth using the hollow stem auger drilling method. A filter 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, and the remaining annular space was filled with neat cement grout. The PVC casing was brought up to 0.2 ft. below ground level. A steel manhole casing 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 6-inch thick concrete encasement (4,000 psi) was installed around the outside of the manhole and flush to the land surface. A two foot by two foot concrete pad was installed around the outside of the manhole cover at the top of the land surface.

Seven 22.5 ft. monitoring wells (MW-7 thru MW-13) were installed at the site by W.E.S., Inc. on May 14 and 15, 1996. The construction details of monitoring wells MW-7 thru MW-13 are identical to the construction details of monitoring wells MW-2 thru MW-6 (outlined above) except the solid PVC riser casing is 12 feet long.

Eight 22.5 ft. monitoring wells (MW-14 thru MW-21) were installed at the site by W.E.S., Inc. on July 31, 1996 and August 1, 1996. The construction details of monitoring wells MW-14 thru MW-21 are identical to the construction details of monitoring wells MW-2 thru MW-6 (outlined above) except the solid PVC riser casing is 12 feet long.

Five 23.5-24.5 ft. monitoring wells (MW-22 thru MW-26) were installed at the site by W.E.S., Inc. on September 18 and 19, 1996. The construction details of monitoring wells MW-22 thru MW-26 are identical to the construction details of monitoring wells MW-2 thru MW-6 (outlined above) except the solid PVC riser casing is 13-14 feet long.

Five 25.5 ft. monitoring wells (MW-27 thru MW-31) were installed at the site by W.E.S., Inc. on October 22, 1996. The construction details of monitoring wells MW-27 thru MW-31 are identical to the construction details of monitoring wells MW-2 thru MW-6 (outlined above) except the solid PVC riser casing is 15 feet long.



LEGEND

HOT CUTTINGS STORED ON PLASTIC SHEETING

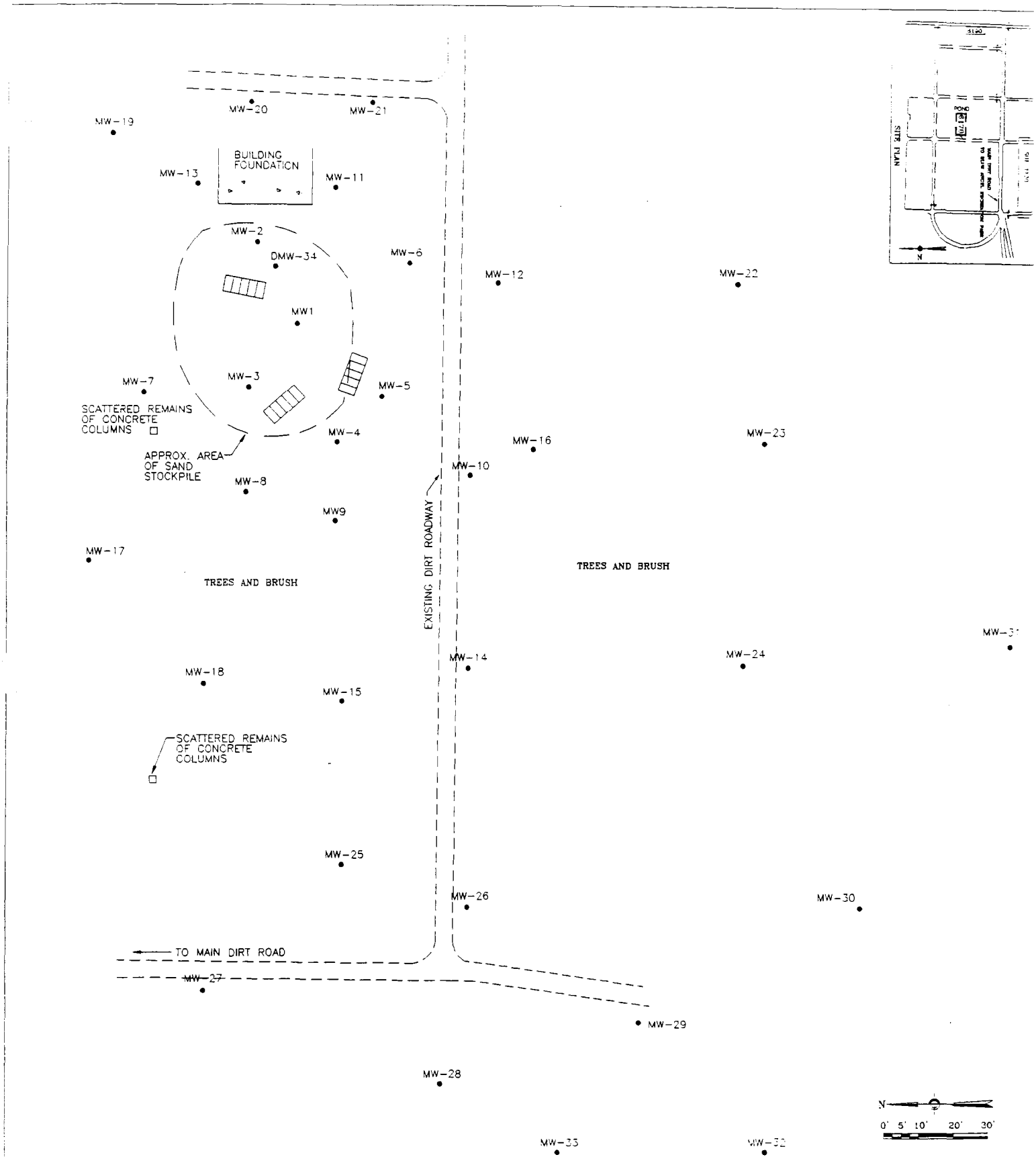
B103 SOIL BORING

NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA

SCALE:	FIGURE 2-1	DRAWN BY: DWG. NO: REVISED BY:

SOIL BORING LOCATION MAP
SITE 1120, BRONSON FIELD

CLIENT: NAS ENVIRONMENTAL DEPARTMENT, NAS PENSACOLA



LEGEND

HOT CUTTINGS STORED ON PLASTIC SHEETING

MW-25 MONITORING WELL

NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA

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

MONITORING WELL LOCATION MAP
SITE 1120, BRONSON FIELD

CLIENT: NAS ENVIRONMENTAL DEPARTMENT, NAS PENSACOLA

Two 25.5 ft. monitoring wells (MW-32 thru MW-33) were installed at the site by W.E.S., Inc. on December 10, 1996. The construction details of monitoring wells MW-32 thru MW-33 are identical to the construction details of monitoring wells MW-2 thru MW-6 (outlined above) except the solid PVC riser casing is 15 feet long.

One 40.5 ft. deep vertical extent monitoring well (DMW-34) at site 1120 was installed by W.E.S., Inc. on January 19, 1997. Construction details of deep vertical extent monitoring well DMW-34 are identical to construction details of monitoring wells MW-2 thru MW-6 (outlined above) with the following exceptions: 5.0 feet of 0.010 slotted Schedule 40 PVC pipe, 35 feet of solid PVC riser, 40.5 feet in depth, and 1 ft. fine sand seal placed above the sand pack.

2.2 GROUNDWATER FLOW DIRECTION

The top of casing elevations for monitoring wells M-1 thru DMW-34 were surveyed by W.E.S., Inc. personnel on February 4, 1997. Benchmark assumes elevation of 30.00 ft, top of casing riser, existing monitoring well MW-1. Groundwater elevations for the groundwater level measurements taken on August 8, 1997 are shown in Table 2-1. A groundwater flow direction map for the groundwater level measurements taken on August 8, 1997 is shown in Figure 2-3. The groundwater flow direction map indicates the groundwater flow direction at the site to be toward the southwest toward Perdido Bay.

2.3 GROUNDWATER FLOW RATE

There are nine sites at Bronson Field at which contamination assessment reports are being conducted. Because the hydrogeology at each of the nine sites was generally found consistent, slug tests were performed at only three of the sites (Sites 1140NE, 1122 and 1116). A rising head slug test was performed at each of the three sites by W.E.S., Inc. to assess the hydraulic conductivity of the surficial zone of the sand-and-gravel aquifer. Procedures for conducting the slug tests, slug test data graphs and calculations are attached in Appendix B. The slug test results indicate the estimated horizontal hydraulic conductivity (k) at sites 1140NE, 1122 and 1116 to be 0.9719 ft/day, 0.1171 ft/day and 0.6899 ft/day, respectively. Therefore, the average estimated horizontal hydraulic conductivity at the site is 0.6130 ft/day. The calculated linear groundwater flow velocity at sites 1140NE, 1122 and1116 was estimated to be 0.0152 ft/day (5.5337 ft/yr), 0.0043 ft/day (1.5514 ft/yr) and 0.0069 ft/day (2.5181 ft/yr), respectively. Therefore, the average estimated linear groundwater velocity was determined to be 0.0088 ft/day (3.201 ft/yr).

2.4 SITE SPECIFIC HYDROGEOLOGY

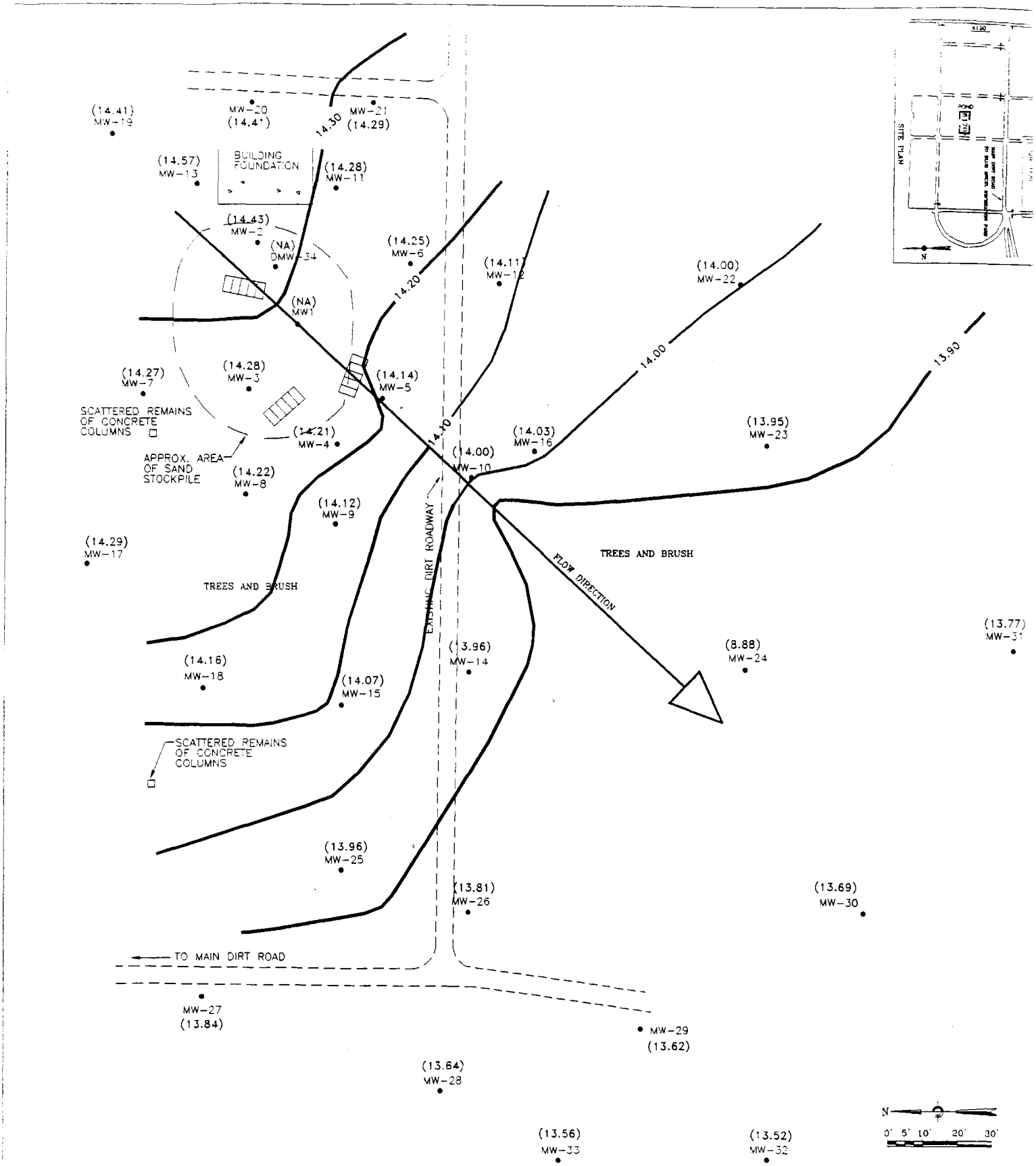
The principal aquifer of concern at the site is the surfical zone of the sand-and-gravel aquifer. The surfical zone was penetrated to a depth of 40.5 feet below land surface (BLS) during this investigation. The groundwater table was encountered at approximately 14 feet to 19 feet BLS.

The site specific geology was determined by examination of soil samples collected during the installation of soil borings and monitoring wells. The shallow subsurface lithology beneath the site is generally characterized by (1) tan, silty, fine sand at a depth of 0-7 ft. BLS; (2) brown,

TABLE 2-1
TOP OF CASING AND GROUNDWATER ELEVATIONS
U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1120

WELL NUMBER	TOC FT. M.S.L.	DTW (FT) 8/8/97	GROUNDWATER ELEVATION 8/8/97
MW-1(BM)	30.00	NA	NA
MW-2	30.08	15.65	14.43
MW-3	30.74	16.46	14.28
MW-4	29.08	14.87	14.21
MW-5	28.36	14.22	14.14
MW-6	28.30	14.05	14.25
MW-7	29.46	15.19	14.27
MW-8	29.90	15.68	14.22
MW-9	29.66	15.54	14.12
MW-10	29.21	15.21	14.00
MW-11	28.43	14.15	14.28
MW-12	28.66	14.55	14.11
MW-13	29.42	14.85	14.57
MW-14	29.51	15.55	13.96
MW-15	30.38	16.31	14.07
MW-16	28.71	14.68	14.03
MW-17	30.71	16.42	14.29
MW-18	30.59	16.43	14.16
MW-19	30.22	15.81	14.41
MW-20	29.85	15.44	14.41
MW-21	28.24	13.95	14.29
MW-22	28.01	14.01	14.00
MW-23	28.52	14.57	13.95
MW-24	29.45	15.57	8.88
MW-25	30.25	16.29	13.96
MW-26	30.91	17.10	13.81
MW-27	32.55	18.71	13.84
MW-28	32.68	19.04	13.64
MW-29	31.03	17.41	13.62
MW-30	29.71	16.02	13.69
MW-31	29.18	15.41	13.77
MW-32	30.43	16.91	13.52
MW-33	32.11	18.55	13.56
DMW-34	31.46	NA	NA

NOTES: TOC = Top of Casing
DTW = Depth to Water
Benchmark assumes elevation of 30.0 ft., Top of Casing Riser, Existing MW-1, Bronson Field, Florida.



LEGEND

	HOT CUTTINGS STORED ON PLASTIC SHEETING
MW-25	MONITORING WELL
(13.64)	GROUNDWATER ELEVATION
14.00	GROUNDWATER CONTOUR

NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA

SCALE:	FIGURE 2-3	DRAWN BY: DWG. NO.: REVISED BY:

GROUNDWATER FLOW DIRECTION MAP
SITE 1120, BRONSON FIELD

CLIENT: NAS ENVIRONMENTAL DEPARTMENT, NAS PENSACOLA

silty, fine sand at a depth of 7-10 ft. BLS; (3) gray, fine to medium sand with clay traces at a depth of 10-16 ft. BLS; (4) beige, fine to medium clayey sand from 16-17 ft. BLS; (5) white extra fine to fine grained sand with dark accessory minerals at a depth of 17-40 ft. BLS. Stratigraphic units are shown on lithologic logs compiled during the drilling of the groundwater monitoring wells. Lithologic logs are found in Appendix C.

2.5 SOIL ASSESSMENT

The extent of soil contamination at the site was determined by OVA screening. Twenty soil borings were installed at the site on February 6, 1996 and September 18, 1996 by W.E.S. Inc. to a depth of approximately 14-19 feet BLS. The soil borings were installed using a hollow stem auger. Thirty-four additional soil borings were installed during the installation of monitoring wells MW-2 thru DMW-34. Soil samples were collected from soil borings SB-1 thru SB-14, SB-101 thru SB-106, and monitoring wells MW-2 thru DMW-34 at three foot intervals beginning at 1' BLS and ending at 1' above the water table. Most samples were taken at 1, 4, 7, 10, 13 and 16 feet BLS. The locations of the soil borings and monitoring wells are shown in Figures 2-1 and 2-2, respectively.

The soil boring designations and their respective OVA screening results are shown in Table 2-2 and a Soil Contamination Distribution Map is included as Figure 2-4. The groundwater table at the site was generally encountered at 14-19 feet BLS. Soil samples from SB-13 (120 ppm) @ 14 ft. BLS, SB-101 (860 ppm) @ 19 ft. BLS, SB-104 (80 ppm) @19 ft. BLS, SB-105 (140 ppm) @ 19 ft. BLS, MW-3 (60 ppm) @ 14 ft. BLS, MW-4 (70 ppm) @14 ft. BLS, MW-12 (90 ppm) @ 1 ft. BLS, and MW-24 (180 ppm) @ 19 ft. BLS exceeded the 50 ppm level for soil considered to be excessively contaminated from diesel contamination. Those soil samples, with the exception of MW-12, were collected approximately 1 ft. above the water table. The OVA results indicate that the diesel contamination is located directly above the water table in the capillary fringe. The OVA readings from monitoring well MW-12 (90 ppm, 10 ppm, 0 ppm, 0 ppm, and 0 ppm) @ 1, 4, 7, 10, and 13 ft. BLS, respectfully, indicate a very small, confined, area of surface contamination. All other soil samples collected were found to be less than the 50 ppm level for soil considered to be excessively contaminated from diesel contamination.

2.6 SURFACE WATER ASSESSMENT

No surface water was observed at or immediately adjacent to the site. The nearest surface water, Perdido Bay, is located approximately 2000 feet southwest of the site and therefore no surface water assessment was performed for this report.

2.7 GROUNDWATER QUALITY ASSESSMENT

Groundwater samples were extracted from shallow groundwater monitoring wells MW-1 thru MW-33 and deep vertical extent monitoring well DMW-34 by W.E.S., Inc. personnel using the methods and procedures outlined in their Comprehensive Quality Assurance Plan No. 900465G. The groundwater samples were analyzed by PWC Pensacola laboratory using the method and

TABLE 2-2

VOLATILE ORGANIC VAPOR CONCENTRATIONS IN SOIL (OVA HEADSPACE ANALYSIS) FOR SOIL BORINGS SB-1 THRU SB-14 AND SB-101 THRU SB-106 MW-2 THRU DMW-34 U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1120

Boring Designation	Depth (Feet BLS)	VOCs Concentration (ppm)[1]
SB-1	1	0
	4	0
	7	0
	10	0
	13	0
	14	0
SB-2	1	0
	4	0
	7	0
	10	0
	13	0
	14	0
	16	0
SB-3	1	0
	4	0
	7	0
	10	0
	13	0
	14	0
SB-4	1	0
	4	0
	7	0
	10	0
	13	0
	15	0

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

Notes: BLS = below land surface

NS = not sampled

ppm = parts per million

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

TABLE 2-2 (Cont.)		
Boring Designation	**Depth (Feet BLS)**	**VOCs Concentration (ppm)[1]**
SB-5	1	0
	4	0
	7	0
	10	0
	13	0
	14	0
SB-6	1	0
	4	0
	7	0
	10	0
	13	0
	14	0
SB-7	1	0
	4	0
	7	0
	10	0
	13	0
	14	0
SB-8	1	0
	4	0.5
	7	0
	10	0
	13	0
	14	0
SB-9	1	0
	4	0
	7	0
	10	0
	13	0
	14	0

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

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

TABLE 2-2 (Cont.)		
Boring Designation	**Depth (Feet BLS)**	**VOCs Concentration (ppm)[1]**
SB-10	1	0
	4	0
	7	0
	10	0
	13	0
	14	0
SB-11	1	0
	4	0
	7	0
	10	0
	13	0
	14	0
SB-12	1	0
	4	0
	7	0
	10	0
	13	0
	15	0
SB-13	1	0
	4	0
	7	0
	10	0
	13	0
	14	120
SB-14	1	0
	4	0
	7	0
	10	0
	13	0
	14	0

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

Notes: BLS = below land surface

NS = not sampled

ppm = parts per million

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

TABLE 2-2 (Cont.)		
Boring Designation	**Depth (Feet BLS)**	**VOCs Concentration (ppm)[1]**
SB-101	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
	19	860
SB-102	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
	19	0
SB-103	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
	19	0
SB-104	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
	19	80

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

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

TABLE 2-2 (Cont.)		
Boring Designation	**Depth (Feet BLS)**	**VOCs Concentration (ppm)[1]**
SB-105	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
	19	140
SB-106	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
	19	4

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

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

TABLE 2-2 (Cont.)		
Boring Designation	**Depth (Feet BLS)**	**VOCs Concentration (ppm)[1]**
MW-2	1	0
	4	0
	7	0
	10	0
	13	0
	14	30
MW-3	1	0
	4	0
	7	0
	10	0
	13	0
	14	60
MW-4	1	0
	4	0
	7	0
	10	0
	13	0
	14	70
MW-5	1	0
	4	0
	7	0
	10	0
	13	0
	14	40
MW-6	1	0
	4	0
	7	0
	10	0
	13	0
	14	40

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

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

TABLE 2-2 (Cont.)		
Boring Designation	**Depth (Feet BLS)**	**VOCs Concentration (ppm)[1]**
MW-7	1	0
	4	0
	7	0
	10	0
	13	0
MW-8	1	0
	4	0
	7	0
	10	0
	13	0
MW-9	1	0
	4	0
	7	0
	10	0
	13	0
MW-10	1	0
	4	0
	7	0
	10	0
	13	0
MW-11	1	0
	4	0
	7	0
	10	0
	13	0
MW-12	1	90
	4	10
	7	0
	10	0
	13	0

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

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

TABLE 2-2 (Cont.)		
Boring Designation	**Depth (Feet BLS)**	**VOCs Concentration (ppm)[1]**
MW-13	1	0
	4	0
	7	0
	10	0
	13	0
MW-14	1	0
	4	0
	7	0
	10	0
	13	0
MW-15	1	0
	4	0
	7	0
	10	0
	13	0
MW-16	1	0
	4	0
	7	0
	10	0
	13	0
MW-17	1	0
	4	0
	7	0
	10	0
	14	0
MW-18	1	0
	4	0
	7	0
	10	0
	14	0

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

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

TABLE 2-2 (Cont.)		
Boring Designation	**Depth (Feet BLS)**	**VOCs Concentration (ppm)[1]**
MW-19	1	0
	4	0
	7	0
	10	0
	14	0
MW-20	1	0
	4	0
	7	0
	10	0
	14	0
MW-21	1	0
	4	0
	7	0
	10	0
	14	0
MW-22	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
	19	4
MW-23	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
	19	34

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

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

TABLE 2-2 (Cont.)		
Boring Designation	**Depth (Feet BLS)**	**VOCs Concentration (ppm)[1]**
MW-24	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
	19	180
MW-25	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
	17	3
MW-26	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
	17	3
MW-27	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
	18	0

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

Notes: BLS = below land surface

NS = not sampled

ppm = parts per million

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

TABLE 2-2 (Cont.)		
Boring Designation	**Depth (Feet BLS)**	**VOCs Concentration (ppm)[1]**
MW-28	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
	18	0
MW-29	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
	18	0
MW-30	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
	18	0
MW-31	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
	18	0

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

Notes: BLS = below land surface

NS = not sampled

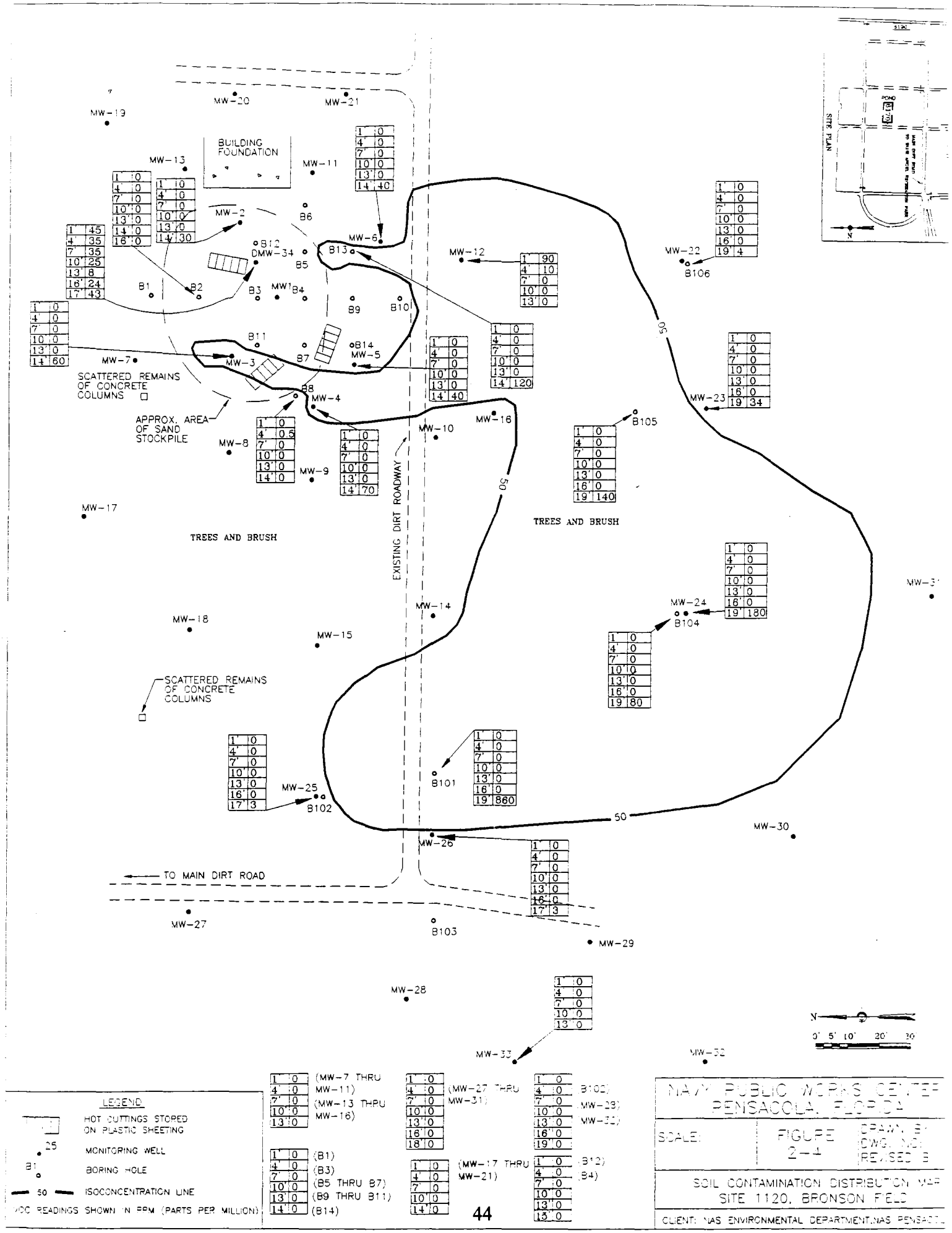
ppm = parts per million

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

TABLE 2-2 (Cont.)		
Boring Designation	**Depth (Feet BLS)**	**VOCs Concentration (ppm)[1]**
MW-32	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
	19	0
MW-33	1	0
	4	0
	7	0
	10	0
	13	0
DMW-34	1	45
	4	35
	7	35
	10	25
	13	8
	16	24
	17	43

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

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


MW-19
MW-20
MW-21
BUILDING FOUNDATION
MW-13
MW-11
MW-2
B6
MW-6
B12
DMW-34
B13
B5
MW-12
MW-22
B106
B1
B2
B3
MW1
B4
B9
B10
B11
B7
B14
MW-5
MW-7
MW-3
SCATTERED REMAINS OF CONCRETE COLUMNS
B8
MW-4
APPROX. AREA OF SAND STOCKPILE
MW-8
MW-9
MW-10
MW-16
B105
MW-23
EXISTING DIRT ROADWAY
MW-17
TREES AND BRUSH
TREES AND BRUSH
MW-24
B104
MW-14
MW-18
MW-15
SCATTERED REMAINS OF CONCRETE COLUMNS
B101
MW-25
B102
MW-26
MW-30
TO MAIN DIRT ROAD
MW-27
B103
MW-29
MW-28
MW-33
MW-32
50
N
0' 5' 10' 20' 30'
LEGEND
HOT CUTTINGS STORED ON PLASTIC SHEETING
25 MONITORING WELL
B1 BORING HOLE
50 ISOCONCENTRATION LINE
VOC READINGS SHOWN IN PPM (PARTS PER MILLION)
(MW-7 THRU MW-11)
(MW-13 THRU MW-16)
(B1)
(B3)
(B5 THRU B7)
(B9 THRU B11)
(B14)
(MW-27 THRU MW-31)
(MW-17 THRU MW-21)
B102)
MW-28)
MW-33)
B12)
B4)
NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA
SCALE:
FIGURE 2-1
DRAWN BY
DWG. NO.
REVISED B
SOIL CONTAMINATION DISTRIBUTION MAP
SITE 1120, BRONSON FIELD
CLIENT: NAS ENVIRONMENTAL DEPARTMENT, NAS PENSACOLA

procedures outlined in PWC Pensacola's Comprehensive Quality Assurance Plan No. 920121G. American Environmental Network (AEN) performed TPH analyses on some of the groundwater samples in accordance with their Comprehensive Quality Assurance Plan No 860137.

Groundwater analytical results are included in Appendix D. Summary tables of the VOAs and PAHs analytical results are shown Tables 2-3 and 2-4, respectfully; and summary tables of the TPHs, lead, and EDBs analytical results are shown in Table 2-5. A Total Xylene Contamination Distribution Map is included as Figure 2-5, a Naphthalene Contamination Distribution Map is included as Figure 2-6, and a TPH Contamination Distribution Map is included as Figure 2-7.

Groundwater samples were collected from shallow groundwater monitoring wells MW-2 thru MW-6 on April 4, 1996. Groundwater samples were analyzed for volatile organic aromatics (VOAs), polynuclear aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPHs), lead, and ethylene dibromide (EDB) utilizing EPA methods 8260, 8270A, FLPRO 8015, SW6010, and 504, respectfully. The analytical results are found in Appendix D. Ethylbenzene was detected in the groundwater samples collected from monitoring wells MW-2 thru MW-4 at concentrations of 9 ppb, 6 ppb, and 8 ppb, respectfully, which are below the FDEP groundwater cleanup target level of 30 ppb for ethylbenzene. Total Xylenes were detected in the groundwater samples collected from monitoring wells MW-2 thru MW-5 at concentrations of 38 ppb, 13 ppb, 18 ppb, and 4 ppb, respectfully. Groundwater collected from monitoring well MW-2 exceeded the FDEP groundwater cleanup target level of 20 ppb for total xylenes. Acenaphthene was detected in the groundwater samples collected from monitoring wells MW-3 and MW-4 at concentration levels of 9 ppb and 58 ppb, respectfully, which are below the FDEP groundwater cleanup target level of 210 ppb for acenaphthene. Fluorene was detected in the groundwater samples collected from monitoring wells MW-2 and MW-3 at concentration levels of 93 ppb and 20 ppb, respectfully, which are below the FDEP groundwater cleanup target level of 280 ppb for fluorene. Naphthalene was detected in monitoring wells MW-2 thru MW-4 at concentration levels of 620 ppb, 12 ppb, and 180 ppb, respectfully. Groundwater collected from monitoring wells MW-2 and MW-4 exceeded the FDEP groundwater cleanup target level of 20 ppb for naphthalene. Phenanthrene was detected in the groundwater samples collected from monitoring wells MW-2 thru MW-4 at concentrations of 74 ppb, 18 ppb, and 60 ppb, respectfully, which are below the FDEP groundwater cleanup target level of 210 ppb for phenanthrene. 1-Methylnaphthalene was detected in the groundwater samples collected from monitoring well MW-2 thru MW-4 and MW-6 at concentration levels of 1500 ppb, 480 ppb, 530 ppb and 13 ppb, respectfully. 2-Methylnaphthalene was detected in the groundwater samples collected from monitoring wells MW-2 thru MW-4 and MW-6 at concentrations of 2300 ppb, 630 ppb, 890 ppb, and 22 ppb, respectfully. Lead was detected in monitoring wells MW-2 thru MW-4 and MW-6 at levels of 0.05 ppm, 0.48 ppm, 0.16 ppm, and 0.26 ppm, respectfully. Contamination levels of lead in monitoring wells MW-2 thru MW-4 and MW-6 exceeded the FDEP groundwater cleanup target level of 0.015 ppm for lead. Follow-up testing for lead performed on monitoring wells MW-2 thru MW-6 on May 22, 1996, using the quiescent sampling method, indicated lead levels were below detection level (BDL) in all groundwater samples. No EDBs were detected in groundwater samples collected from monitoring wells MW-2 thru MW-6. TPHs were detected in the groundwater samples collected from monitoring wells MW-2 thru MW-6 at levels of

TABLE 2-3
SUMMARY OF VOLATILE ORGANIC COMPOUNDS ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES COLLECTED FROM MONITORING WELLS MW-1 THRU DMW-34 U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1120

PARAMETER	MONITORING WELL NUMBER								
	MW-1 5/22/96	MW-2 4/4/96	MW-3 4/4/96	MW-4 4/4/96	MW-5 4/4/96	MW-6 4/4/96	MW-7 6/5/96	MW-8 6/5/96	MW-9 6/5/96
Ethylbenzene	BDL	9	6	8	BDL	BDL	BDL	BDL	8
Xylenes (Total)	BDL	38	13	18	4	BDL	BDL	BDL	26
Chloroform	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Toluene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

PARAMETER	MONITORING WELL NUMBER								
	MW-10 6/5/96	MW-11 6/5/96	MW-12 6/5/96	MW-13 6/5/96	MW-14 8/13/96	MW-15 8/13/96	MW-16 8/13/96	MW-17 8/13/96	MW-18 8/13/96
Ethylbenzene	15	BDL	BDL	BDL	20	BDL	9	BDL	BDL
Xylenes (Total)	37	BDL	1	BDL	57	BDL	59	BDL	BDL
Chloroform	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Toluene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

NOTES: Groundwater samples collected on dates indicated above.
All results reported in parts per billion (ppb) unless otherwise noted.
BDL = Below detection limits

TABLE 2-3 (CONT.)

PARAMETER	MONITORING WELL NUMBER								
	MW-19 8/13/96	MW-20 8/13/96	MW-21 8/13/96	MW-22 9/26/96	MW-23 9/26/96	MW-24 9/26/96	MW-25 9/26/96	MW-26 9/26/96	MW-27 10/24/96
Ethylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	7	BDL	BDL
Xylenes (Total)	BDL	BDL	BDL	BDL	BDL	BDL	40	1	BDL
Chloroform	BDL	BDL	BDL	2	BDL	BDL	BDL	BDL	2
Toluene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

PARAMETER	MONITORING WELL NUMBER						
	MW-28 10/24/96	MW-29 10/24/96	MW-30 10/24/96	MW-31 10/24/96	MW-32 12/12/96	MW-33 12/12/96	DMW-34 1/31/97
Ethylbenzene	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Xylenes (Total)	BDL	1	BDL	BDL	BDL	BDL	1
Chloroform	BDL	BDL	BDL	BDL	1	BDL	BDL
Toluene	BDL	BDL	BDL	BDL	BDL	BDL	3

NOTES: Groundwater samples collected on dates indicated above.
All results reported in parts per billion (ppb) unless otherwise noted.
BDL = Below detection limits

TABLE 2-4
SUMMARY OF POLYNUCLEAR AROMATIC HYDROCARBONS ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES COLLECTED FROM MONITORING WELLS MW-1 THRU DMW-34 U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1120

PARAMETER	MONITORING WELL NUMBER									
	MW-1 5/22/96	MW-2 4/4/96	MW-3 4/4/96	MW-4 4/4/96	MW-5 4/4/96	MW-6 4/4/96	MW-7 6/5/96	MW-8 6/5/96	MW-9 6/5/96	MW-10 6/5/96
Acenaphthene	BDL	BDL	9	58	BDL	BDL	BDL	BDL	BDL	BDL
Fluorene	BDL	93	20	BDL	BDL	BDL	BDL	BDL	11	9
Naphthalene	BDL	620	12	180	BDL	BDL	BDL	BDL	88	86
Phenanthrene	BDL	74	18	60	BDL	BDL	BDL	BDL	7	8
1-Methylnaphthalene	BDL	1500	480	530	BDL	13	BDL	28	170	100
2-Methylnaphthalene	BDL	2300	630	890	BDL	22	BDL	25	260	150

PARAMETER	MONITORING WELL NUMBER									
	MW-11 6/5/96	MW-12 6/5/96	MW-13 6/5/96	MW-14 8/14/96	MW-15 8/14/96	MW-16 8/14/96	MW-17 8/14/96	MW-18 8/14/96	MW-19 8/14/96	MW-20 8/14/96
Acenaphthene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Fluorene	BDL	BDL	BDL	15	BDL	8	BDL	BDL	BDL	BDL
Naphthalene	BDL	BDL	BDL	170	BDL	100	BDL	BDL	BDL	BDL
Phenanthrene	BDL	BDL	BDL	9	BDL	BDL	BDL	BDL	BDL	BDL
1-Methylnaphthalene	BDL	36	BDL	210	44	160	BDL	BDL	BDL	BDL
2-Methylnaphthalene	BDL	34	BDL	270	63	200	BDL	BDL	BDL	BDL

NOTES: Groundwater samples collected on dates indicated above.
BDL = Below detection limits
All results reported in parts per billion (ppb) unless otherwise noted.

TABLE 2-4 (CONT.)

PARAMETER	MONITORING WELL NUMBER							
	MW-21 8/14/96	MW-22 9/26/96	MW-23 9/26/96	MW-24 9/26/96	MW-25 9/26/96	MW-26 9/26/96	MW-27 10/24/96	MW-28 10/24/96
Acenaphthene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Fluorene	BDL	BDL	BDL	BDL	3	BDL	BDL	BDL
Naphthalene	BDL	BDL	BDL	BDL	62	10	BDL	BDL
Phenanthrene	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1-Methylnaphthalene	BDL	BDL	BDL	39	89	31	BDL	BDL
2-Methylnaphthalene	BDL	BDL	BDL	48	120	32	BDL	BDL

PARAMETER	MONITORING WELL NUMBER					
	MW-29 10/24/96	MW-30 10/24/96	MW-31 10/24/96	MW-32 12/12/96	MW-33 12/12/96	DMW-34 1/31/97
Acenaphthene	BDL	BDL	BDL	BDL	BDL	BDL
Fluorene	BDL	BDL	BDL	BDL	BDL	BDL
Naphthalene	BDL	BDL	BDL	BDL	BDL	6
Phenanthrene	BDL	BDL	BDL	BDL	BDL	BDL
1-Methylnaphthalene	8	BDL	BDL	BDL	BDL	19
2-Methylnaphthalene	4	BDL	BDL	BDL	BDL	23

NOTES: Groundwater samples collected on dates indicated above.
BDL = Below detection limits
All results reported in parts per billion (ppb) unless otherwise noted.

TABLE 2-5
SUMMARY OF TPH, LEAD, & EDB
ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES
COLLECTED FROM MONITORING WELLS MW-1 THRU DMW-34
U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1120

PARAMETER	DATE	MONITORING WELL NUMBER										
		MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11
TPH	4/4/96	NS	110	31	6.3	4.8	15	NS	NS	NS	NS	NS
TPH	5/22/96	.160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TPH	6/5/96	NS	NS	NS	NS	NS	NS	13	20	75	41	75
Lead	4/4/96	NS	.05	.48	.16	BDL	.26	NS	NS	NS	NS	NS
Lead	5/22/96	BDL	BDL	BDL	BDL	BDL	BDL	NS	NS	NS	NS	NS
Lead	7/2,3,& 7/4/96	NS	NS	NS	NS	NS	NS	BDL	BDL	BDL	BDL	BDL
Lead	9/24& 9/25/96	NS	NS	NS	NS	NS	NS	0.010	0.005	BDL	BDL	BDL
Lead	8/11/97	BDL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EDB	4/4/96	NS	BDL	BDL	BDL	BDL	BDL	NS	NS	NS	NS	NS
EDB	6/5/96	NS	NS	NS	NS	NS	NS	BDL	BDL	BDL	BDL	BDL
	8/11/97	BDL	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

NOTES: Groundwater samples collected on dates indicated above.
All results reported in parts per million (ppm) unless otherwise noted.
NS = Not sampled
TPH = Total Petroleum Hydrocarbons
EDB = 1,2 Dibromoethane

TABLE 2-5 (CONT.)

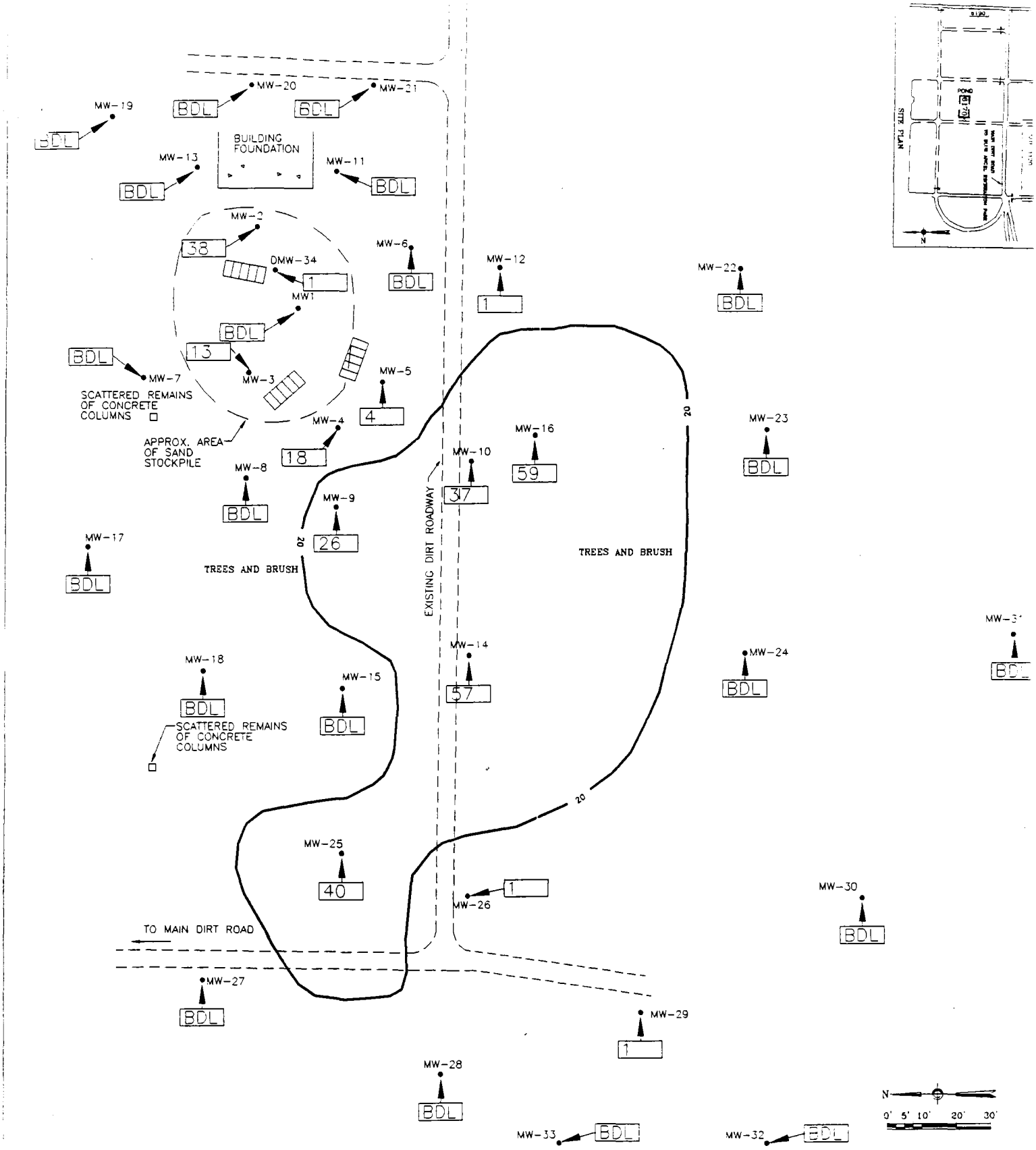
PARAMETER	DATE	MONITORING WELL NUMBER										
		MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	MW-18	MW-19	MW-20	MW-21	MW-22
TPH	6/5/96	87	4.8	NS	NS	NS	NS	NS	NS	NS	NS	NS
TPH	8/13/96	NS	NS	22	3.4	2.9	0.41	1.4	0.31	3.1	0.33	NS
TPH	9/24,25 &26/96	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	BDL
Lead	7/2,3,& 7/4/96	BDL	BDL	NS	NS	NS	NS	NS	NS	NS	NS	NS
Lead	9/24,25 &26/96	BDL	BDL	BDL	.004	BDL	.008	.007	.003	BDL	.007	NS
Lead	8/11/97	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	BDL
EDB	6/5/96	BDL	BDL	NS	NS	NS	NS	NS	NS	NS	NS	NS
EDB	8/13/96	NS	NS	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NS
EDB	9/26/96	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	BDL

NOTES: Groundwater samples collected on dates indicated above.
All results reported in parts per million (ppm) unless otherwise noted.
NS = Not sampled
TPH = Total Petroleum Hydrocarbons
EDB = 1,2 Dibromoethane

TABLE 2-5 (CONT.)

PARAMETER	DATE	MONITORING WELL NUMBER											
		MW-23	MW-24	MW-25	MW-26	MW-27	MW-28	MW-29	MW-30	MW-31	MW-32	MW-33	DMW-34
TPH	9/26/96	BDL	0.52	0.85	0.36	NS	NS	NS	NS	NS	NS	NS	NS
TPH	10/24/96	NS	NS	NS	NS	BDL	BDL	BDL	0.26	0.43	NS	NS	NS
TPH	12/12/96	NS	NS	NS	NS	NS	NS	NS	NS	NS	BDL	BDL	NS
TPH	1/31/97	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	BDL
Lead	8/11,12, &13/97	BDL	BDL	BDL	BDL	BDL	BDL	0.004	BDL	BDL	BDL	BDL	0.005
EDB	9/26/96	BDL	BDL	BDL	BDL	NS	NS	NS	NS	NS	NS	NS	NS
EDB	10/24/96	NS	NS	NS	NS	BDL	BDL	BDL	BDL	BDL	NS	NS	NS
EDB	12/12/96	NS	NS	NS	NS	NS	NS	NS	NS	NS	BDL	BDL	NS
EDB	1/31/97	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	BDL

NOTES: Groundwater samples collected on dates indicated above.
All results reported in parts per million (ppm) unless otherwise noted.
NS = Not sampled
TPH = Total Petroleum Hydrocarbons
EDB = 1,2 Dibromoethane



LEGEND

- HOT CUTTINGS STORED ON PLASTIC SHEETING
- MW-25 MONITORING WELL
- BDL TOTAL XYLENE CONCENTRATION
- 20 ISOCONCENTRATION LINE

XYLENE LEVELS SHOWN IN PPB (PARTS PER BILLION)

NOTES:

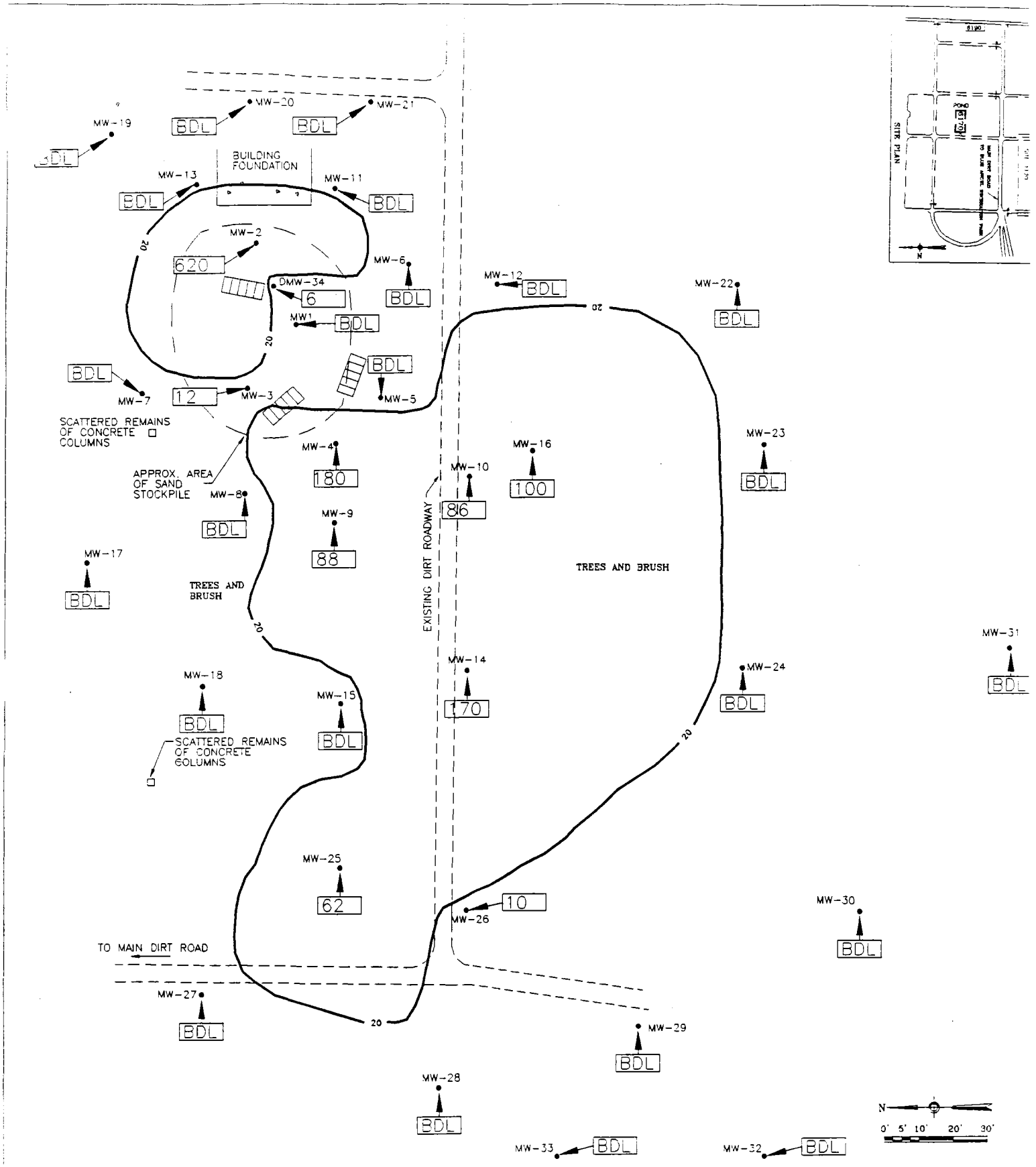
MW-1 (5-22-96)
MW-2 THRU MW-6 (4-4-96)
MW-7 THRU MW-13 (6-5-96)
MW-14 THRU MW-21 (8-13-96)
MW-22 THRU MW-26 (9-26-96)
MW-27 THRU MW-31 (10-24-96)
MW-32 AND MW-33 (12-12-96)
DMW-34 (1-31-97)

NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA

SCALE:	FIGURE 2-5	DRAWN BY: DWG. NO.: REVISED BY:

TOTAL XYLENE CONTAM. DISTRIBUTION MAP
SITE 1120, BRONSON FIELD

CLIENT: NAS ENVIRONMENTAL DEPARTMENT, NAS PENSACOLA



LEGEND

HOT CUTTINGS STOPED ON PLASTIC SHEETING

.25 MONITORING WELL

BDL NAPHTHALENE CONCENTRATION

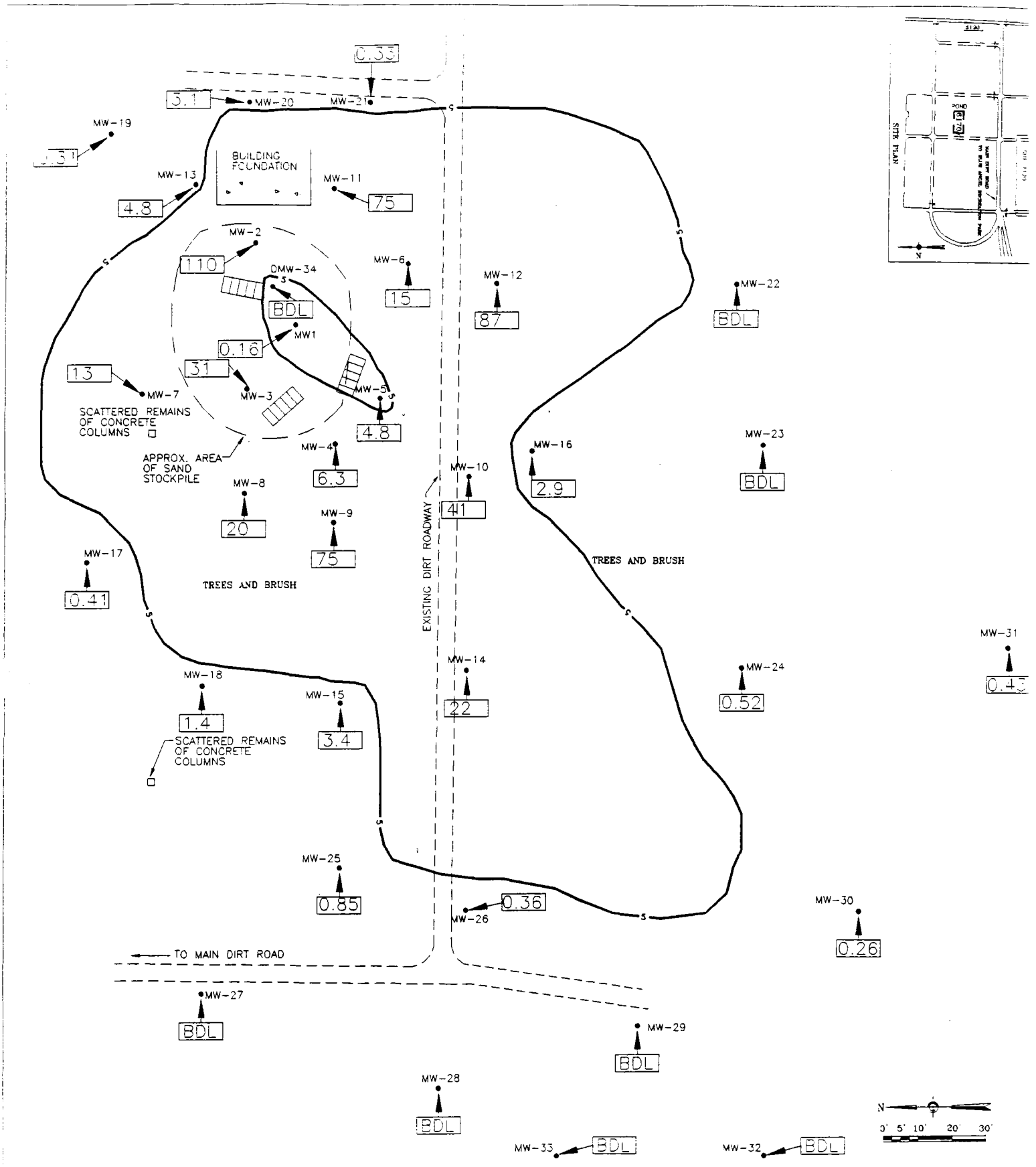
20 ISOCONCENTRATION LINE

NAPTHALENE LEVELS IN PPB (PARTS PER BILLION)

NOTES:

MW-1 (5-22-96)
MW-2 THRU MW-6 (4-4-96)
MW-7 THRU MW-13 (6-5-96)
MW-14 THRU MW-21 (8-13-96)
MW-22 THRU MW-26 (9-26-96)
MW-27 THRU MW-31 (10-24-96)
MW-32 AND MW-33 (12-12-96)
DMW-34 (1-31-97)

NAVY PUBLIC WORKS CENTER PENSACOLA, FLORIDA		
SCALE:	FIGURE 2-6	DRAWN BY: DWG. NO: REVISED BY:
NAPHTHALENE CONTAM. DISTRIBUTION MAP SITE 1120, BRONSON FIELD		
CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA		



LEGEND

HOT CUTTINGS STORED ON PLASTIC SHEETING

MONITORING WELL

BDL TPH CONCENTRATION

5 ISOCONCENTRATION LINE

TPH LEVELS SHOWN IN PPM (PARTS PER MILLION)

NOTES:

MW-1 (5-22-96)
MW-2 THRU MW-6 (4-4-96)
MW-7 THRU MW-13 (6-5-96)
MW-14 THRU MW-21 (8-13-96)
MW-22 THRU MW-26 (9-26-96)
MW-27 THRU MW-31 (10-24-96)
MW-32 AND MW-33 (12-12-96)
DMW-34 (1-31-97)

NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA

SCALE:	FIGURE 2-7	DRAWN BY: DWG. NO: REVISED BY:

TPH CONTAMINATION DISTRIBUTION MAP
SITE 1120, BRONSON FIELD

CLIENT: NAS ENVIRONMENTAL DEPARTMENT, NAS PENSACOLA

110 ppm, 31 ppm, 6.3 ppm, 4.8 ppm, and 15 ppm, respectfully. Contamination levels of TPHs in monitoring wells MW-2, MW-3, MW-4, and MW-6 exceeded the FDEP groundwater cleanup target level TPH of 5 ppm.

A groundwater sample was collected on May 22, 1996 from shallow groundwater monitoring well MW-1 and analyzed for volatile organic aromatics (VOAs), polynuclear aromatic hydrocarbons (PAHs), and total petroleum hydrocarbons (TPHs) utilizing EPA methods 8260, 8270, and FLPRO 8015. The analytical results are found in Appendix D. No VOAs or PAHs were detected in the groundwater samples collected, however, TPH was detected at a level of .160 ppm which is well below the FDEP groundwater cleanup target level of 5 ppm for TPH. Groundwater samples were also collected on May 22, 1996 from monitoring wells MW-2 thru MW-6 and analyzed for lead using EPA method SW6010A. No lead was detected in the groundwater samples.

Groundwater samples were collected on June 5, 1996 from shallow groundwater monitoring wells MW-7 thru MW-13 and analyzed for volatile organic aromatics (VOAs), polynuclear aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPHs), and ethylene dibromide (EDB) utilizing EPA methods 8260, 8270A, FLPRO 8015, and 504. The analytical results are found in Appendix D. Ethylbenzene was detected in the groundwater samples collected from monitoring wells MW-9 and MW-10 at concentrations of 8 ppb and 15 ppb, respectfully, which are below the FDEP groundwater cleanup target level of 30 ppb for ethylbenzene. Total Xylenes were detected in the groundwater samples collected from monitoring wells MW-9, MW-10 and MW-12 at concentrations of 26 ppb, 37 ppb, and 1 ppb, respectfully. Groundwater collected from monitoring wells MW-9 and MW-10 exceeded the FDEP groundwater cleanup target level of 20 ppb for total xylenes. Fluorene was detected in the groundwater samples collected from monitoring wells MW-9 and MW-10 at concentration levels of 11 ppb and 9 ppb, respectfully, which are below the FDEP groundwater cleanup target level of 280 ppb for fluorene. Naphthalene was detected in monitoring wells MW-9 and MW-10 at concentration levels of 88 ppb and 86 ppb, respectfully, which exceeded the FDEP groundwater cleanup target level of 20 ppb for naphthalene. Phenanthrene was detected in the groundwater samples collected from monitoring wells MW-9 and MW-10 at concentrations of 7 ppb and 8 ppb, respectfully, which are below the FDEP groundwater cleanup target level of 210 ppb for phenanthrene. 1-Methylnaphthalene was detected in the groundwater samples collected from monitoring well MW-8 thru MW-10 and MW-12 at concentration levels of 28 ppb, 170 ppb, 100 ppb and 36 ppb, respectfully. 2-Methylnaphthalene was detected in the groundwater samples collected from monitoring wells MW-8 thru MW-10 and MW-12 at concentrations of 25 ppb, 260 ppb, 150 ppb, and 34 ppb, respectfully. No EDBs were detected in groundwater samples from monitoring wells MW-7 thru MW-13. TPHs were detected in groundwater samples from monitoring wells MW-7 thru MW-13 at levels of 13 ppm, 20 ppm, 75 ppm, 41 ppm, 75 ppm, 87 ppm, and 4.8 ppm, respectfully. Contamination levels of TPHs in monitoring wells MW-7 thru MW-12 exceeded the FDEP groundwater cleanup target levels of 5 ppm for TPH.

Groundwater samples were collected from shallow groundwater monitoring wells MW-7 thru MW-13 on July 2, 3, & 4, 1996, and analyzed for lead utilizing EPA method SW6010. No lead was detected in groundwater samples collected from monitoring wells MW-7 thru MW-13.

Groundwater samples were collected on August 13, 1996 from shallow groundwater monitoring wells MW-14 thru MW-21 and analyzed for volatile organic aromatics (VOAs), polynuclear aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPHs), and ethylene dibromide (EDB) utilizing EPA methods 8260, 8270A, FLPRO 8015, and 504. The analytical results are found in Appendix D. Ethylbenzene was detected in the groundwater samples collected from monitoring wells MW-14 and MW-16 at concentrations of 20 ppb and 9 ppb, respectfully, which are below the FDEP groundwater cleanup target level of 30 ppb for ethylbenzene. Total Xylenes were detected in the groundwater samples collected from monitoring wells MW-14 and MW-16 at concentrations of 57 ppb and 59 ppb, respectfully, which exceeded the FDEP groundwater cleanup target level of 20 ppb for total xylenes. Fluorene was detected in the groundwater samples collected from monitoring wells MW-14 and MW-16 at concentration levels of 15 ppb and 8 ppb, respectfully, which are below the FDEP groundwater cleanup target level of 280 ppb for fluorene. Naphthalene was detected in monitoring wells MW-14 and MW-16 at concentration levels of 170 ppb and 100 ppb, respectfully, which exceeded the FDEP groundwater cleanup target level of 20 ppb for naphthalene. Phenanthrene was detected in the groundwater sample collected from monitoring well MW-14 at a concentration of 9 ppb which is below the FDEP groundwater cleanup target level of 210 ppb for phenanthrene. 1-Methylnaphthalene was detected in the groundwater samples collected from monitoring well MW-14 thru MW-16 at concentration levels of 210 ppb, 44 ppb, and 160 ppb, respectfully. 2-Methylnaphthalene was detected in the groundwater samples collected from monitoring wells MW-14 thru MW-16 at concentrations of 270 ppb, 63 ppb, and 200 ppb, respectfully. No EDBs were detected in groundwater samples collected from monitoring wells MW-14 thru MW-21. TPHs were detected in the groundwater samples collected from monitoring wells MW-14 thru MW-21 at levels of 22 ppm, 3.4 ppm, 2.9 ppm, 0.41 ppm, 1.4 ppm, and 0.31 ppm, 3.1 ppm, and 0.33 ppm respectfully. Only monitoring well MW-14 exceeded the FDEP groundwater cleanup target level of 5 ppm for TPH.

Groundwater samples were collected on September 24, 25, and 26, 1996 from shallow groundwater monitoring wells MW-7 thru MW-21 and analyzed for lead using EPA method SW6010A. Lead levels did not exceed FDEP groundwater cleanup target levels of .015 ppm for lead in those monitoring wells.

Groundwater samples were collected on September 26, 1996 from shallow groundwater monitoring wells MW-22 thru MW-26 and analyzed for volatile and semi-volatile organics (VOAs), polynuclear aromatic hydrocarbons (PAHs), TPH, and ethylene dibromide (EDB) utilizing EPA methods 8260, 8270A, FLPRO 8015, and 504. The analytical results are found in Appendix D. Analyses of groundwater samples for VOAs and PAHs collected from monitoring wells MW-22 thru MW-26 indicated ethylbenzene (7 ppb) in MW-25, total xylenes (40 ppb and 1 ppb) in MW-25 and MW-26, respectfully, chloroform (2 ppb) in MW-22. Xylene levels in monitoring well MW-25 exceeded the FDEP groundwater cleanup target level of 20 ppb for xylene. Fluorene was detected in the groundwater sample collected from monitoring well MW-25 at a concentration level of 3 ppb which is below the FDEP groundwater cleanup target level of 280 ppb for fluorene. Naphthalene was detected in monitoring wells MW-25 and MW-26 at concentration levels of 62 ppb and 10 ppb, respectfully. Groundwater samples from

monitoring well MW-25 exceeded the FDEP groundwater cleanup target level of 20 ppb for naphthalene. 1-Methylnaphthalene was detected in the groundwater samples collected from monitoring well MW-24 thru MW-26 at concentration levels of 39 ppb, 89 ppb, and 31 ppb, respectfully. 2-Methylnaphthalene was detected in the groundwater samples collected from monitoring wells MW-24 thru MW-26 at concentrations of 48 ppb, 120 ppb, and 32 ppb, respectfully. No EDBs were detected in groundwater samples from monitoring wells MW-22 thru MW-26. TPHs were detected in groundwater samples from MW-24, MW-25, and MW-26 at levels of 0.52 ppm, 0.85 ppm, and 0.36 ppm respectfully, which are below the FDEP groundwater cleanup target level of 5 ppm for TPH.

Groundwater samples were collected from shallow groundwater monitoring wells MW-27 thru MW-31 on October 24, 1996. PWC Pensacola Laboratory analyzed groundwater samples for volatile and semi-volatile organics (VOAs), polynuclear aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPHs), and ethylene dibromide (EDB) utilizing EPA methods 8260, 8270A, FLPRO 8015, and 504. The analytical results are found in Appendix D. Analyses of groundwater samples for VOAs and PAHs collected from monitoring wells MW-27 thru MW-31 indicated chloroform (2 ppb) in monitoring well MW-27 and total xylene (1 ppb) in monitoring well MW-29. Groundwater contamination levels of total xylene (1 ppb) in MW-29 are below the FDEP groundwater cleanup target levels of 20 ppb for total xylene, and groundwater contamination levels of chloroform (2 ppb) in MW-27 are below the FDEP guidance concentration of 100 ppb for chloroform. Groundwater samples collected from monitoring well MW-29 indicated contamination levels of 1-methylnaphthalene (8 ppb) and 2-methylnaphthalene (4 ppb). No EDBs were detected in groundwater samples from monitoring wells MW-22 thru MW-26. TPHs were detected in groundwater samples from monitoring wells MW-30 and MW-31 at levels of 0.26 ppm and 0.43 ppm respectfully, which did not exceed the FDEP groundwater cleanup target level of 5 ppm for TPH.

Groundwater samples were collected from shallow groundwater monitoring wells MW-32 and MW-33 on December 12, 1996. NPWC Pensacola Laboratory analyzed groundwater samples for volatile and semi-volatile organics (VOAs), polynuclear aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPHs), and ethylene dibromide (EDB) utilizing EPA methods 8260, 8270A, FLPRO 8015, and 504. The analytical results are found in Appendix D. Chloroform (1 ppb) was detected in the groundwater sample collected from MW-32 which is well below the FDEP guidance concentration of 100 ppb for chloroform. No PAHs, EDBs, or TPHs were detected in the groundwater samples collected from monitoring wells MW-32 and MW-33.

A groundwater sample was collected from deep vertical extent monitoring well DMW-34 on January 31, 1996. PWC Pensacola Laboratory analyzed the groundwater sample for volatile and semi-volatile organics (VOAs), polynuclear aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPHs), and ethylene dibromide (EDB) utilizing EPA methods 8260, 8270A, FLPRO 8015, and 504. Analyses of the groundwater sample for VOAs and PAHs collected from deep monitoring well DMW-34 indicated total xylene (1ppb), toluene (3 ppb), naphthalene (6 ppb), 1-methylnaphthalene (19 ppb), and 2-methylnaphthalene (23 ppb) which are below the FDEP groundwater cleanup target level of 20 ppb, 40 ppb, 20 ppb for total xylene, toluene, and naphthalene, respectfully. No TPHs or EDBs were detected in the groundwater samples

collected from deep vertical extent monitoring well DMW-34.

Groundwater samples were collected from monitoring wells MW-1 and MW-22 thru DMW-34 on August 11, 1997. NPWC Pensacola Laboratory analyzed the groundwater sample from monitoring well MW-1 for lead and EDBs utilizing EPA methods 239.2 and 508 and analyzed groundwater samples from monitoring wells MW-22 thru DMW-34 for lead utilizing EPA method 239.2. No EDBs were detected in the groundwater sample collected from monitoring well MW-1. Lead was detected in the groundwater samples from monitoring well MW-29 at levels of 0.004 ppm and deep monitoring well DMW-34 at levels of 0.005 ppm which are below the FDEP groundwater cleanup target level of .015 ppm for lead. No lead was detected in the groundwater samples collected from monitoring wells MW-22 thru MW-28 or MW-30 thru MW-33.

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 CONCLUSIONS

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

- Approximately 200 CY of contaminated soil was removed from the excavation site of three (1,500 gal.) underground fuel oil tank and one (250 gal) underground butane tank.

- Thirty-three shallow groundwater monitoring wells (MW-1 thru MW-33) and one vertical extent monitoring well (DMW-34) were installed at the site. Groundwater samples were collected from each well and analyzed for the kerosene analytical group listed in FDEP Rule 62-770.600(4)(a).

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

- Groundwater depth measured in monitoring wells MW-1 thru MW-33 on August 8, 1997 indicates the groundwater flow direction at the site to be southwest, toward Perdido Bay.

- No petroleum contaminants were detected in the groundwater samples collected from shallow monitoring wells MW-23, MW-28, and MW-33.

- Monitoring wells MW-2, MW-9, MW-10, and MW-14 exceeded the FDEP groundwater cleanup target levels of 20 ppb for total xylenes, 20 ppb for naphthalene, and 5000 ppb for TPH, respectfully.

- Total Xylenes were detected in groundwater samples collected from monitoring wells MW-2 (38 ppb), MW-9 (26 ppb), MW-10 (37 ppb), MW-14 (57 ppb), MW-16 (59 ppb), and MW-25 (40 ppb) above the FDEP groundwater cleanup target level of 20 ppb for total xylenes.

- Naphthalene was detected in groundwater samples collected from monitoring wells MW-2 (620 ppb), MW-4 (180 ppb), MW-9 (88 ppb), MW-10 (86 ppb), MW-14 (170 ppb), MW-16 (100 ppb), and MW-25 (62 ppb) above of the FDEP groundwater cleanup target level of 20 ppb for naphthalene.

- TPHs were detected in groundwater samples collected from monitoring wells MW-2 (110 ppm), MW-3 (31 ppm), MW-4 (6.3 ppm), MW-6 (15 ppm), MW-7 (13 ppm), MW-8 (20 ppm), MW-9 (75 ppm), MW-10 (41 ppm), MW-11 (75 ppm), MW-12 (87 ppm), and MW-14 (22 ppm) above the FDEP regulatory limit of 5 ppm.

- Lead levels in the groundwater samples collected from monitoring well MW-1 thru DMW-34, using the quiescent sampling method, were below FDEP groundwater cleanup target level of 0.015 ppm and no EDBs were detected in any of the monitoring wells.

- One active potable water well was located within a half mile (0.34 miles) radius of the site.

- The areal extent of the groundwater contamination at the site is not significantly greater than FDEP groundwater cleanup target levels; however the contamination appears dispersed over a wide area.

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

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

3.2 RECOMMENDATIONS

Contaminants were detected in the groundwater at levels that did not significantly exceed the FDEP regulatory limits. No free product was discovered in any of the groundwater monitoring wells; and soil contamination appears to be limited to the capillary fringe of the groundwater table.

It is recommended that another sampling event be performed on monitoring wells MW-2, MW-3, MW-4, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-14, MW-16, and MW-25 which show contamination above the FDEP groundwater cleanup target levels. In addition upgradient monitoring well MW-19 and downgradient perimeter monitoring wells MW-24 and MW-3 are also recommended to be resampled. Groundwater samples should be analyzed for VOAs, PAHs, and TPH in accordance with EPA methods 8260, 8270A, and FLPRO,

respectively.

No soil remediation is recommended since the soil contamination appears to be limited to the capillary fringe of the water table. Based upon the analytical results of the new sampling event either a Remedial Action Plan or Monitoring Only Plan for Natural Attenuation shall be submitted for FDEP approval.

4.0 PROFESSIONAL REVIEW CERTIFICATION

The Site 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 Site Assessment Report was developed for U.S. Navy Outlying Landing Field (OLF) Bronson, Site 1120, Pensacola, Florida, and should not be construed to apply to any other site.

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

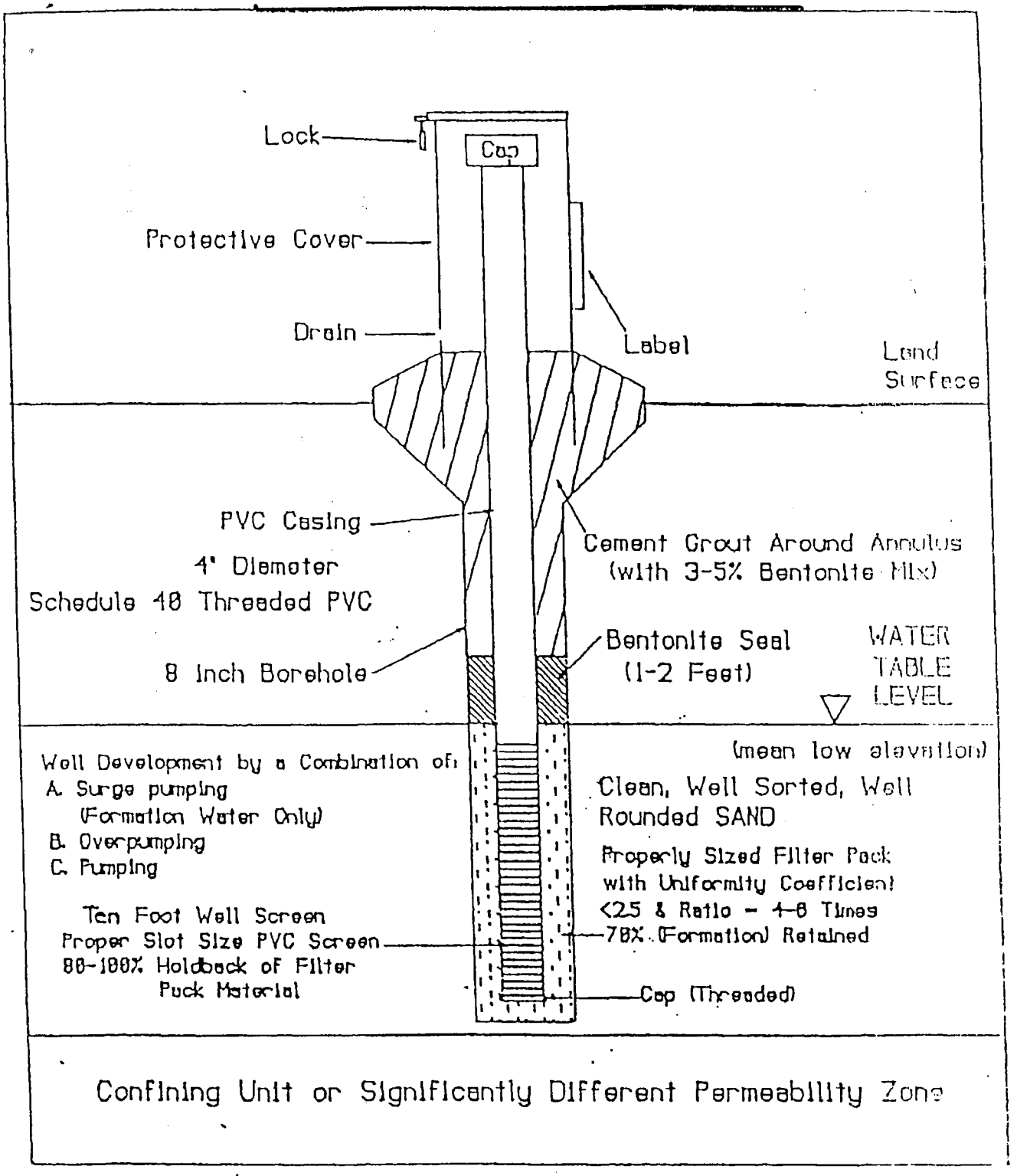
3/16/98
Date

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.

APPENDIX A

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

MONITOR WELL CONSTRUCTION DETAIL

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

LOGGED BY: Victor A. Spooner
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-2

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
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TIME Start: 1405 Finish: 0815

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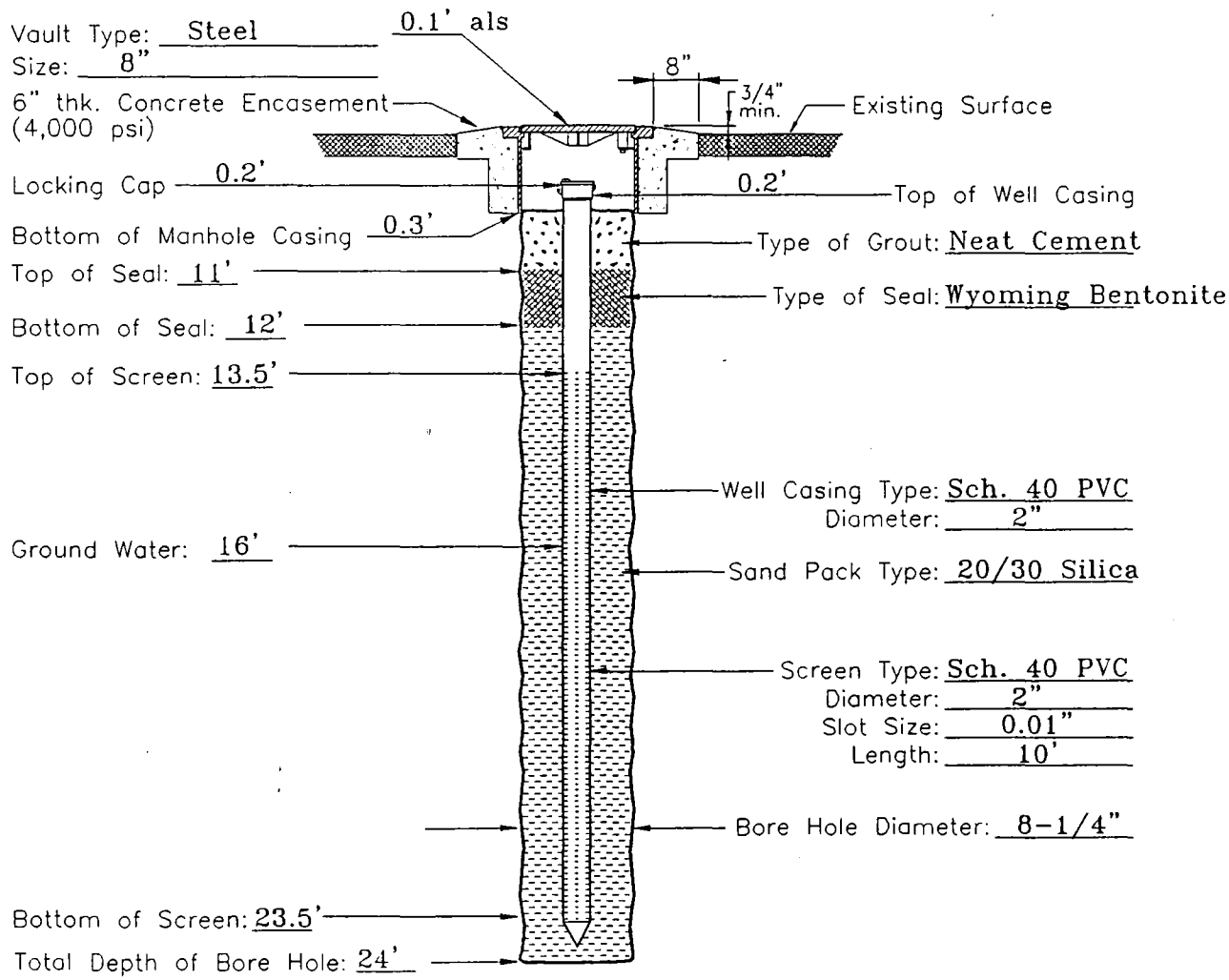

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

DRAWING ABOVE IS NOT TO SCALE

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6389 Tower Lane
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(941) 378-5218 Fax

MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Victor A. Spooner
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-3

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 3/28/96 Finish: 3/29/96
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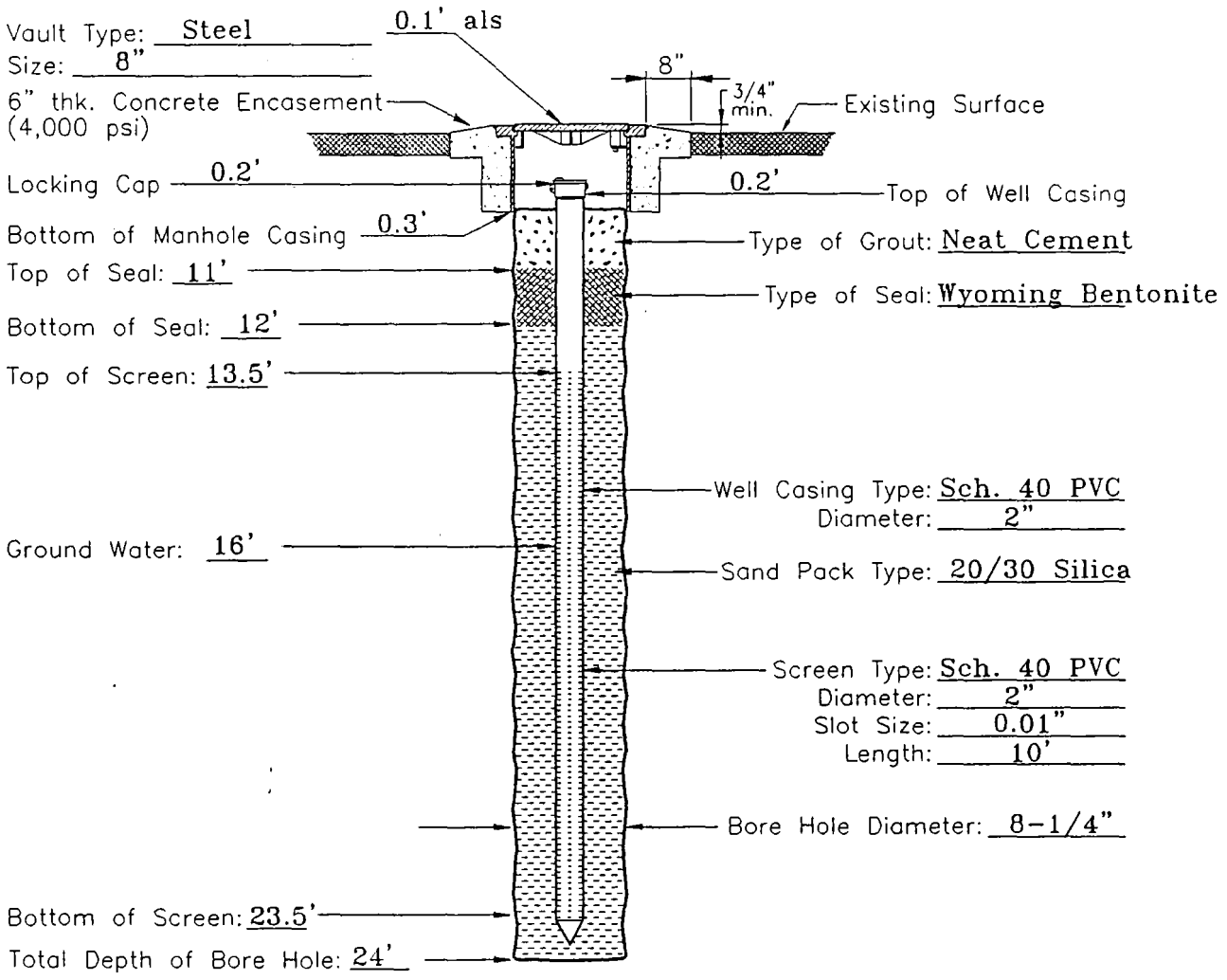

NOTE: DEPTHS SHOWN ARE BELOW LAND SURFACE (B.L.S.)

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LOGGED BY: Victor A. Spooner
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-4

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
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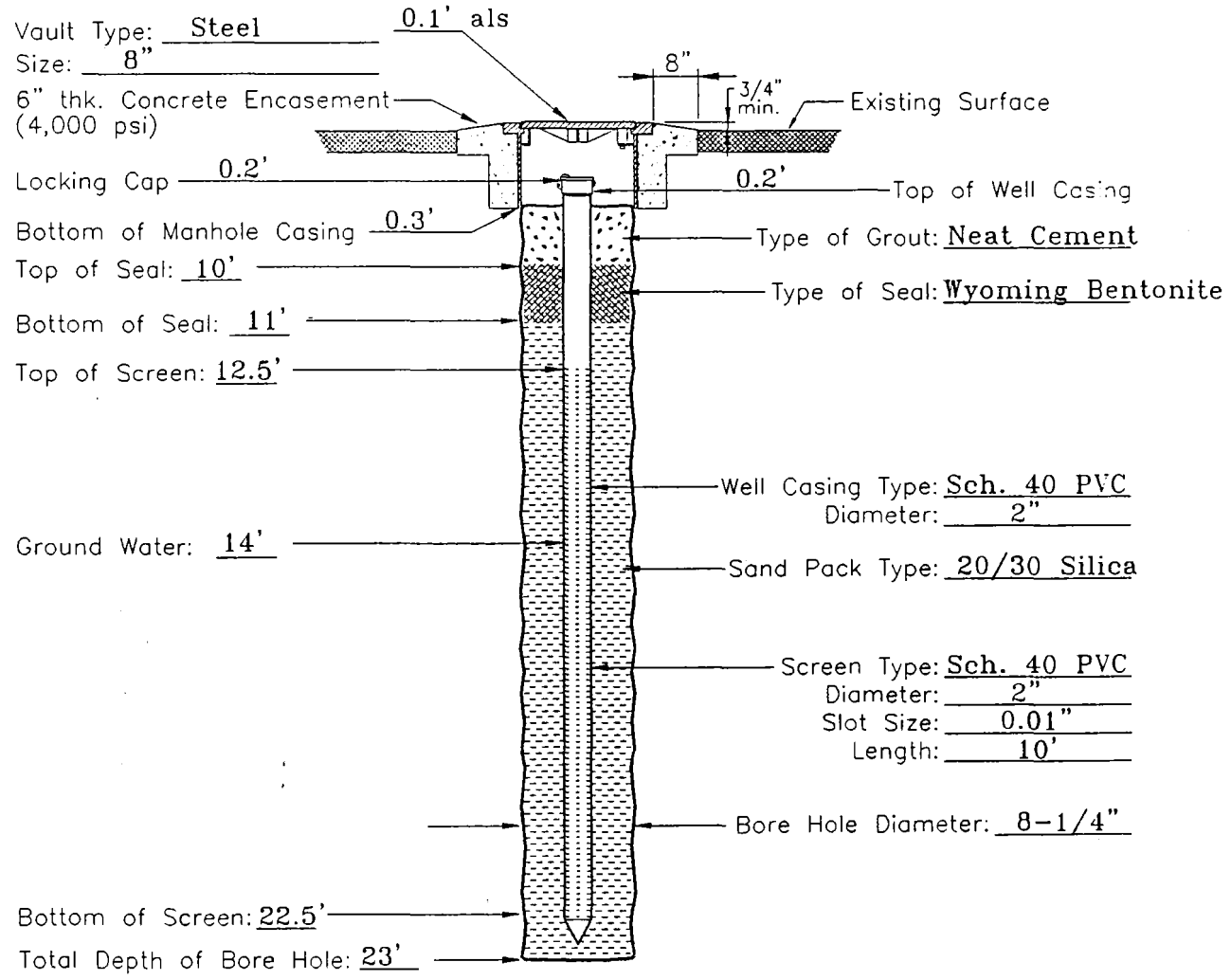

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LOGGED BY: Victor A. Spooner
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-5

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 3/28/96 Finish: 3/29/96
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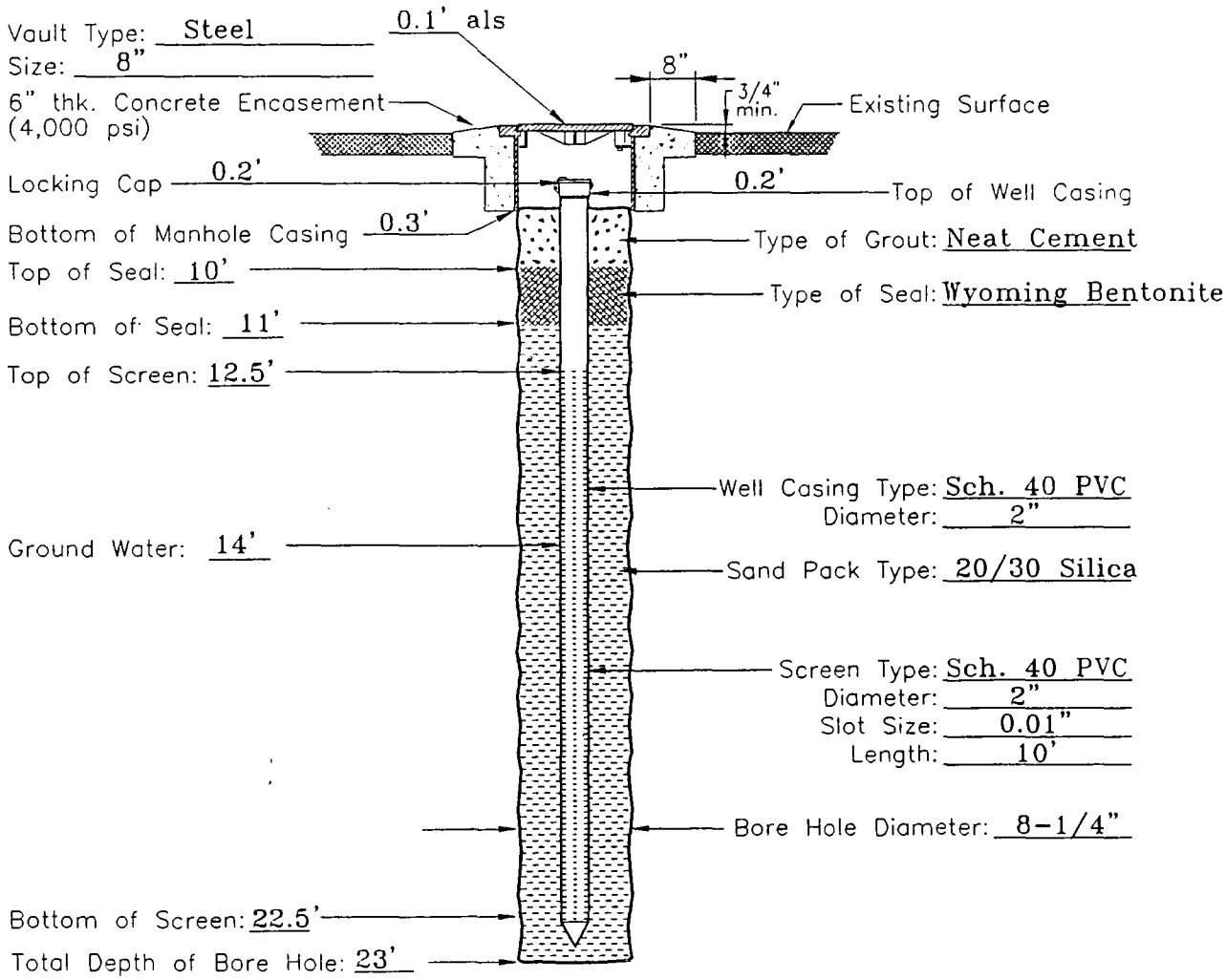

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LOGGED BY: Victor A. Spooner
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-6

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 3/28/96 Finish: 3/29/96
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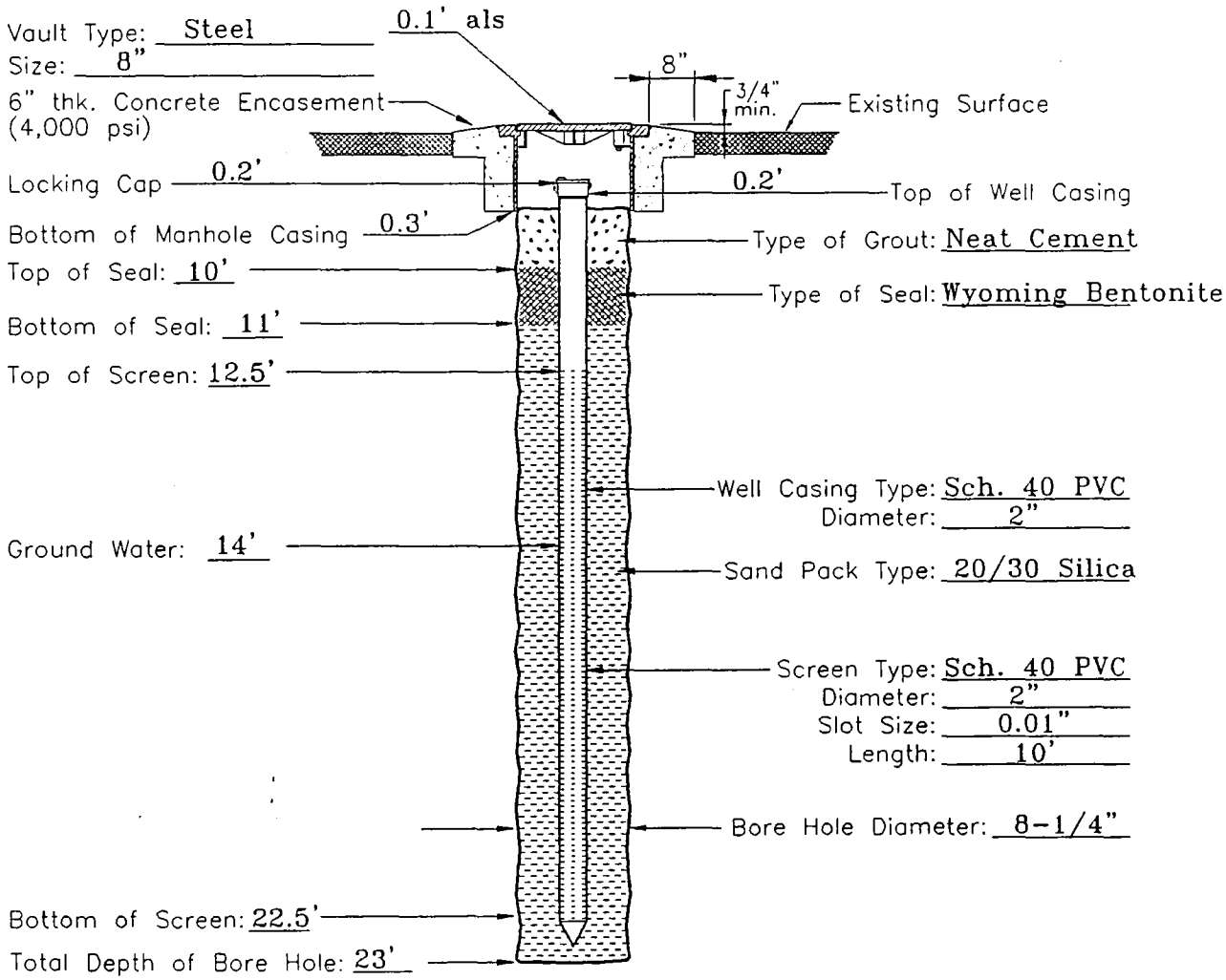

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MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
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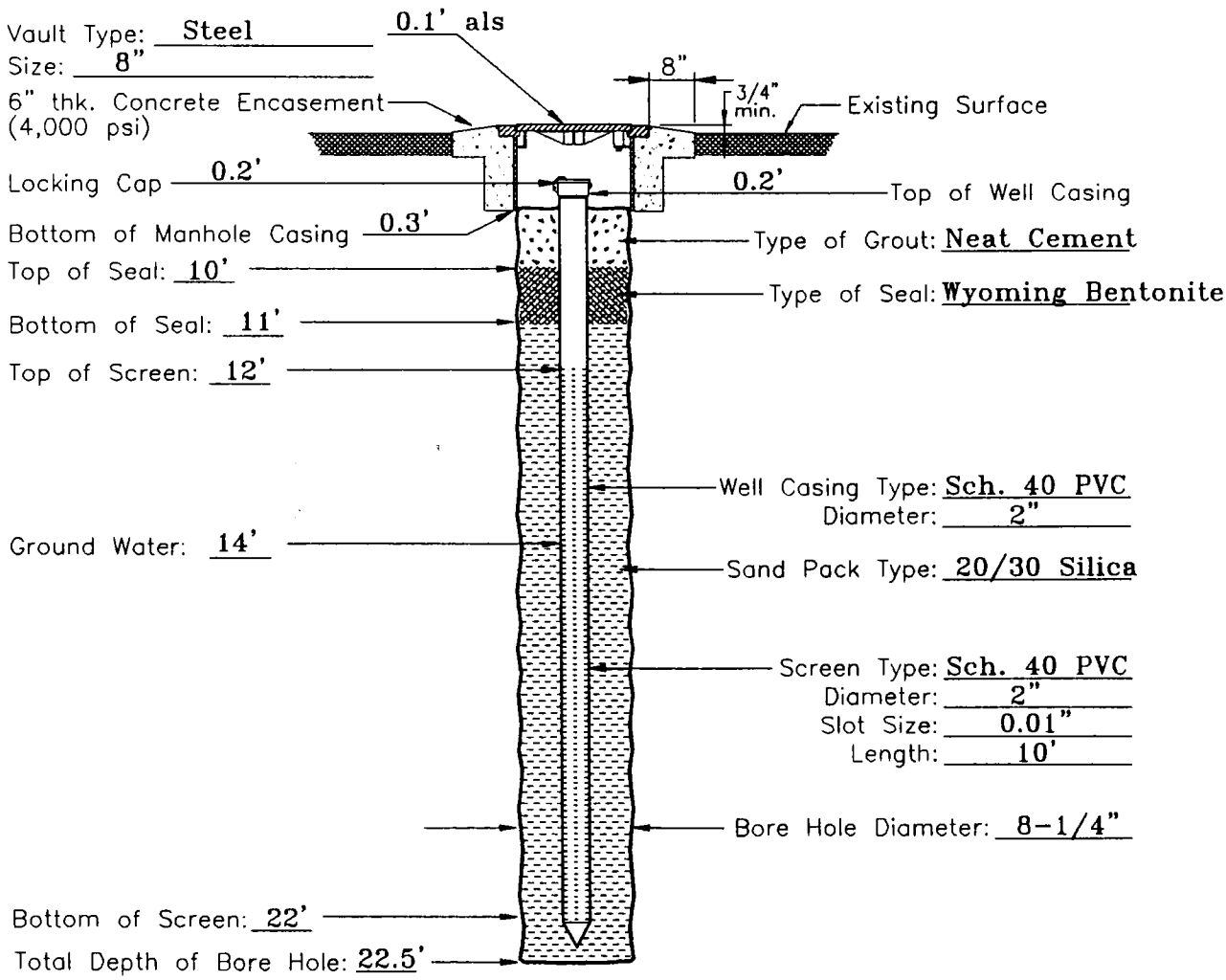

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LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-8

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
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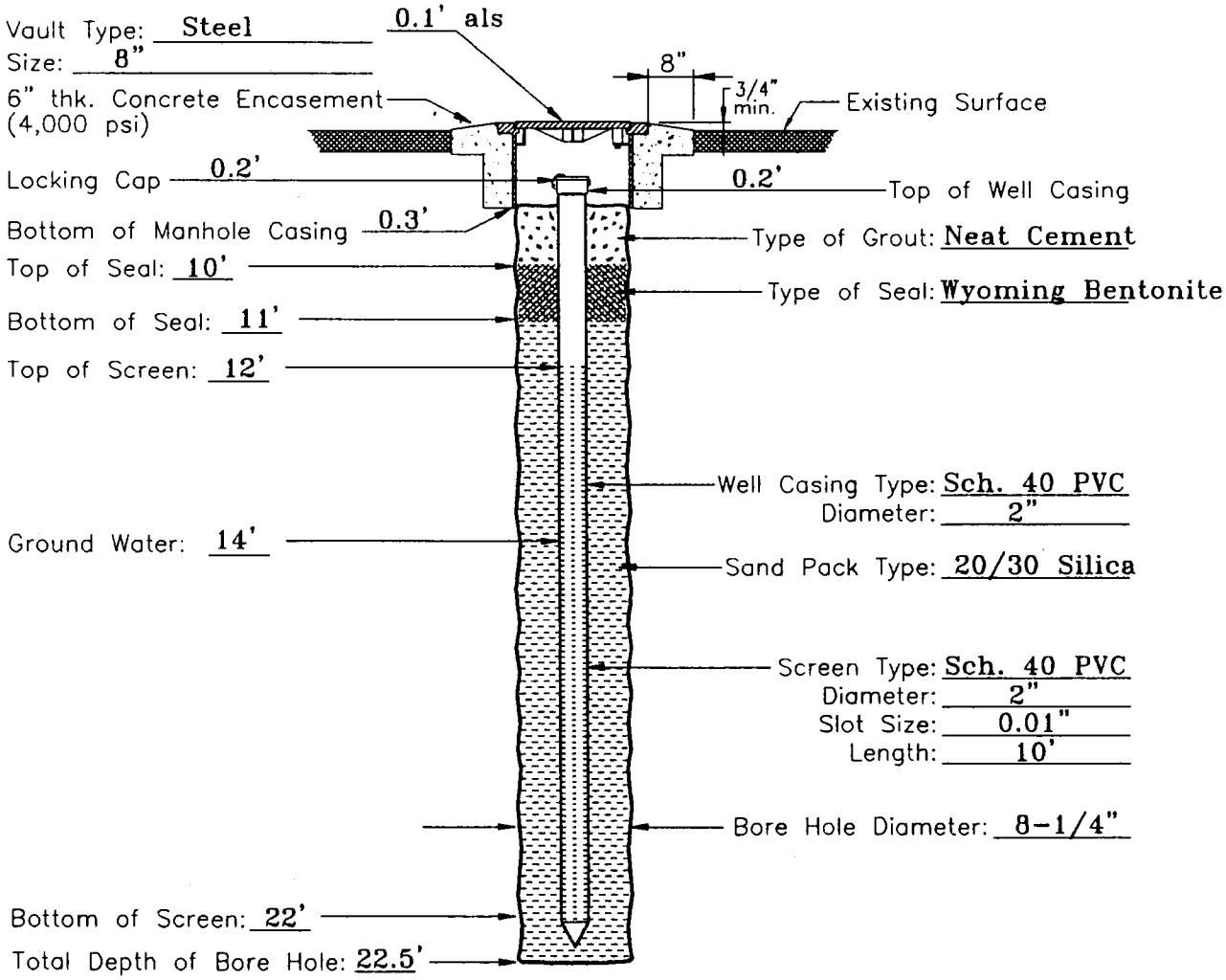

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LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-9

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
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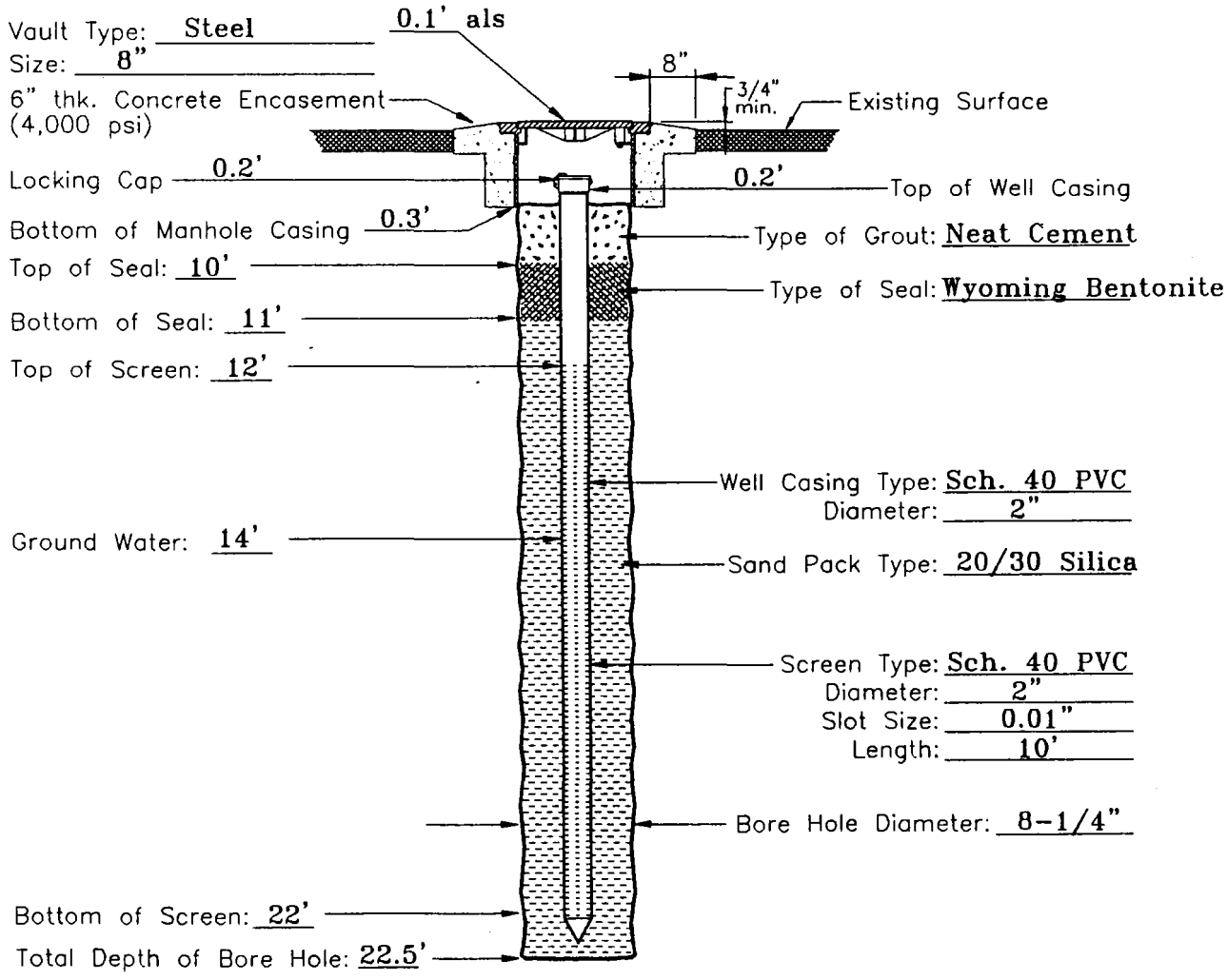

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LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-10

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
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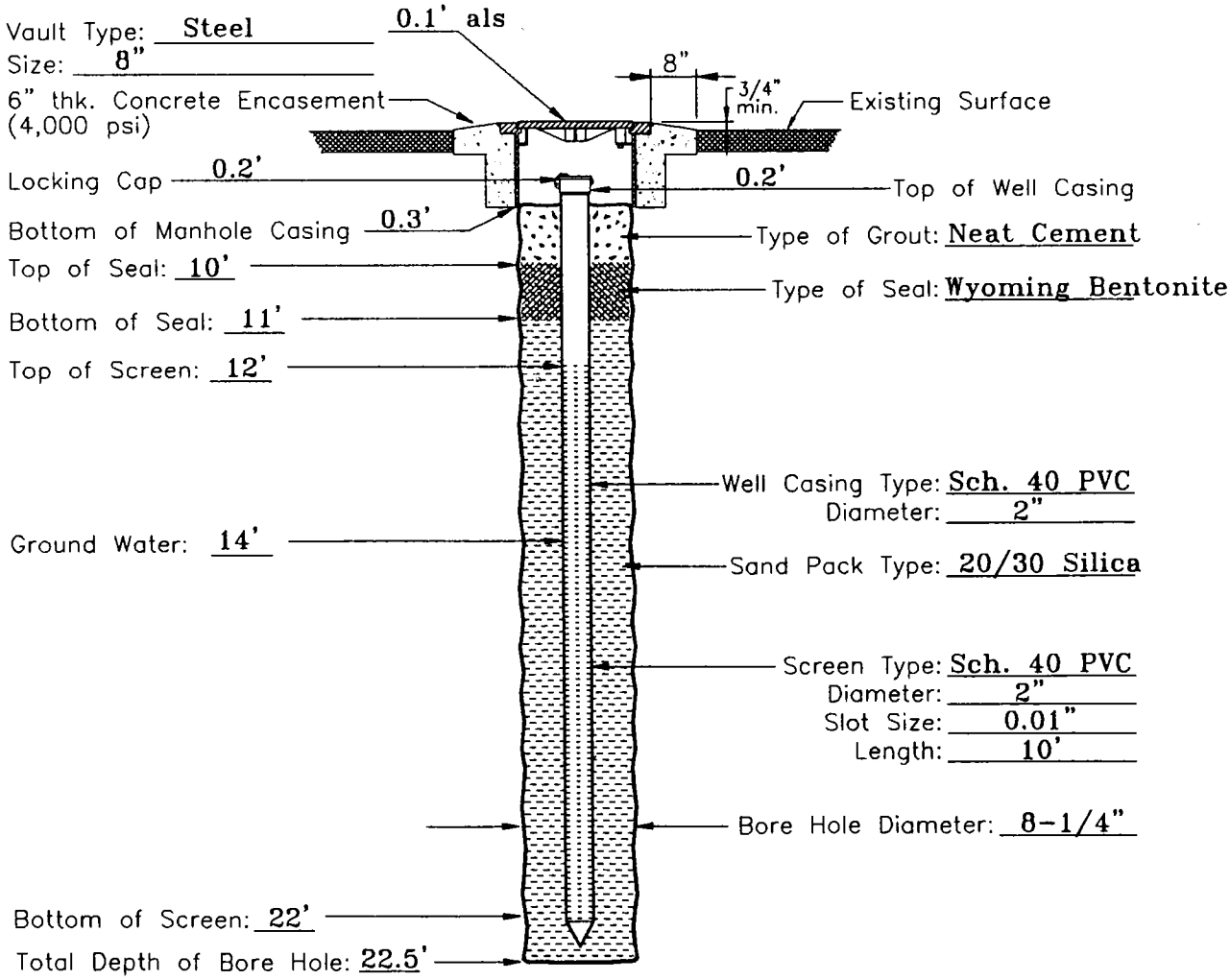

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LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-11

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
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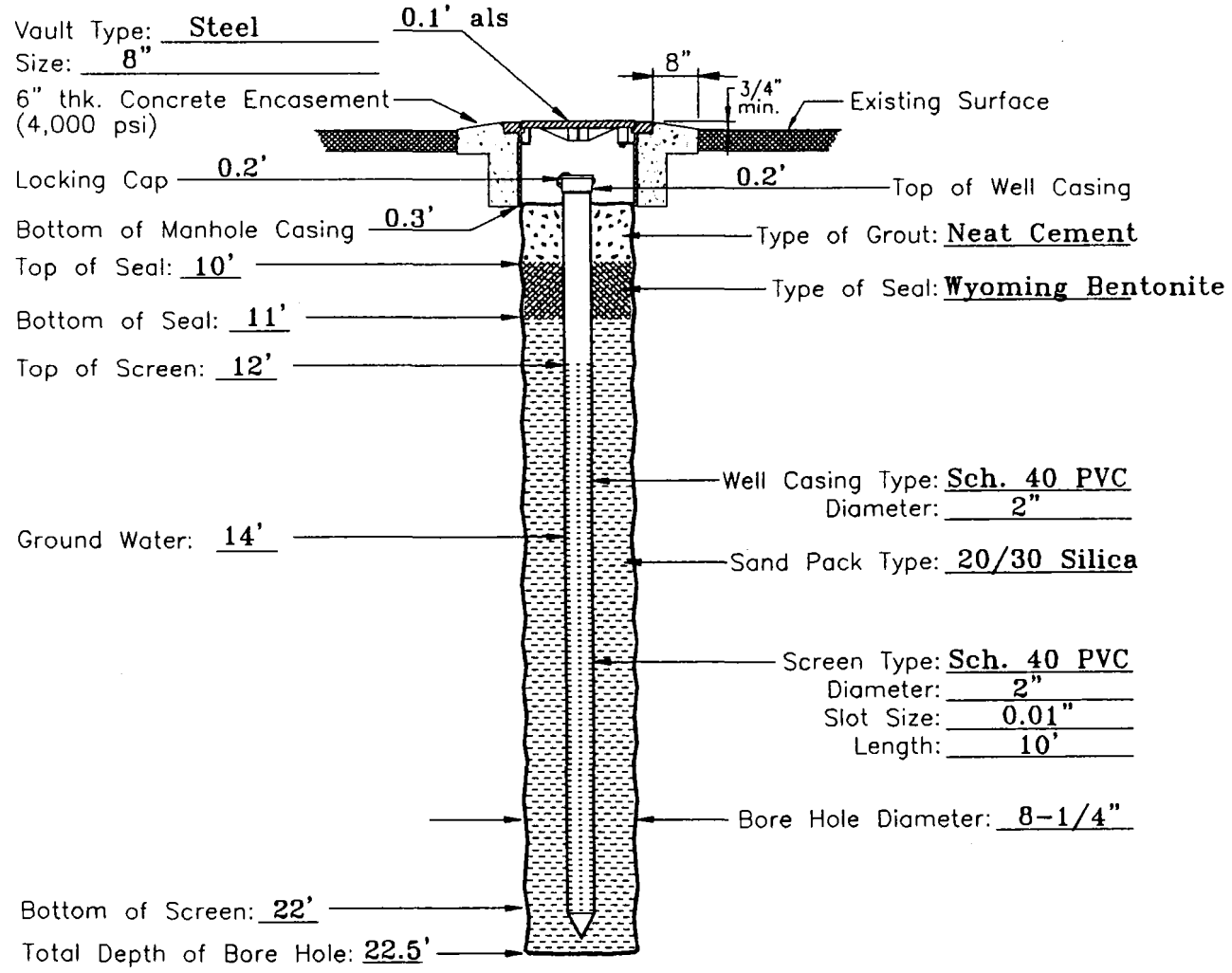

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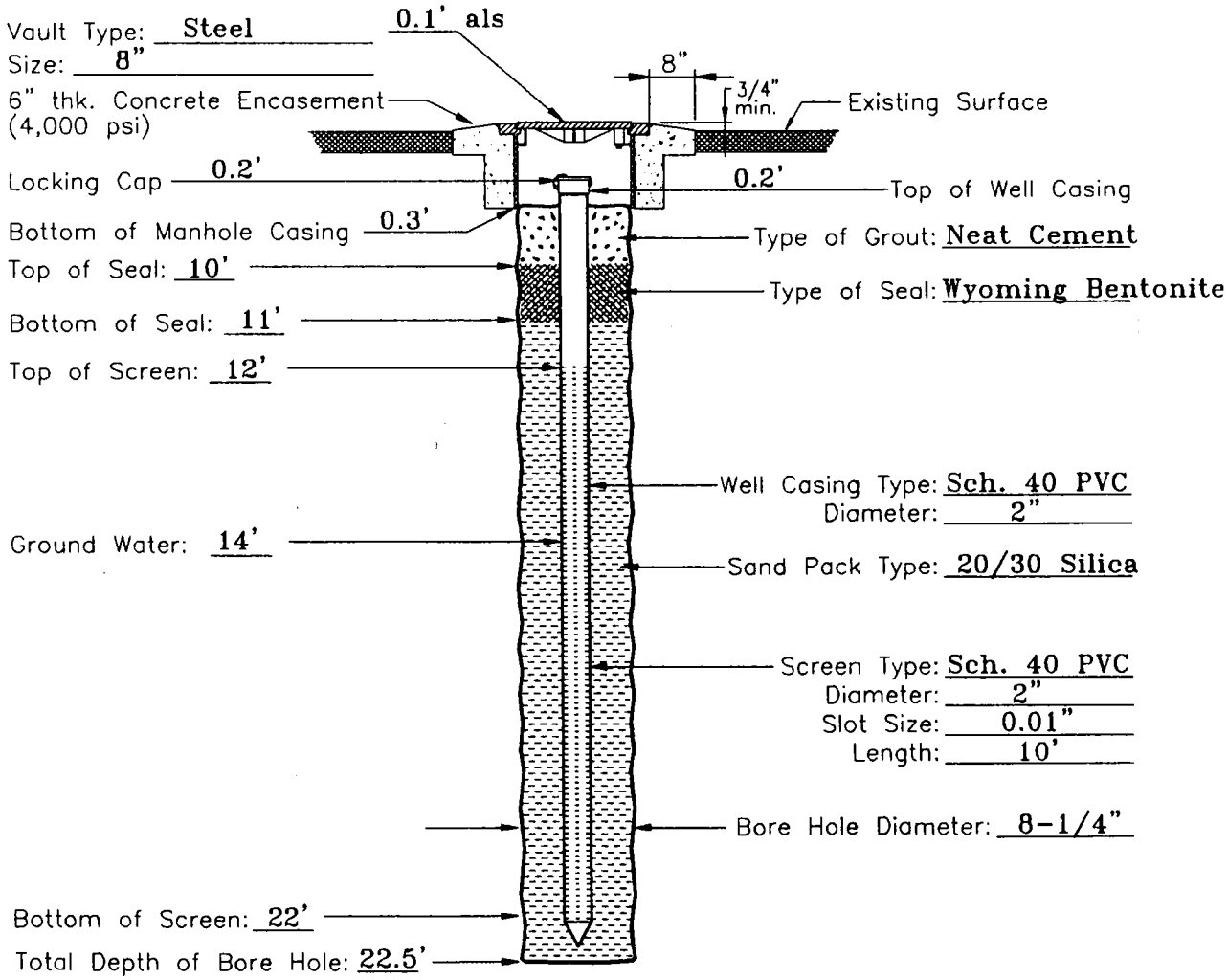
(941) 378-5218 Fax

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-12

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/14/96 Finish: 5/14/96
TIME Start: 1515 Finish: 1600

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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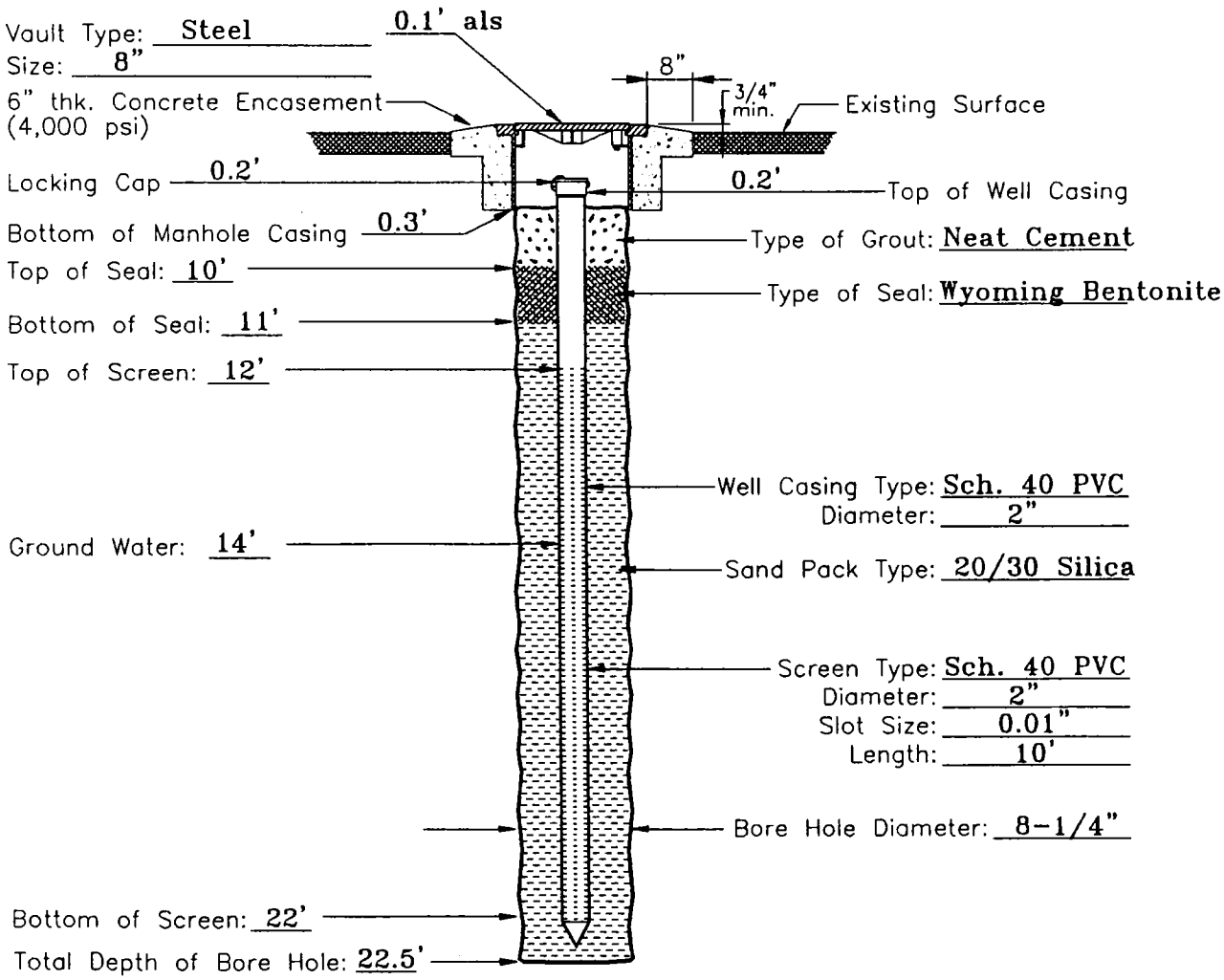
MONITOR WELL CONSTRUCTION DETAIL

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 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/15/96 Finish: 5/15/96
TIME Start: 0945 Finish: 1030

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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MONITOR WELL CONSTRUCTION DETAIL

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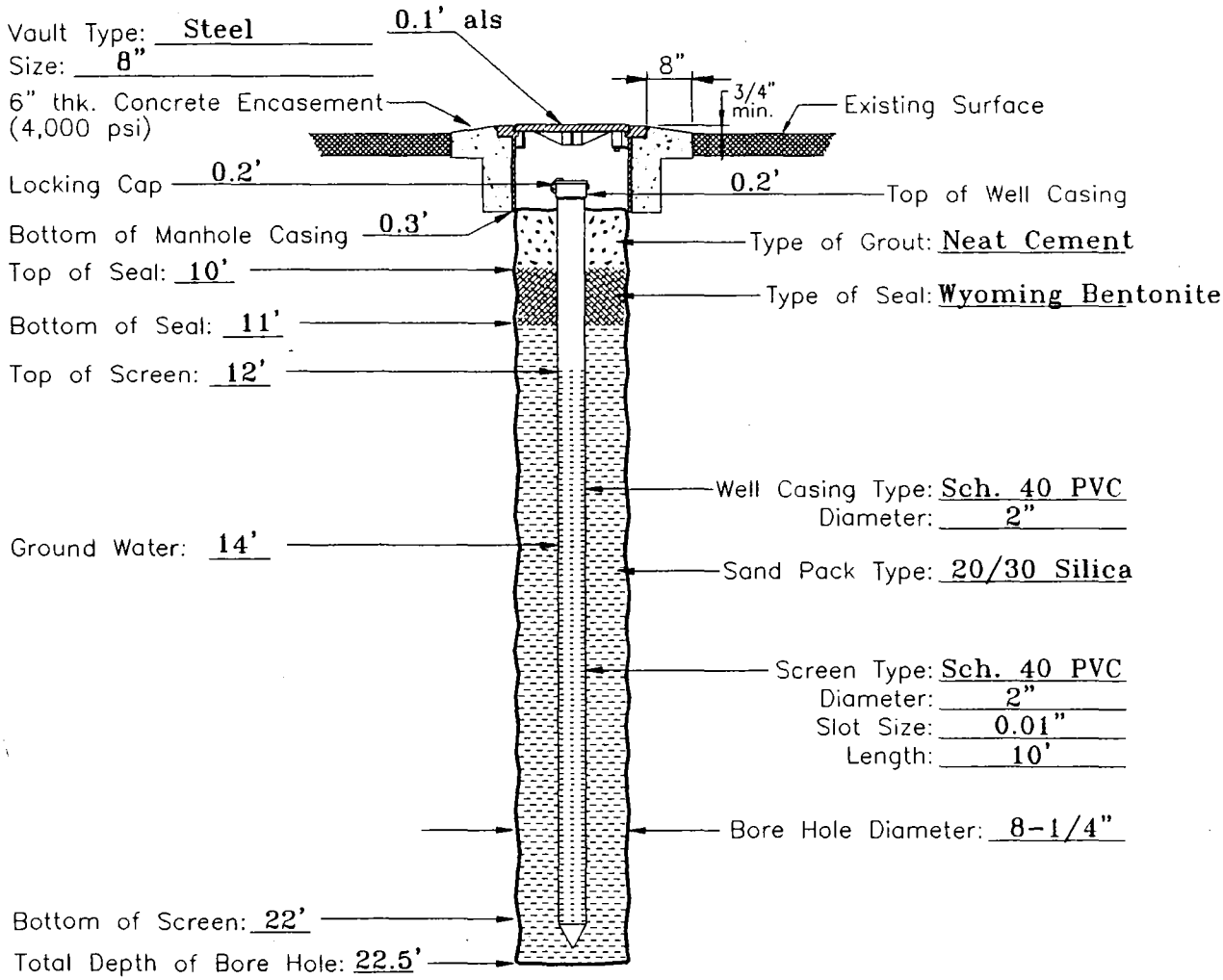
LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-14

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 7/31/96 Finish: 7/31/96
TIME Start: 1405 Finish: 1425

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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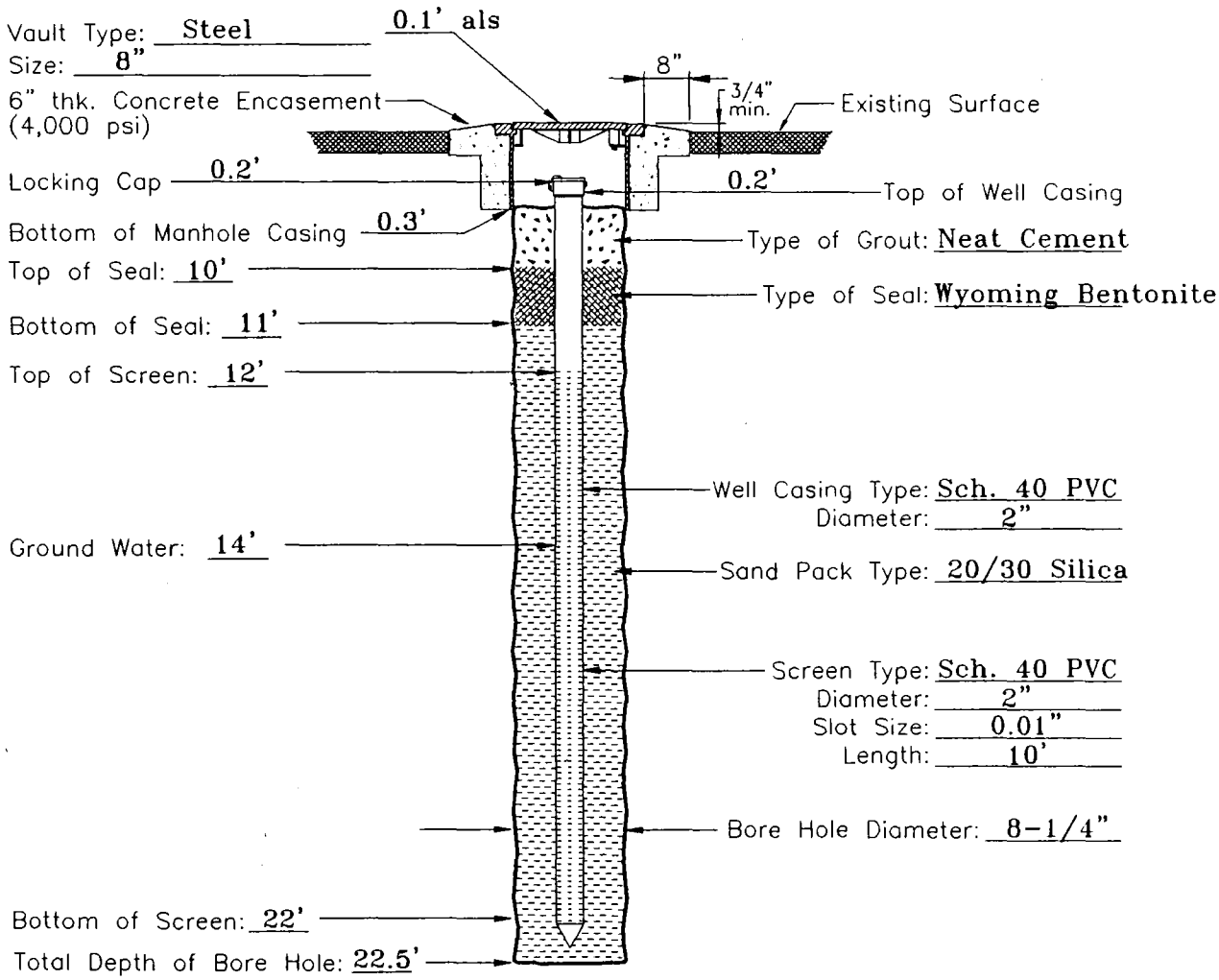
MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-15

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 7/31/96 Finish: 7/31/96
TIME Start: 1435 Finish: 1455

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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MONITOR WELL CONSTRUCTION DETAIL

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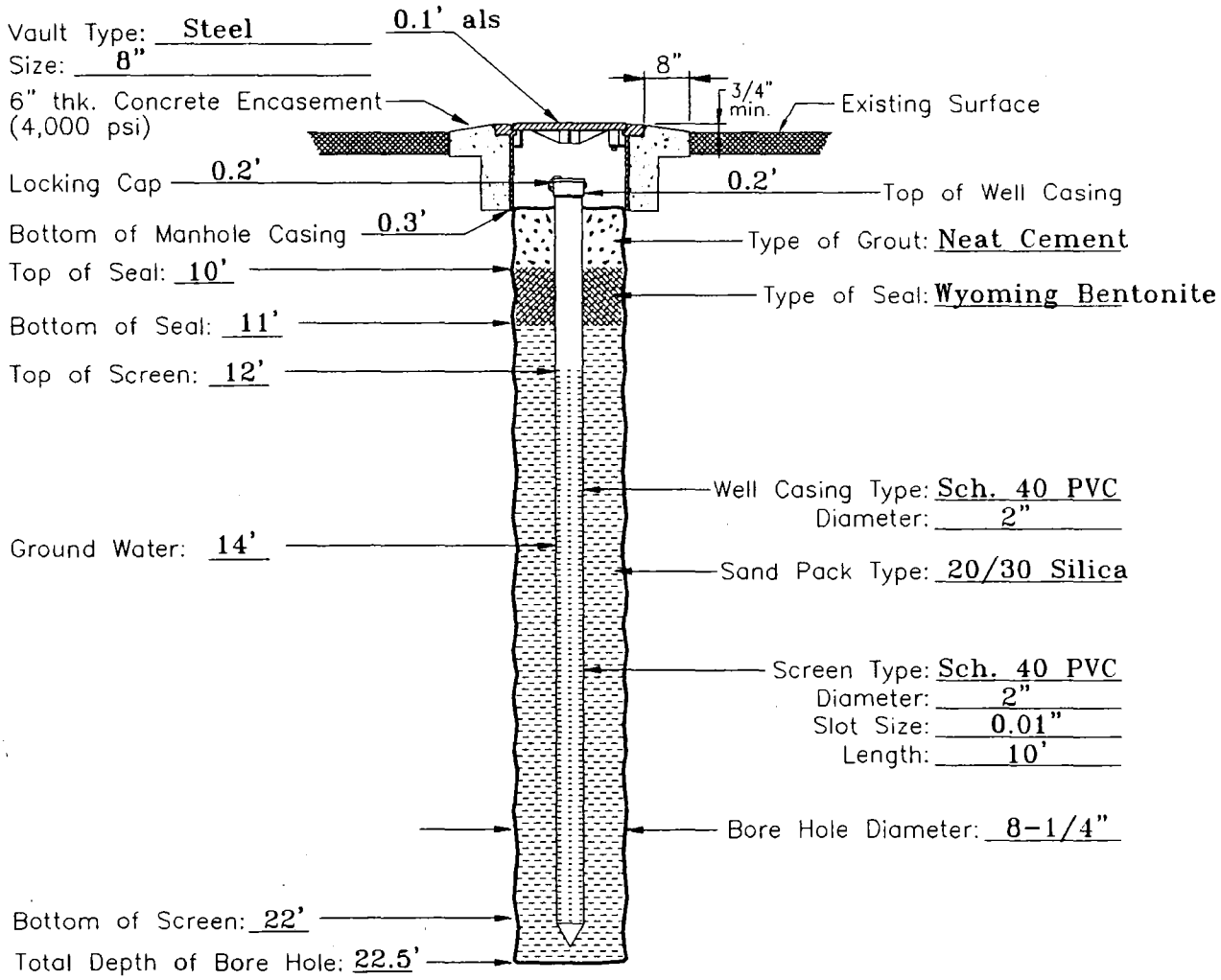
LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-16

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 7/31/96 Finish: 7/31/96
TIME Start: 1505 Finish: 1525

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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MONITOR WELL CONSTRUCTION DETAIL

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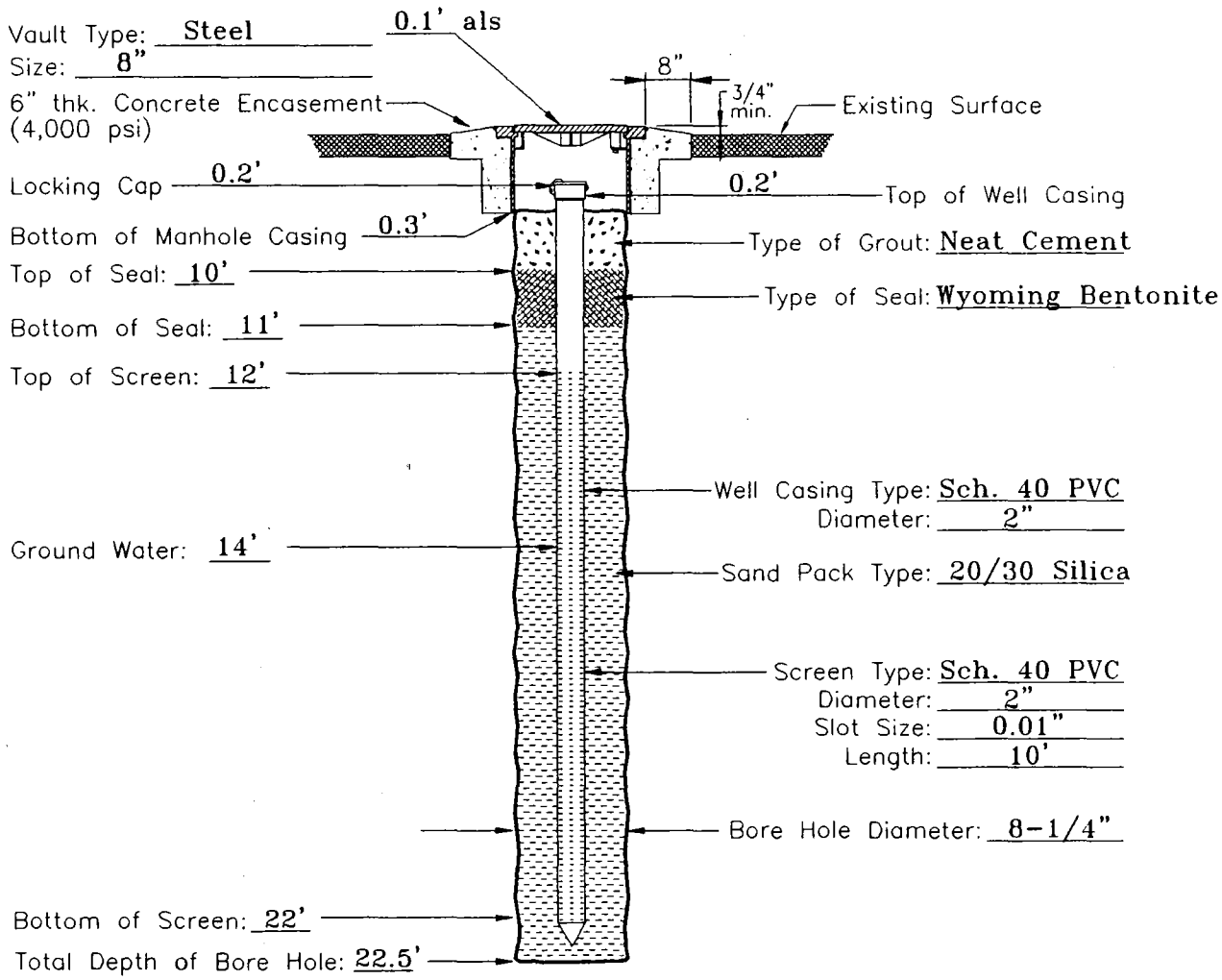
LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-17

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 8/1/96 Finish: 8/1/96
TIME Start: 1127 Finish: 1154

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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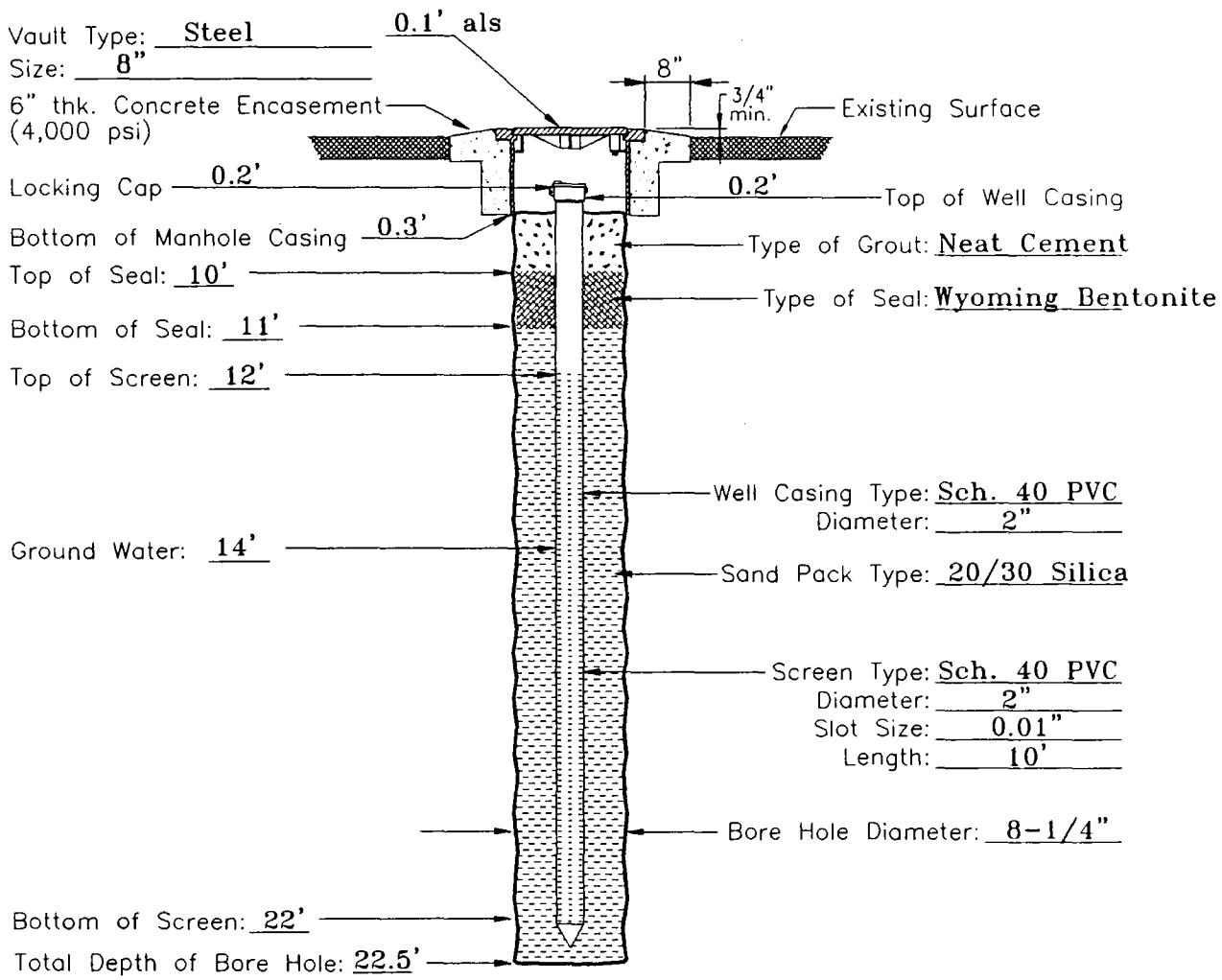
MONITOR WELL CONSTRUCTION DETAIL

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-18

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 8/1/96 Finish: 8/1/96
TIME Start: 1205 Finish: 1230

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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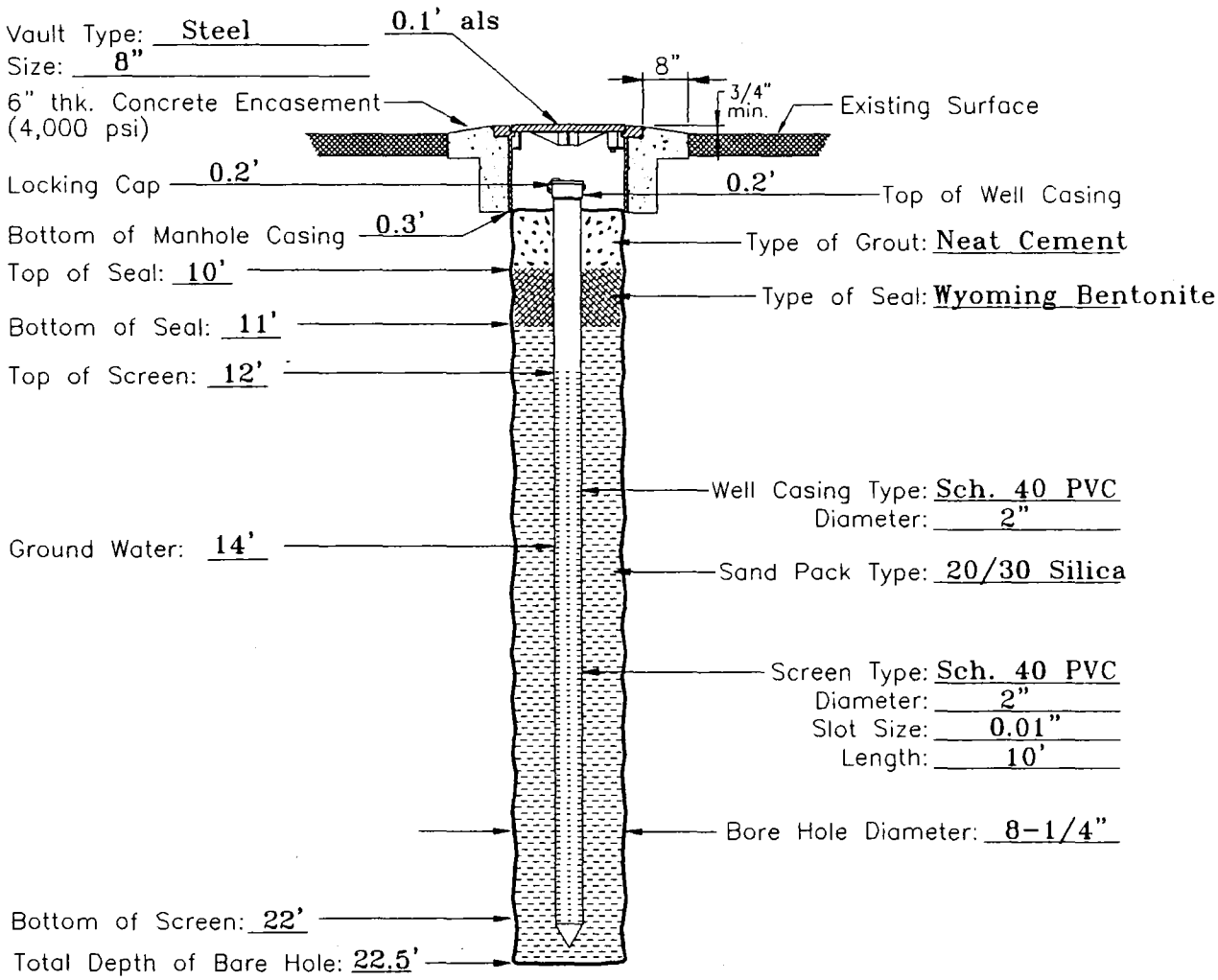
MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 8/1/96 Finish: 8/1/96
TIME Start: 1240 Finish: 1300

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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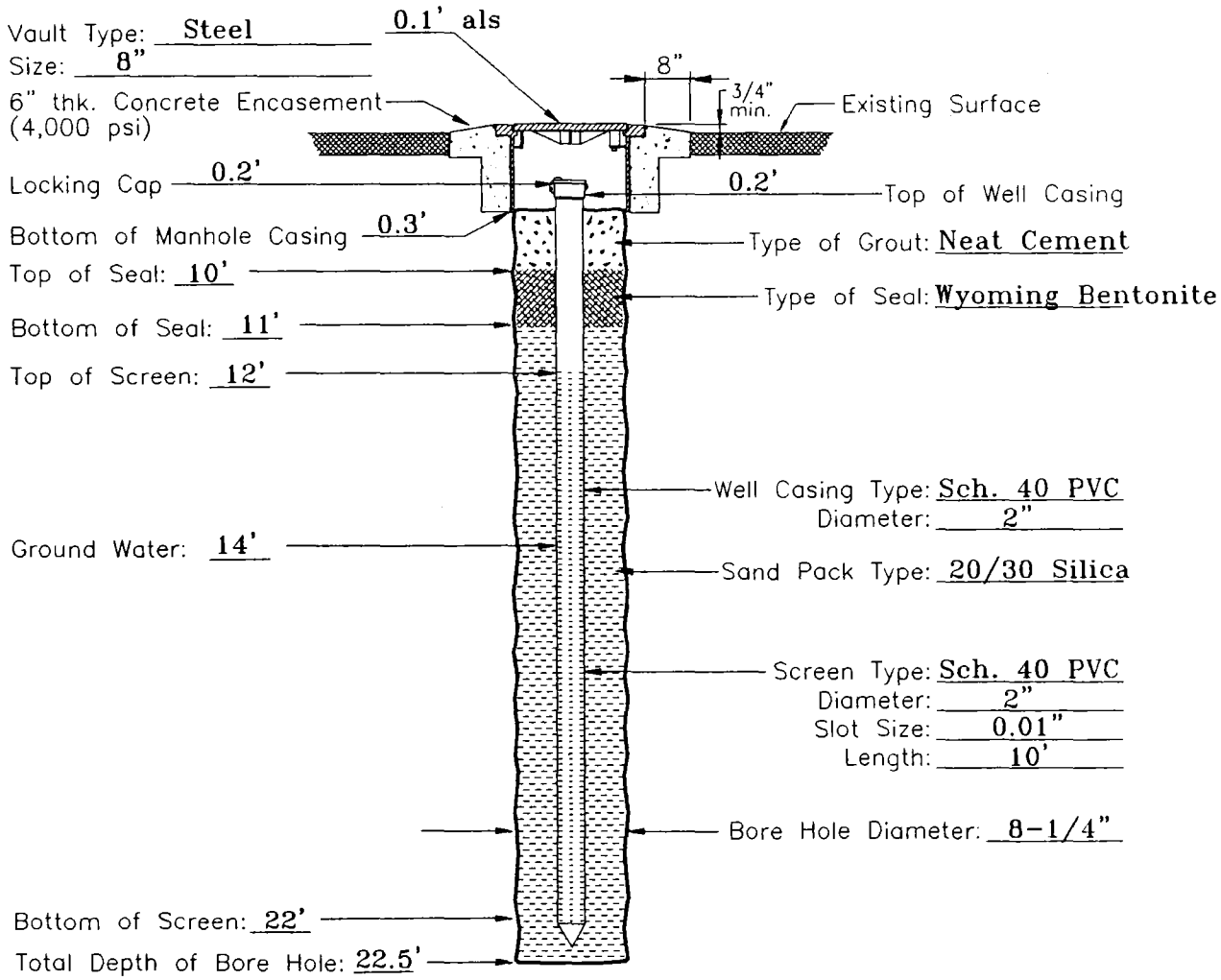
MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 8/1/96 Finish: 8/1/96
TIME Start: 1310 Finish: 1335

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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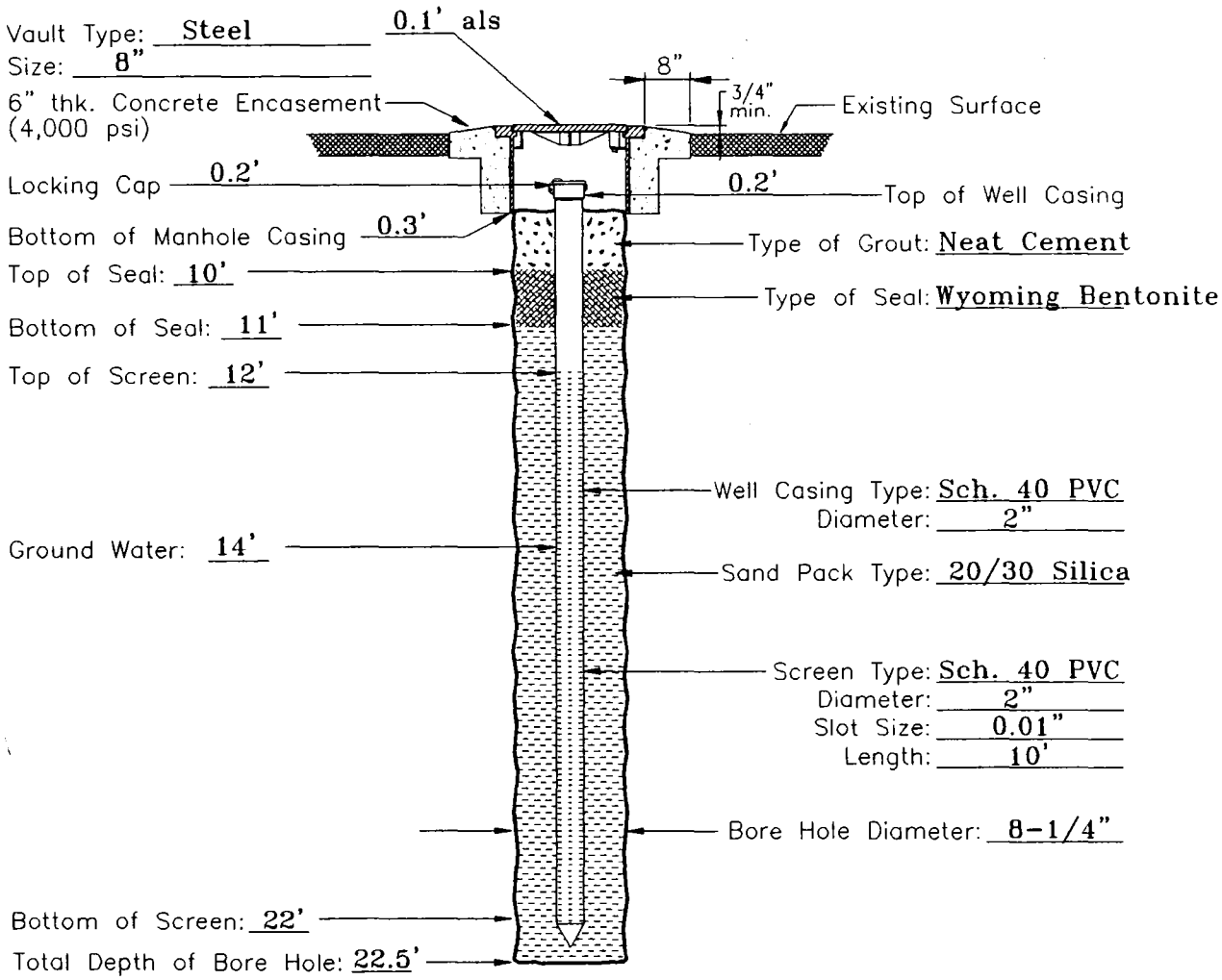
MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 8/1/96 Finish: 8/1/96
TIME Start: 1345 Finish: 1415

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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MONITOR WELL CONSTRUCTION DETAIL

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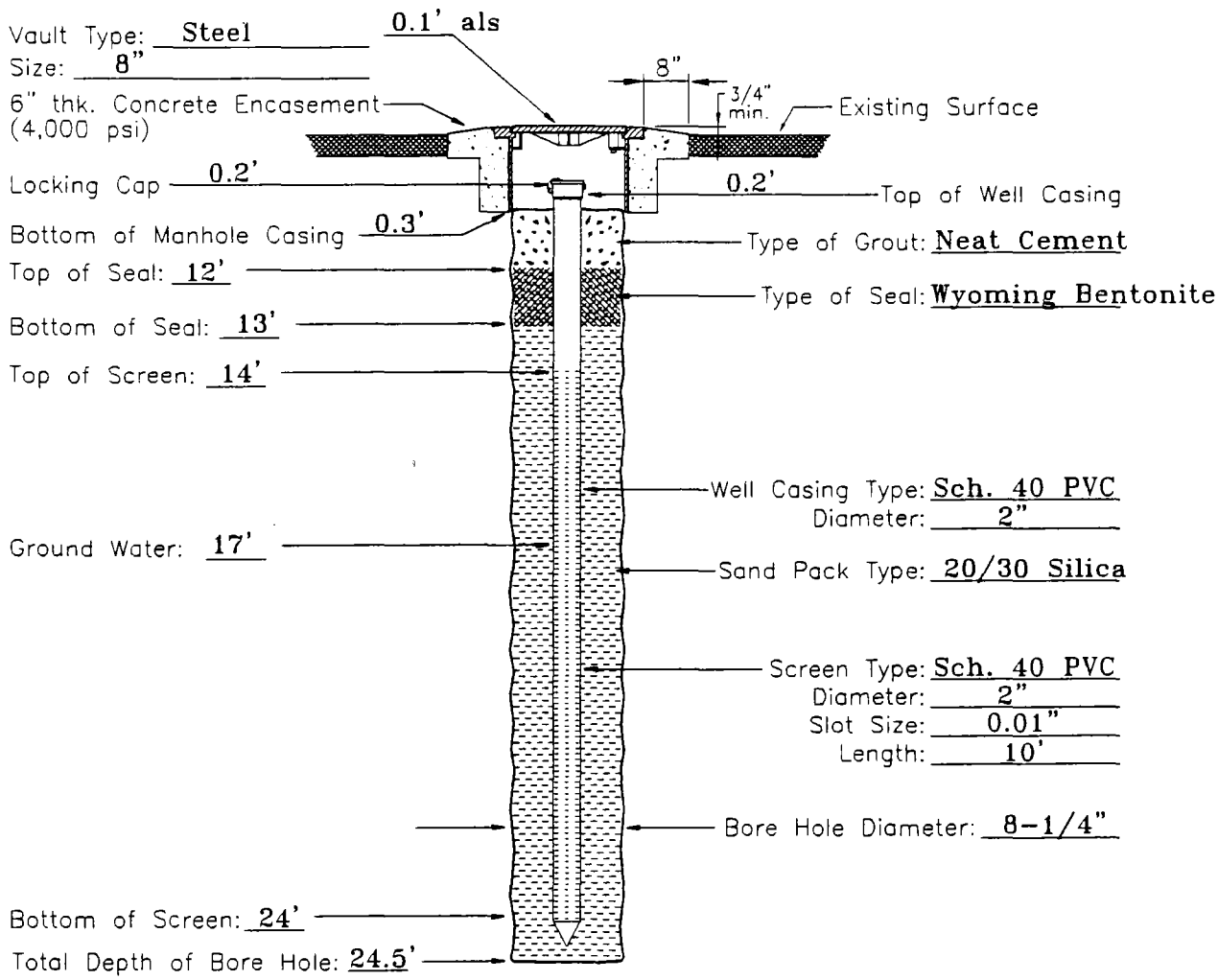
LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-22

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 9/18/96 Finish: 9/18/96
TIME Start: 1300 Finish: 1350

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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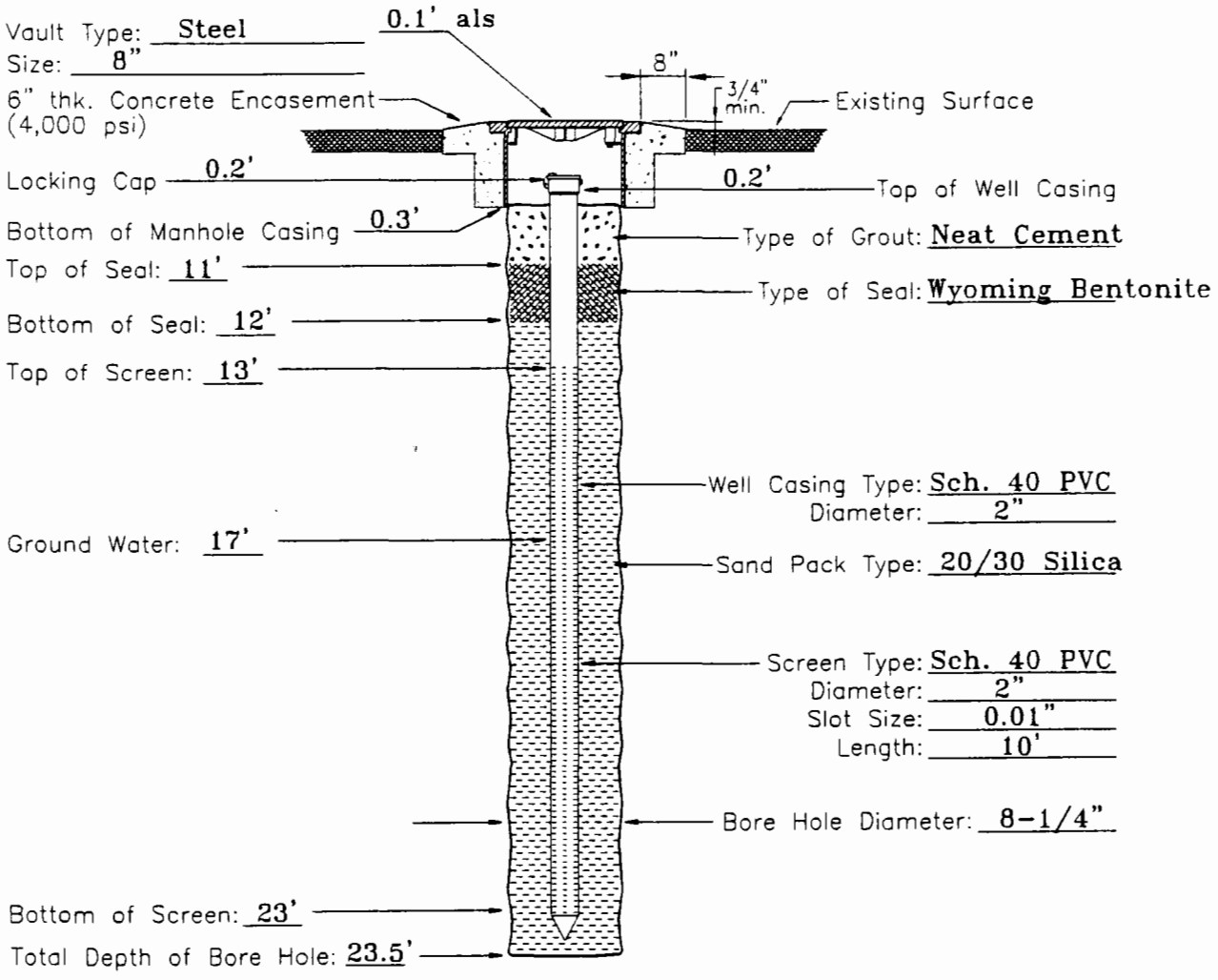
MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 9/18/96 Finish: 9/18/96
TIME Start: 1400 Finish: 1440

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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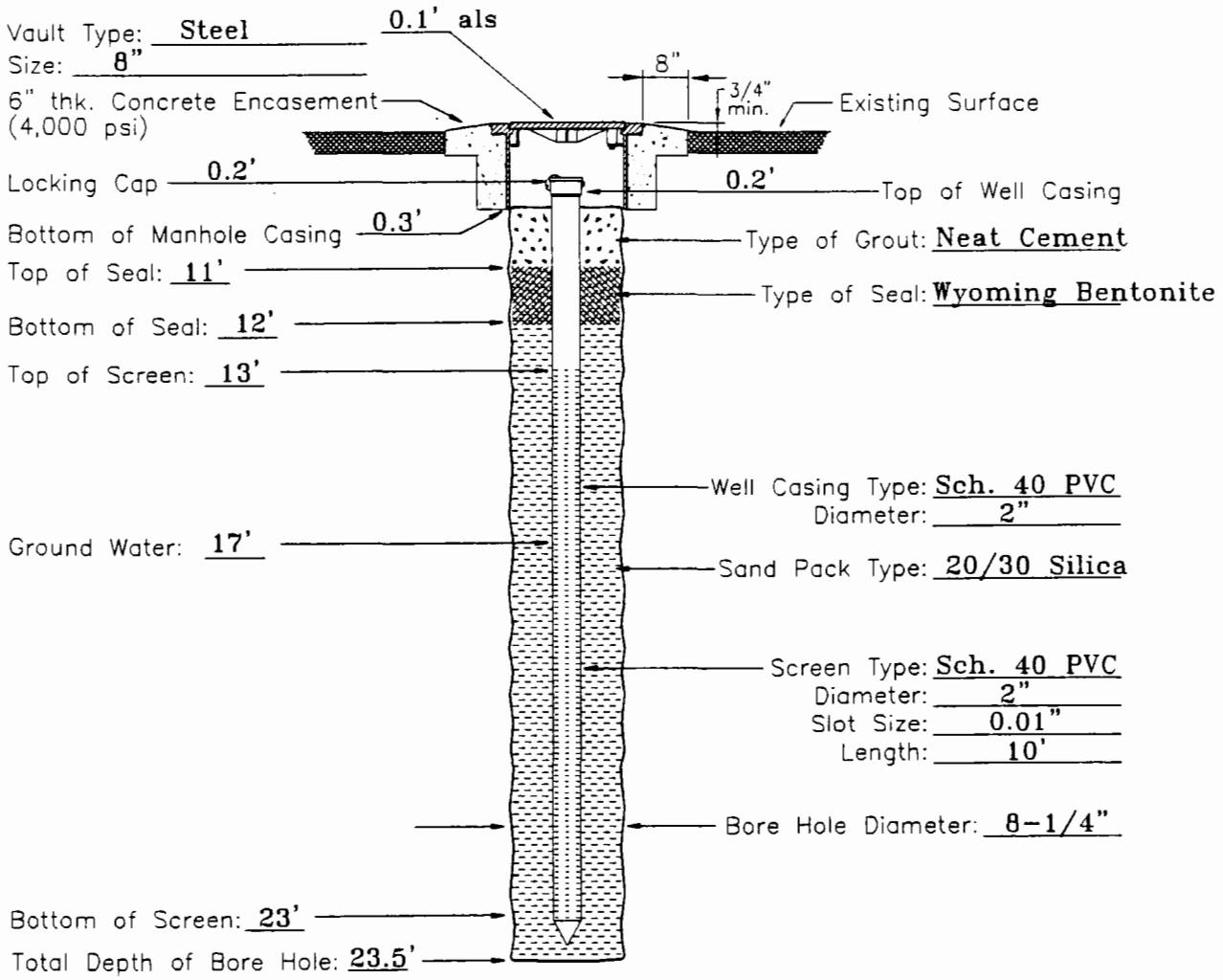
MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 9/18/96 Finish: 9/18/96
TIME Start: 1450 Finish: 1540

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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MONITOR WELL CONSTRUCTION DETAIL

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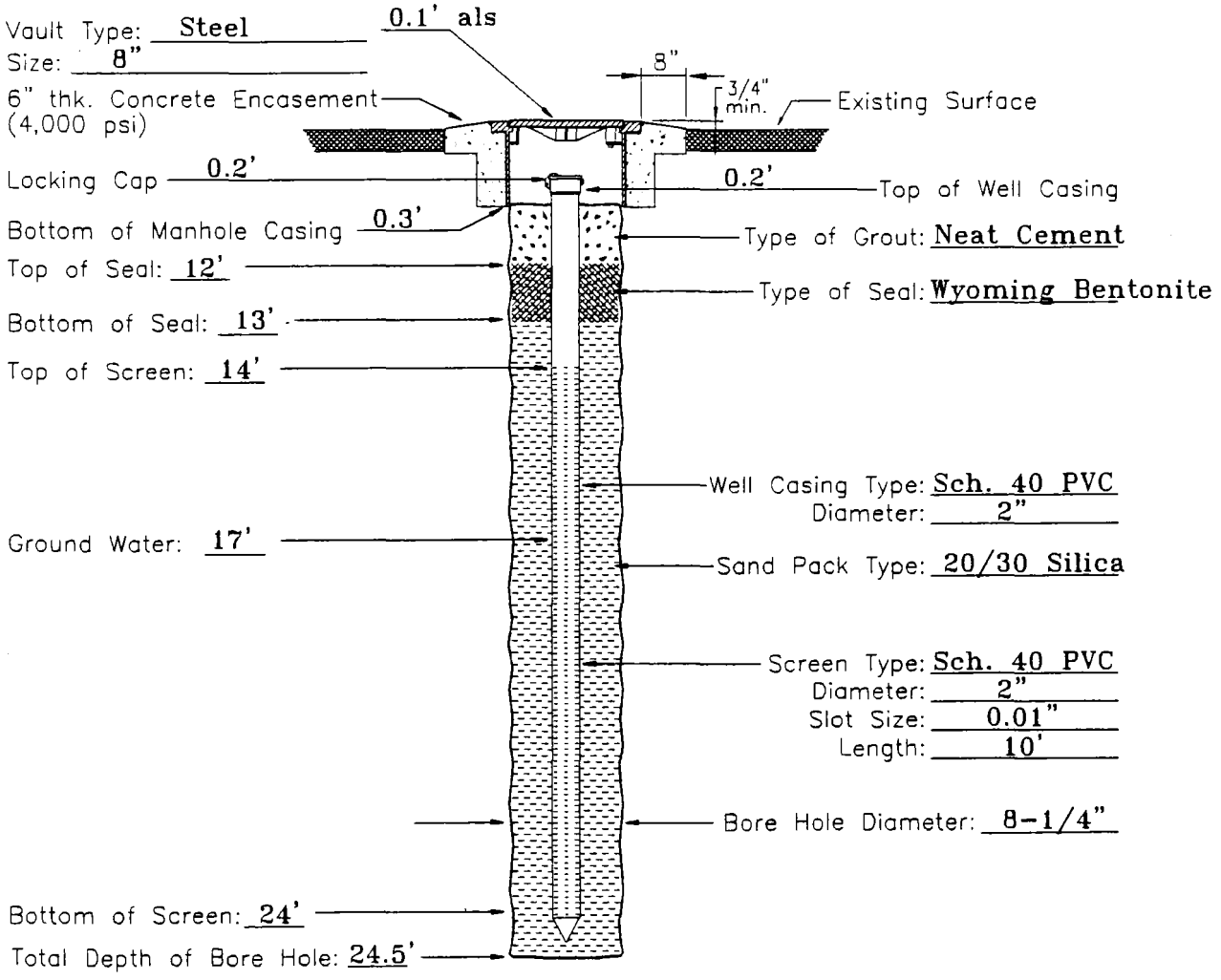
LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-25

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 9/19/96 Finish: 9/19/96
TIME Start: 1000 Finish: 1050

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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MONITOR WELL CONSTRUCTION DETAIL

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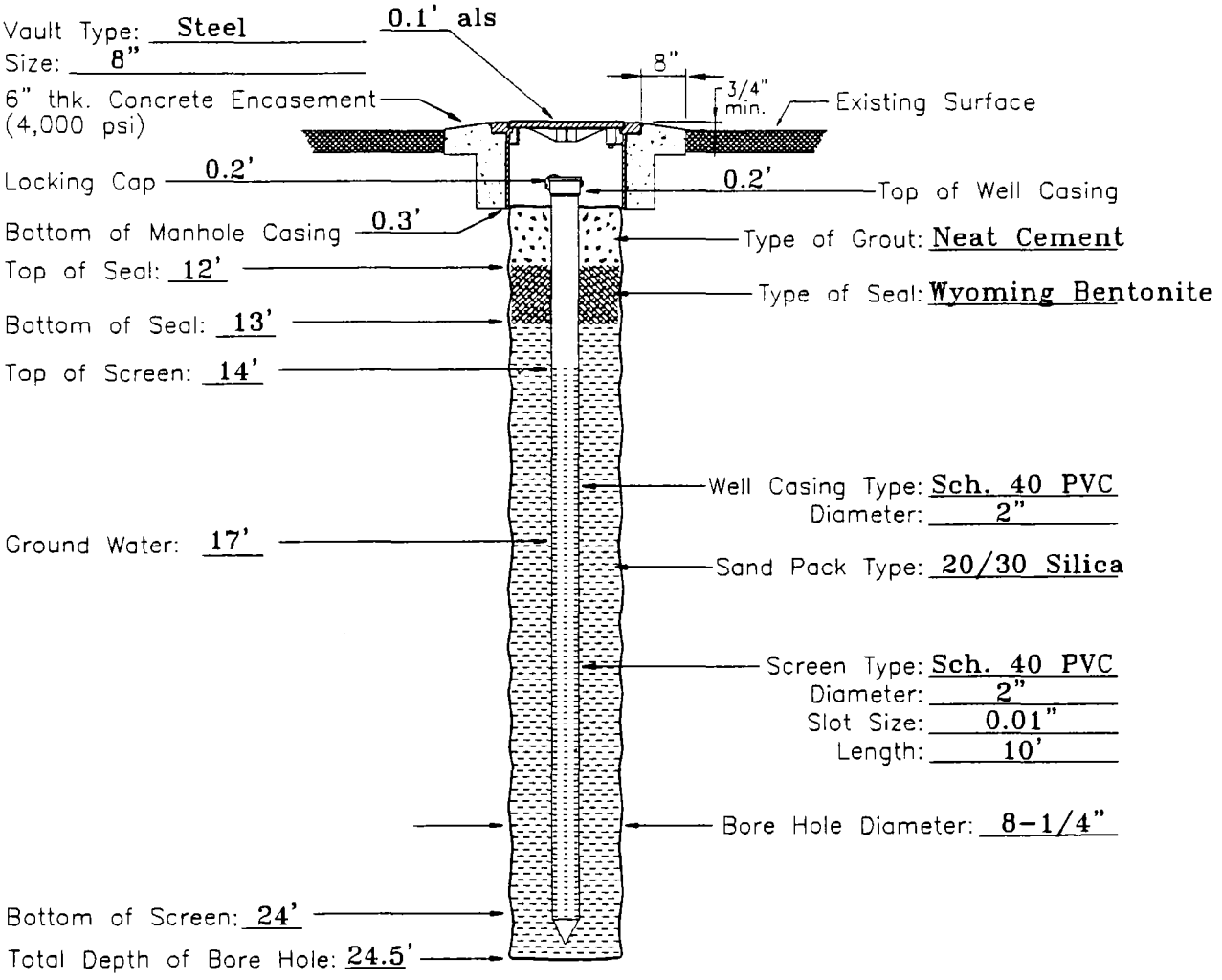
LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-26

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 9/19/96 Finish: 9/19/96
TIME Start: 1100 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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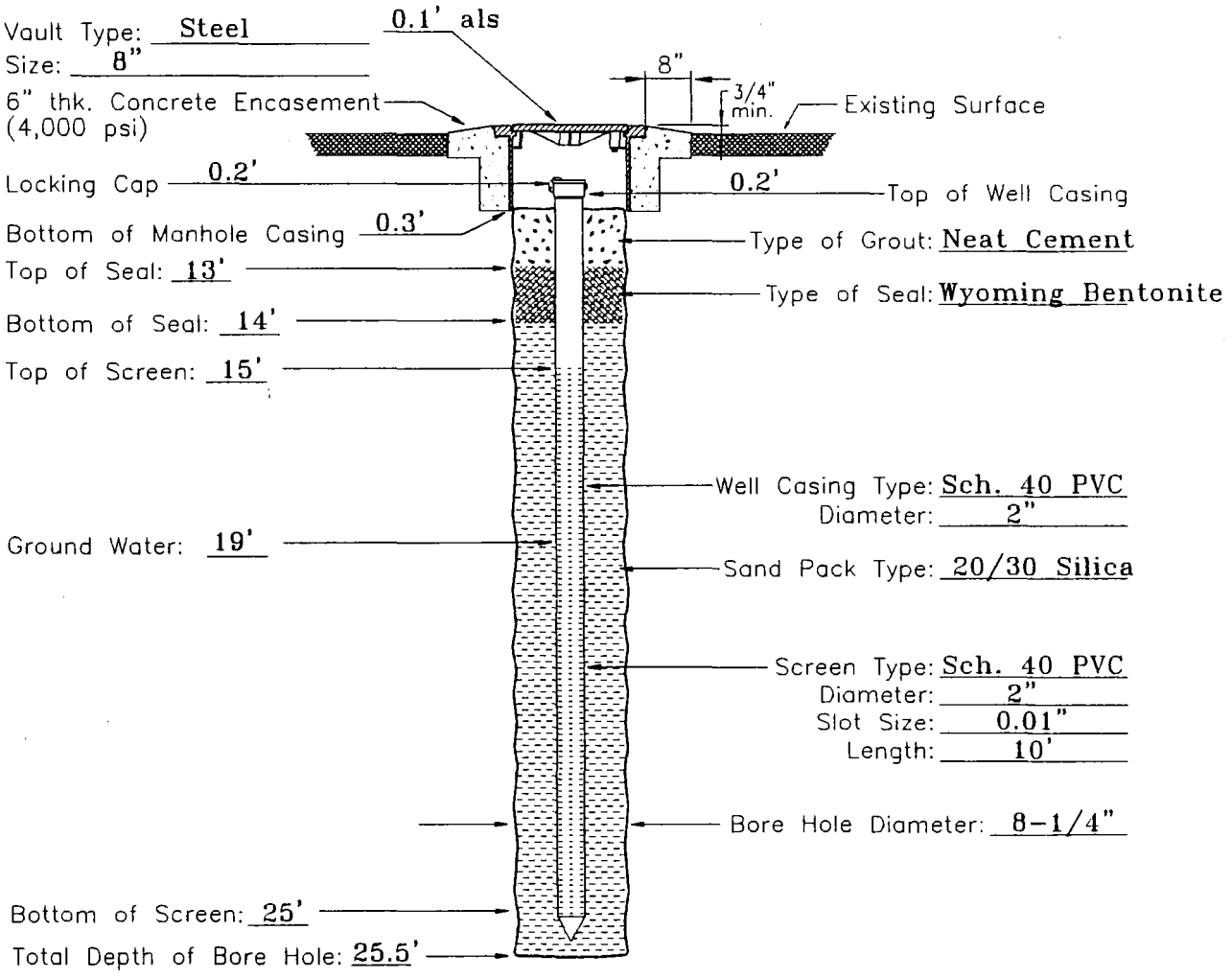
MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 10/22/96 Finish: 10/22/96
TIME Start: 1000 Finish: 1045

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

MONITOR WELL CONSTRUCTION DETAIL

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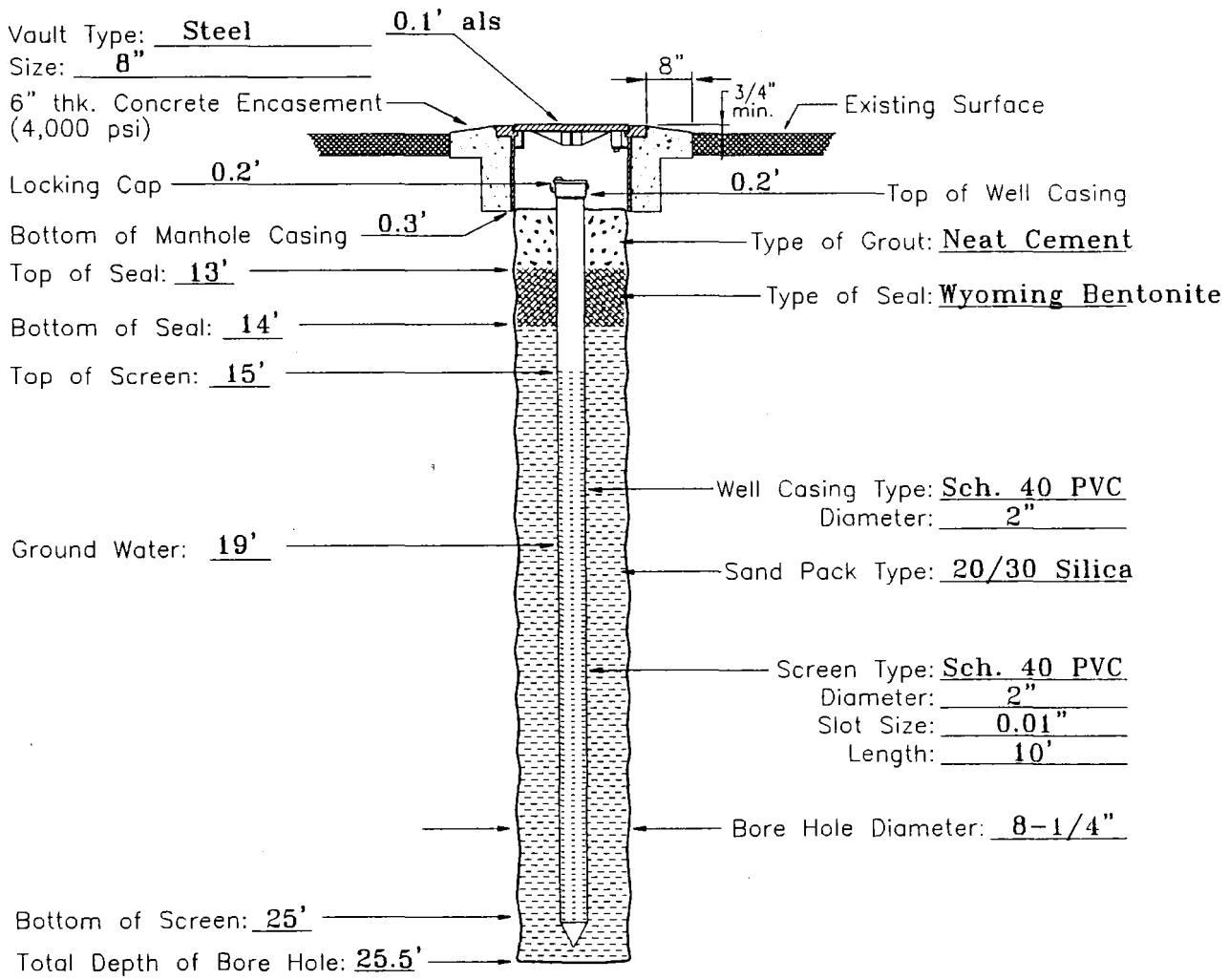
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

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

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 10/22/96 Finish: 10/22/96
TIME Start: 1100 Finish: 1200

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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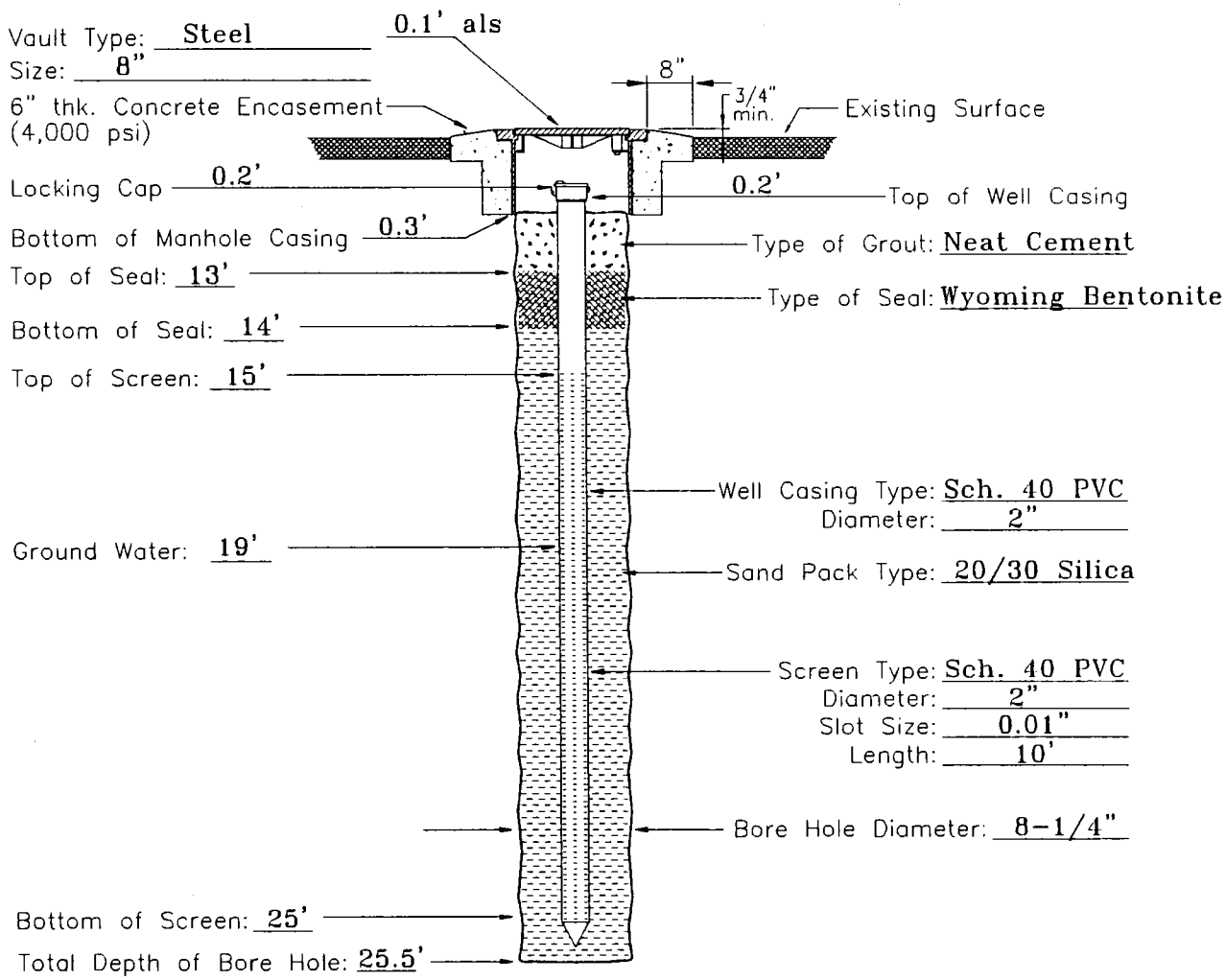
MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 10/22/96 Finish: 10/22/96
TIME Start: 1245 Finish: 1330

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



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MONITOR WELL CONSTRUCTION DETAIL

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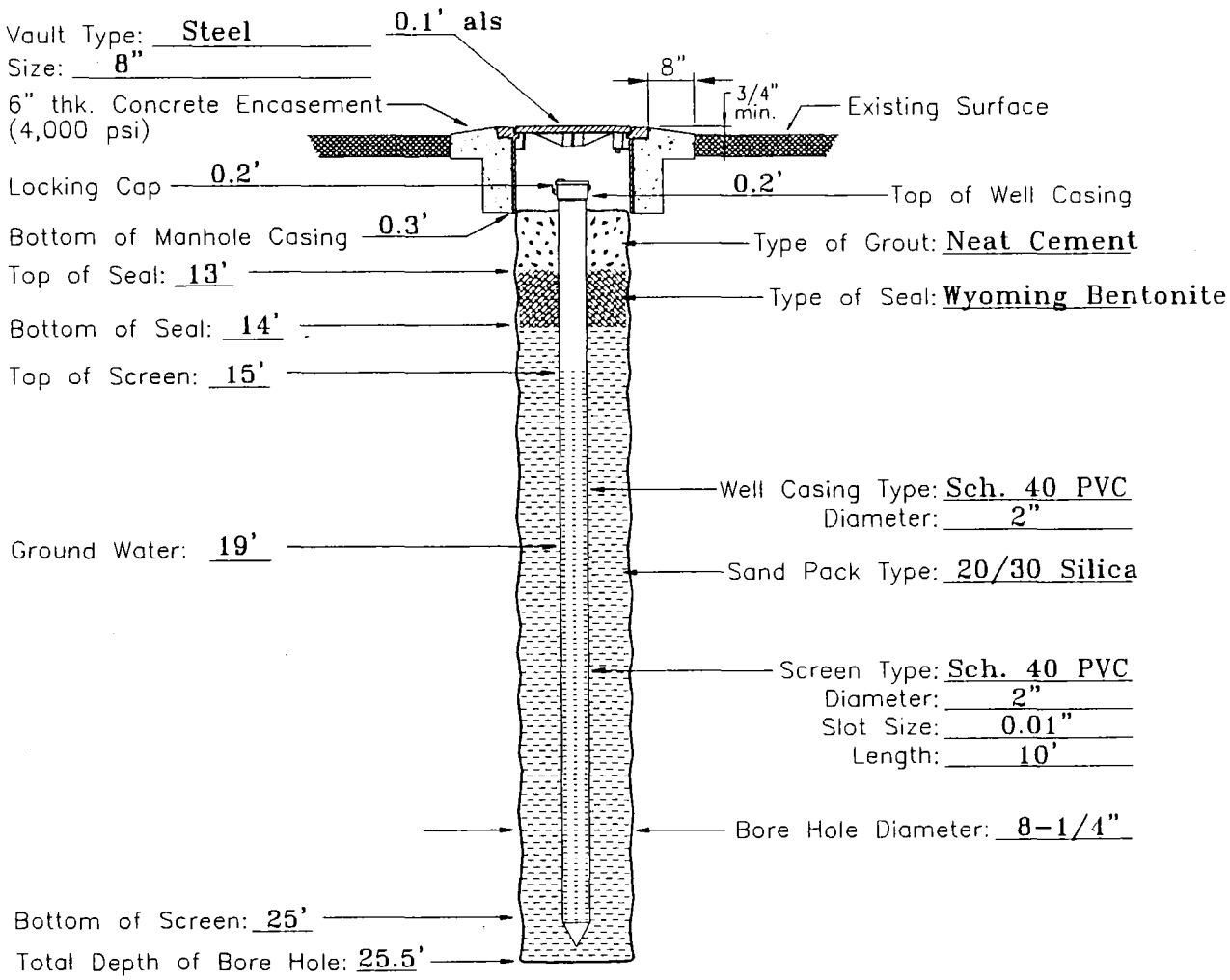
LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-30

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 10/22/96 Finish: 10/22/96
TIME Start: 1345 Finish: 1430

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



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1120

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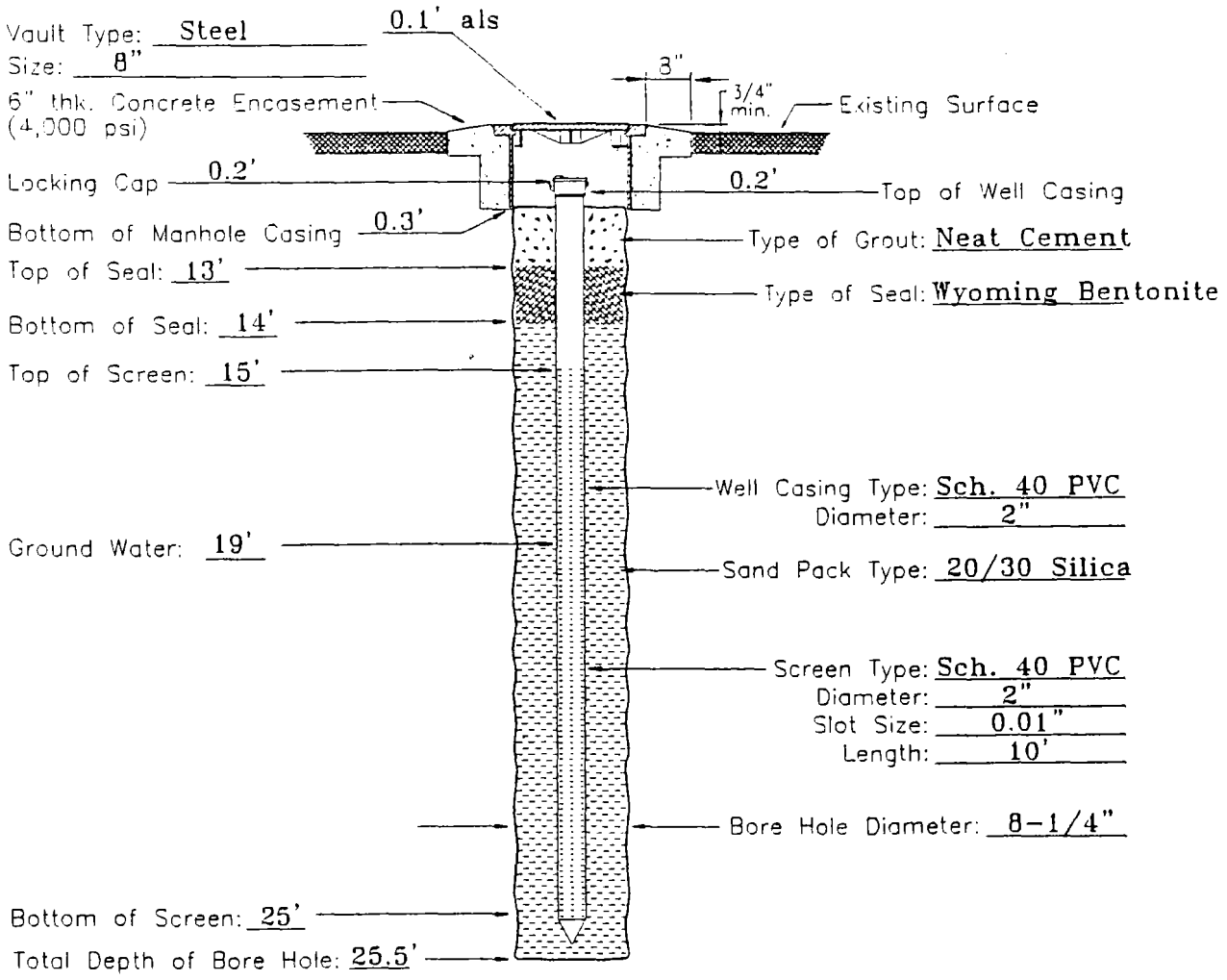
MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 10/22/96 Finish: 10/22/96
TIME Start: 1445 Finish: 1530

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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Environmental Division

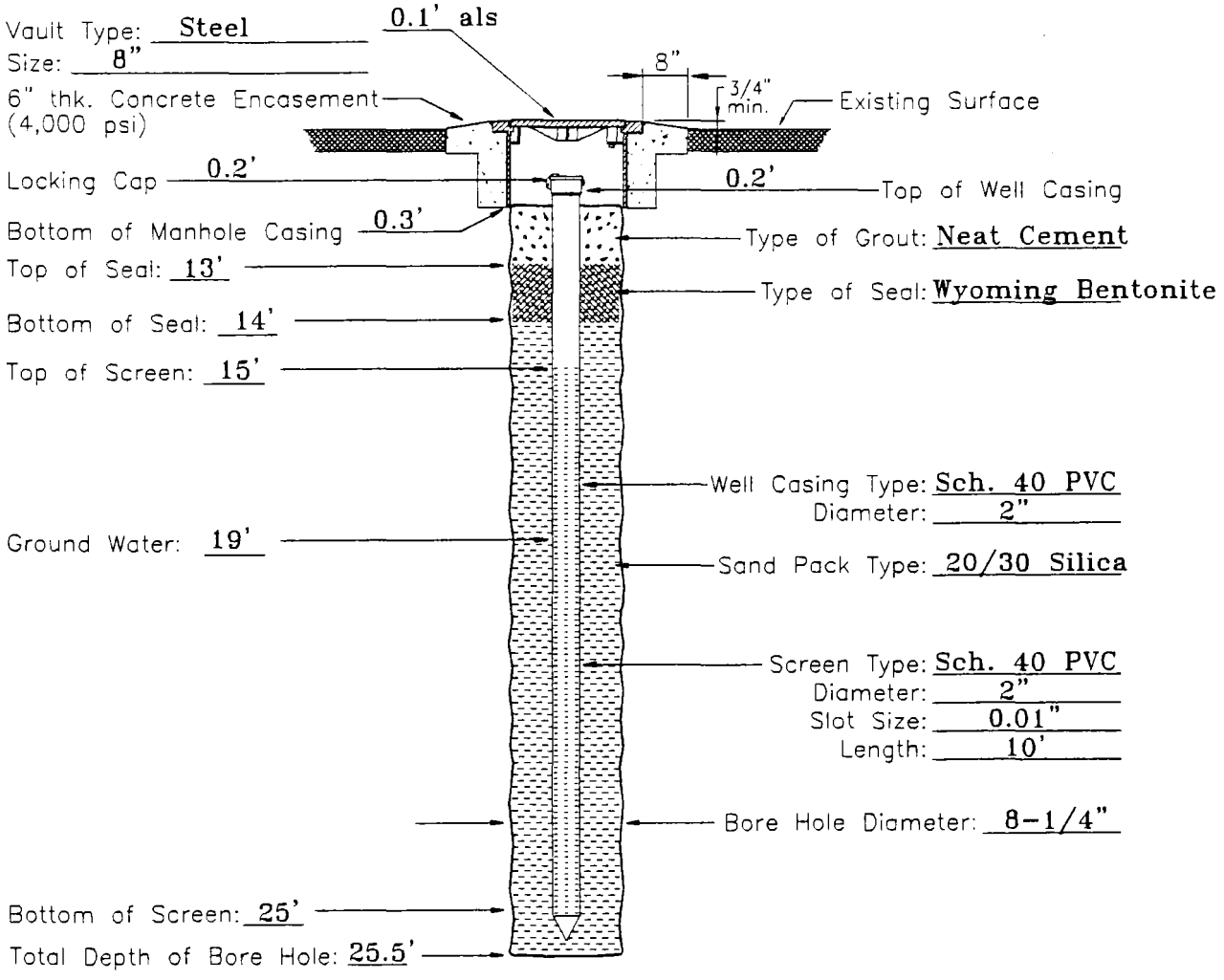
6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 12/10/96 Finish: 12/10/96
TIME Start: 0930 Finish: 1015

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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Environmental Division

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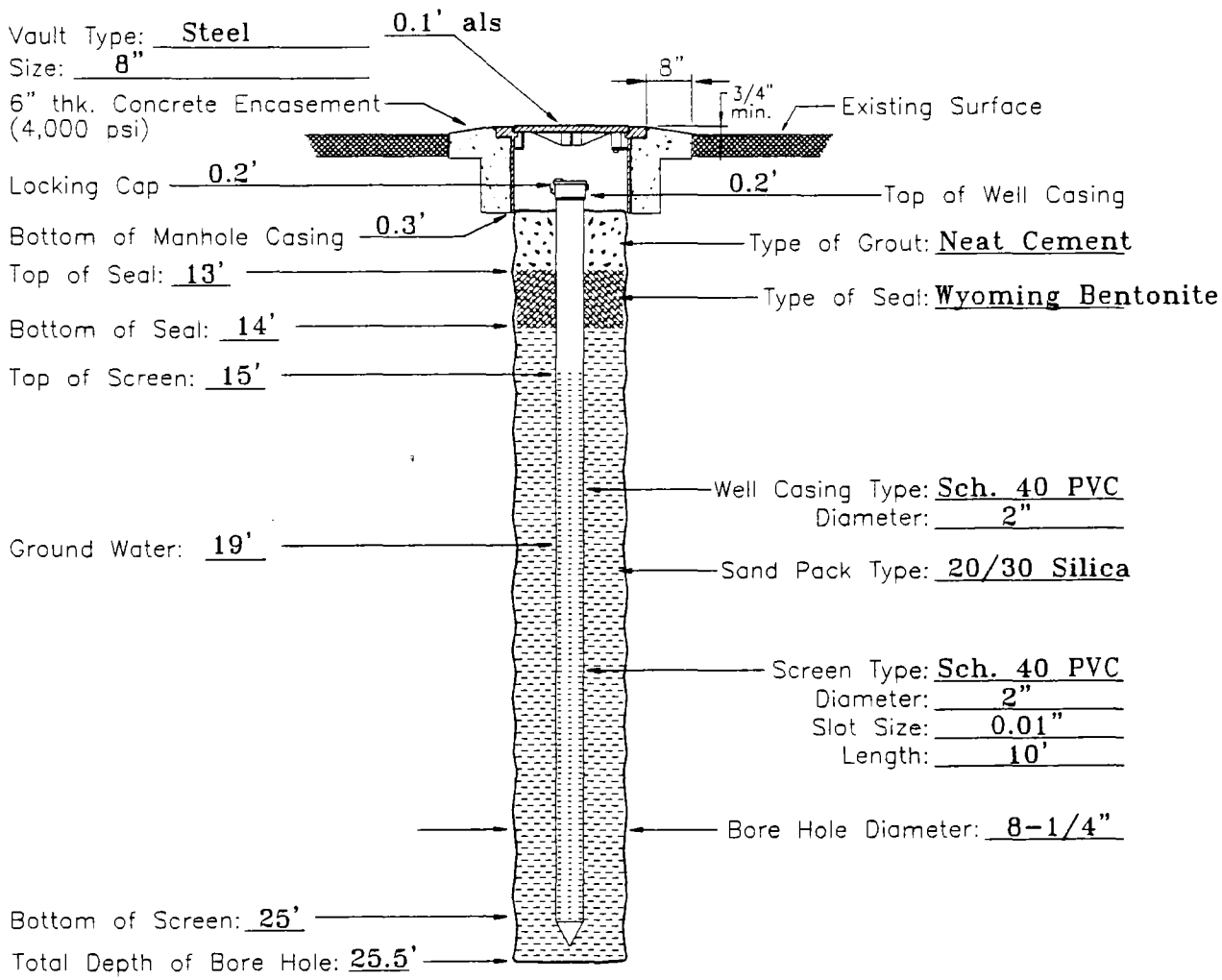
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 12/10/96 Finish: 12/10/96
TIME Start: 1530 Finish: 1630

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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Environmental Division

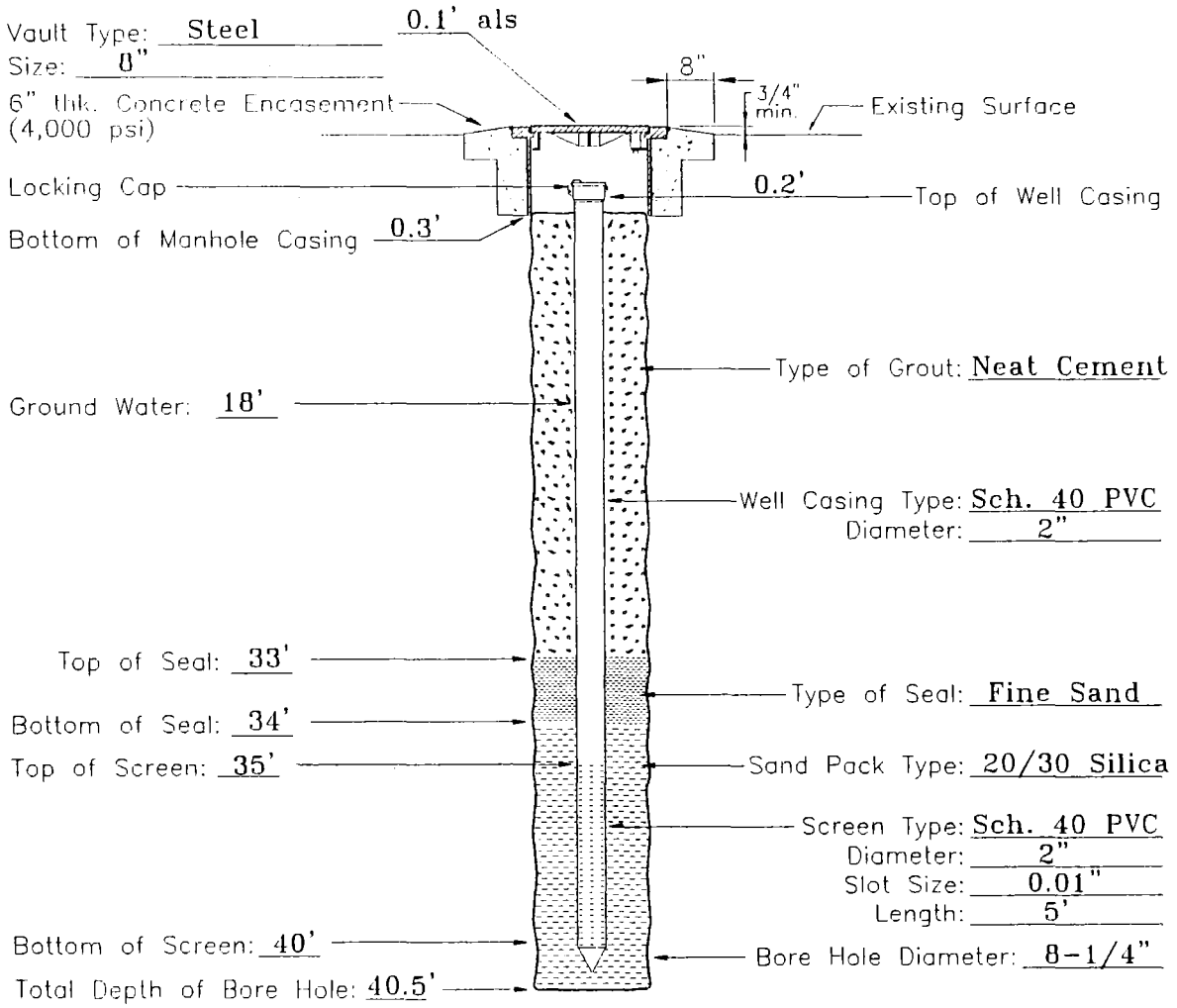
6389 Tower Lane
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

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-34

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1120, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 01/29/97 Finish: 01/29/97
TIME Start: 1000 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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APPENDIX B

SLUG TEST DATA, GRAPHS, AND CALCULATIONS

October 31, 1996

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

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

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

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

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

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

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

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

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

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

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

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,

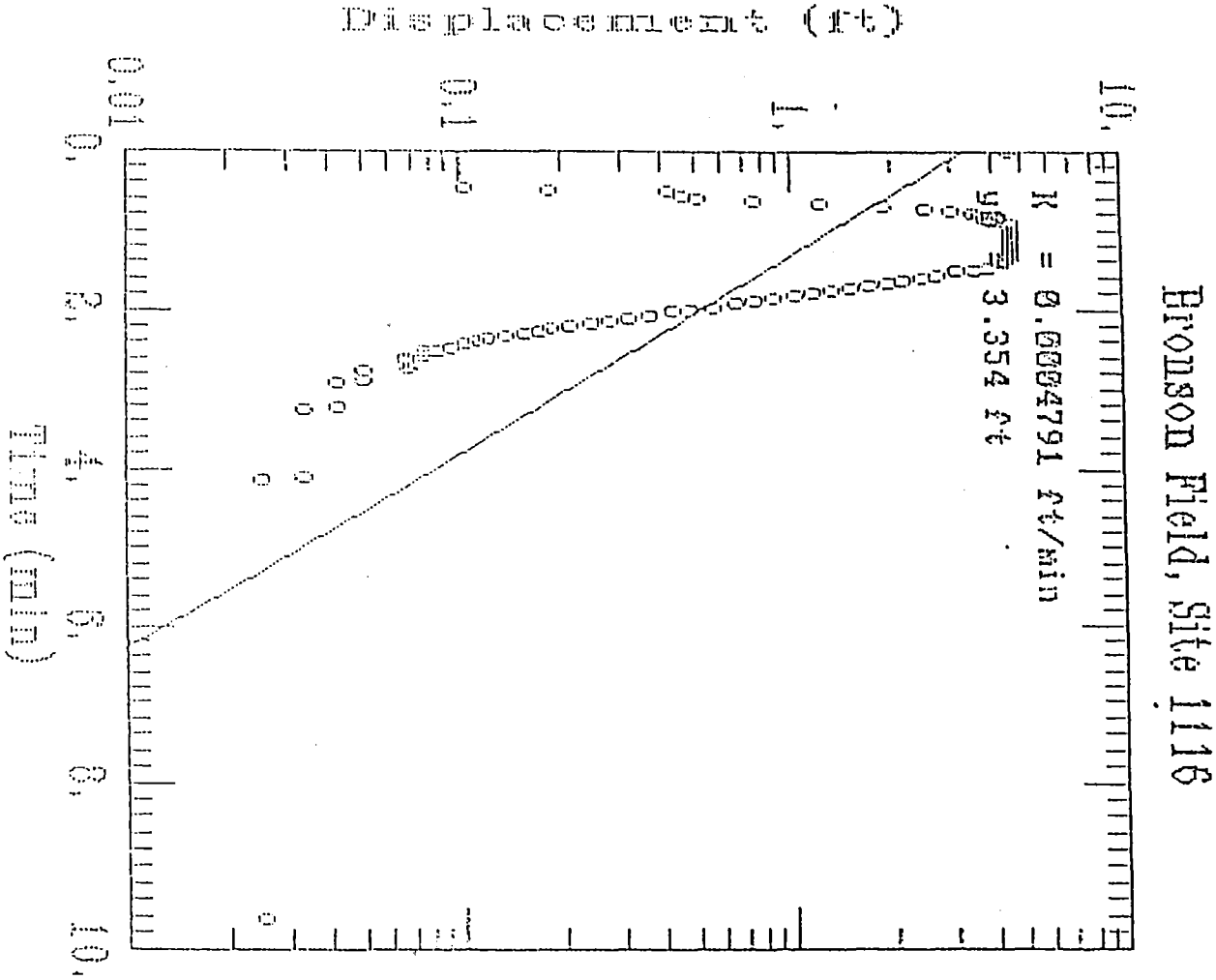
W.E.S., Inc.
Environmental Division

Patrick J. Brown
Staff Geologist

Michael J. Walsh, P.G.
Project Administrator

cc: File

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


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

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

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

Step 1
Interval 00:00:02
Readings 300

Time	Chnl 1						
0.00	+6.4552	1.13	+1.8926	2.27	+6.2863	3.40	+6.4214
0.03	+6.4552	1.17	+1.8926	2.30	+6.3032	3.43	+6.4214
0.07	+6.4552	1.20	+1.8842	2.33	+6.3200	3.47	+6.4214
0.10	+6.4552	1.23	+1.8926	2.37	+6.3369	3.50	+6.4214
0.13	+6.4552	1.27	+1.9010	2.40	+6.3454	3.53	+6.4214
0.17	+6.4552	1.30	+1.8926	2.43	+6.3538	3.57	+6.4214
0.20	+6.4552	1.33	+1.9010	2.47	+6.3623	3.60	+6.4214
0.23	+6.4552	1.37	+1.9010	2.50	+6.3707	3.63	+6.4214
0.27	+6.4552	1.40	+1.9686	2.53	+6.3792	3.67	+6.4214
0.30	+6.4552	1.43	+2.1630	2.57	+6.3792	3.70	+6.4214
0.33	+6.4552	1.47	+2.5263	2.60	+6.3876	3.73	+6.4214
0.37	+6.4552	1.50	+2.9572	2.63	+6.3876	3.77	+6.4214
0.40	+6.4552	1.53	+3.3290	2.67	+6.3961	3.80	+6.4214
0.43	+6.4552	1.57	+3.7008	2.70	+6.3961	3.83	+6.4214
0.47	+6.3538	1.60	+3.9965	2.73	+6.3961	3.87	+6.4214
0.50	+6.2694	1.63	+4.2838	2.77	+6.4045	3.90	+6.4214
0.53	+6.0328	1.67	+4.5288	2.80	+6.4045	3.93	+6.4214
0.57	+5.9905	1.70	+4.7316	2.83	+6.4045	3.97	+6.4214
0.60	+5.9314	1.73	+4.9597	2.87	+6.4045	4.00	+6.4214
0.63	+5.6948	1.77	+5.1371	2.90	+6.4045	4.03	+6.4214
0.67	+5.2365	1.80	+5.2977	2.93	+6.4130	4.07	+6.4214
0.70	+4.5795	1.83	+5.4329	2.97	+6.4130	4.10	+6.4214
0.73	+3.9373	1.87	+5.5765	3.00	+6.4130	4.13	+6.4299
0.77	+3.4557	1.90	+5.6663	3.03	+6.4130	4.17	+6.4299
0.80	+2.9657	1.93	+5.7877	3.07	+6.4130	4.20	+6.4299
0.83	+2.7544	1.97	+5.8807	3.10	+6.4130	4.23	+6.4299
0.87	+2.6023	2.00	+5.9567	3.13	+6.4130	4.27	+6.4299
0.90	+2.2644	2.03	+6.0243	3.17	+6.4130	4.30	+6.4299
0.93	+1.8842	2.07	+6.0835	3.20	+6.4130	4.33	+6.4299
0.97	+1.8842	2.10	+6.1342	3.23	+6.4130	4.37	+6.4299
1.00	+1.8842	2.13	+6.1764	3.27	+6.4214	4.40	+6.4299
1.03	+1.8842	2.17	+6.2102	3.30	+6.4214	4.43	+6.4299
1.07	+1.8926	2.20	+6.2440	3.33	+6.4214	4.47	+6.4299
1.10	+1.9010	2.23	+6.2694	3.37	+6.4214	4.50	+6.4299

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

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

Step 1
Interval 00:00:02
Readings 300

Time	Chnl 1						
4.53	+6.4299	5.67	+6.4299	6.80	+6.4299	7.93	+6.4299
4.57	+6.4299	5.70	+6.4299	6.83	+6.4299	7.97	+6.4299
4.60	+6.4299	5.73	+6.4299	6.87	+6.4299	8.00	+6.4299
4.63	+6.4299	5.77	+6.4299	6.90	+6.4299	8.03	+6.4299
4.67	+6.4299	5.80	+6.4299	6.93	+6.4299	8.07	+6.4299
4.70	+6.4299	5.83	+6.4299	6.97	+6.4299	8.10	+6.4299
4.73	+6.4299	5.87	+6.4299	7.00	+6.4299	8.13	+6.4299
4.77	+6.4299	5.90	+6.4299	7.03	+6.4299	8.17	+6.4299
4.80	+6.4299	5.93	+6.4299	7.07	+6.4299	8.20	+6.4299
4.83	+6.4299	5.97	+6.4299	7.10	+6.4299	8.23	+6.4299
4.87	+6.4299	6.00	+6.4299	7.13	+6.4299	8.27	+6.4299
4.90	+6.4299	6.03	+6.4299	7.17	+6.4299	8.30	+6.4299
4.93	+6.4299	6.07	+6.4299	7.20	+6.4299	8.33	+6.4299
4.97	+6.4299	6.10	+6.4299	7.23	+6.4299	8.37	+6.4299
5.00	+6.4299	6.13	+6.4299	7.27	+6.4299	8.40	+6.4299
5.03	+6.4299	6.17	+6.4299	7.30	+6.4299	8.43	+6.4299
5.07	+6.4299	6.20	+6.4299	7.33	+6.4299	8.47	+6.4299
5.10	+6.4299	6.23	+6.4299	7.37	+6.4299	8.50	+6.4299
5.13	+6.4299	6.27	+6.4299	7.40	+6.4299	8.53	+6.4299
5.17	+6.4299	6.30	+6.4299	7.43	+6.4299	8.57	+6.4299
5.20	+6.4299	6.33	+6.4299	7.47	+6.4299	8.60	+6.4299
5.23	+6.4299	6.37	+6.4299	7.50	+6.4299	8.63	+6.4299
5.27	+6.4299	6.40	+6.4299	7.53	+6.4299	8.67	+6.4299
5.30	+6.4299	6.43	+6.4299	7.57	+6.4299	8.70	+6.4299
5.33	+6.4299	6.47	+6.4299	7.60	+6.4299	8.73	+6.4299
5.37	+6.4299	6.50	+6.4299	7.63	+6.4299	8.77	+6.4299
5.40	+6.4299	6.53	+6.4299	7.67	+6.4299	8.80	+6.4299
5.43	+6.4299	6.57	+6.4299	7.70	+6.4299	8.83	+6.4299
5.47	+6.4299	6.60	+6.4299	7.73	+6.4299	8.87	+6.4299
5.50	+6.4299	6.63	+6.4299	7.77	+6.4299	8.90	+6.4299
5.53	+6.4299	6.67	+6.4299	7.80	+6.4299	8.93	+6.4299
5.57	+6.4299	6.70	+6.4299	7.83	+6.4299	8.97	+6.4299
5.60	+6.4299	6.73	+6.4299	7.87	+6.4299	9.00	+6.4299
5.63	+6.4299	6.77	+6.4299	7.90	+6.4299	9.03	+6.4299

S/N SD5E-03A-SN-3098 Block 1

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

Step 1
Interval 00:00:02
Readings 300

Time	Chnl 1				
7.97	+6.4299	9.10	+6.4299	9.60	+6.4299
8.00	+6.4299	8.50	+6.4299	9.63	+6.4299
8.03	+6.4299	8.53	+6.4299	test 1 aborted at Step 1	
8.07	+6.4299	8.57	+6.4299		
8.10	+6.4299	8.60	+6.4299		
8.13	+6.4299	8.63	+6.4299		
8.17	+6.4299	8.67	+6.4299		
8.20	+6.4299	8.70	+6.4299		
8.23	+6.4299	8.73	+6.4299		
8.27	+6.4299	8.77	+6.4299		
8.30	+6.4299	8.80	+6.4299		
8.33	+6.4299	8.83	+6.4299		
8.37	+6.4299	8.87	+6.4299		
8.40	+6.4299	8.90	+6.4299		
8.43	+6.4299	8.93	+6.4299		
8.47	+6.4299	8.97	+6.4299		
8.50	+6.4299	9.00	+6.4299		
8.53	+6.4299	9.03	+6.4299		
8.57	+6.4299	9.07	+6.4299		
8.60	+6.4299	9.10	+6.4299		
8.63	+6.4299	9.13	+6.4299		
8.67	+6.4299	9.17	+6.4299		
8.70	+6.4299	9.20	+6.4299		
8.73	+6.4299	9.23	+6.4299		
8.77	+6.4299	9.27	+6.4299		
8.80	+6.4299	9.30	+6.4299		
8.83	+6.4299	9.33	+6.4299		
8.87	+6.4299	9.37	+6.4299		
8.90	+6.4299	9.40	+6.4299		
8.93	+6.4299	9.43	+6.4299		
8.97	+6.4299	9.47	+6.4299		
9.00	+6.4299	9.50	+6.4299		
9.03	+6.4299	9.53	+6.4299		
9.07	+6.4299	9.57	+6.4299		

October 31, 1996

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

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

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• 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

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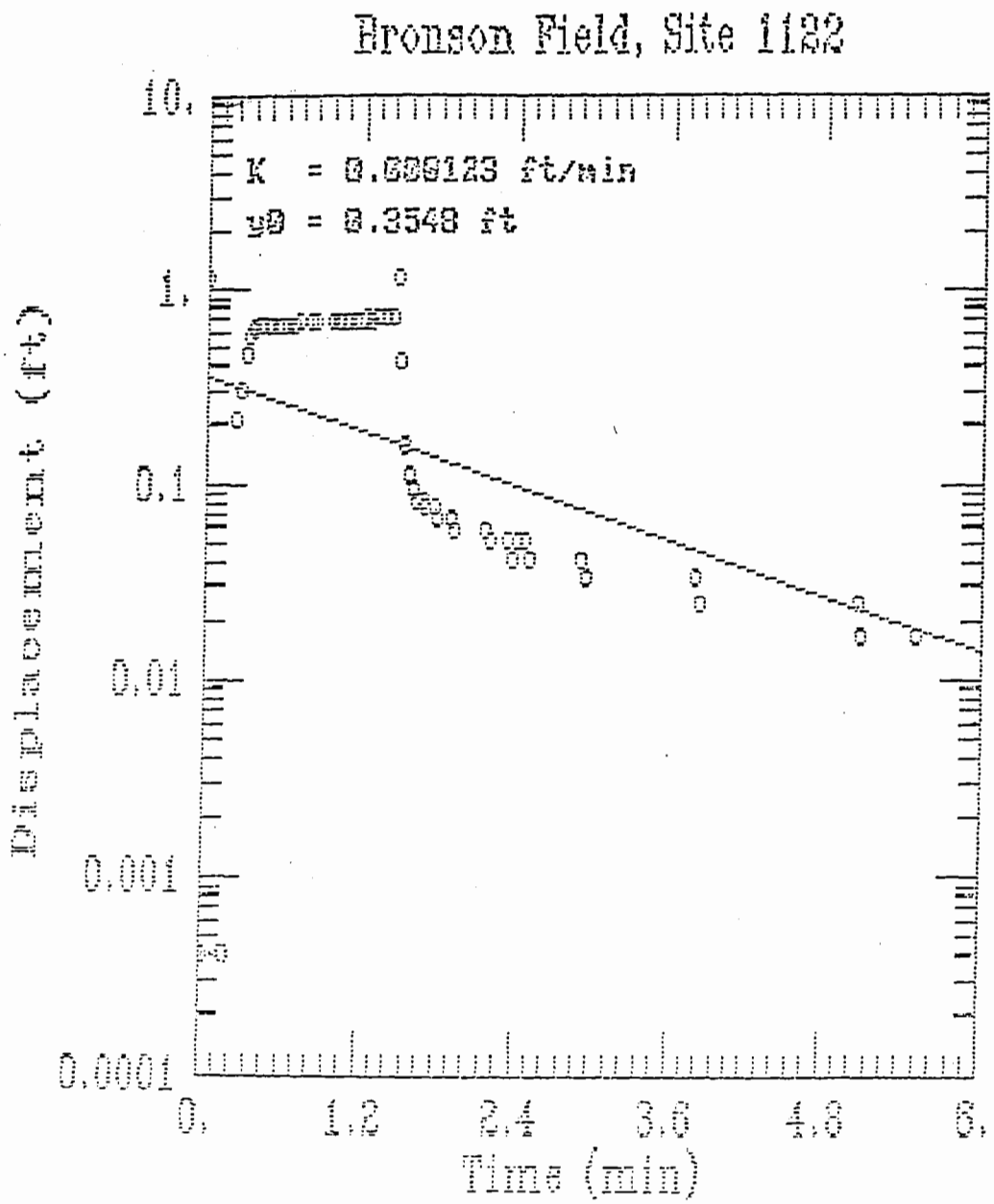
Bronson Field, Site 1122
K = 0.009123 ft/min
y0 = 0.3548 ft
10.
1.
0.1
0.01
0.001
0.0001
Displacement (ft)
0.
1.2
2.4
3.6
4.8
6.
Time (min)

C/N SDEE-03A-SN-3000 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	+6.9675	2.67	+7.1058	3.80	+7.1143
0.43	+6.4975	1.57	+7.0382	2.70	+7.1058	3.83	+7.1227
0.47	+6.4975	1.60	+7.0551	2.73	+7.1058	3.87	+7.1227
0.50	+6.4890	1.63	+7.0636	2.77	+7.1058	3.90	+7.1227
0.53	+6.4890	1.67	+7.0636	2.80	+7.1058	3.93	+7.1227
0.57	+6.4890	1.70	+7.0720	2.83	+7.1058	3.97	+7.1227
0.60	+6.4806	1.73	+7.0720	2.87	+7.1058	4.00	+7.1227
0.63	+6.4806	1.77	+7.0720	2.90	+7.1058	4.03	+7.1227
0.67	+6.4806	1.80	+7.0805	2.93	+7.1143	4.07	+7.1227
0.70	+6.4721	1.83	+7.0805	2.97	+7.1143	4.10	+7.1227
0.73	+6.4721	1.87	+7.0805	3.00	+7.1143	4.13	+7.1227
0.77	+6.4721	1.90	+7.0805	3.03	+7.1143	4.17	+7.1227
0.80	+6.4721	1.93	+7.0889	3.07	+7.1143	4.20	+7.1227
0.83	+6.4637	1.97	+7.0889	3.10	+7.1143	4.23	+7.1227
0.87	+6.4637	2.00	+7.0889	3.13	+7.1143	4.27	+7.1227
0.90	+6.4637	2.03	+7.0889	3.17	+7.1143	4.30	+7.1227
0.93	+6.4637	2.07	+7.0889	3.20	+7.1143	4.33	+7.1227
0.97	+6.4637	2.10	+7.0889	3.23	+7.1143	4.37	+7.1227
1.00	+6.4552	2.13	+7.0889	3.27	+7.1143	4.40	+7.1227
1.03	+6.4552	2.17	+7.0889	3.30	+7.1143	4.43	+7.1227
1.07	+6.4637	2.20	+7.0974	3.33	+7.1143	4.47	+7.1227
1.10	+6.4637	2.23	+7.0974	3.37	+7.1143	4.50	+7.1227

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

Program: STEP TEST
Readings: 160
Start Time: 15:43:04
Start Date: 09/11
Range: 0015 PSI
Channels: 1
Units: Ft-H2O

Step 1
Interval 00:00:02
Readings 300

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

Test 1 aborted at Step 1

October 31, 1996

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

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

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

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

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

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

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

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

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

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

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

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

Sincerely,

W.E.S., Inc.
Environmental Division

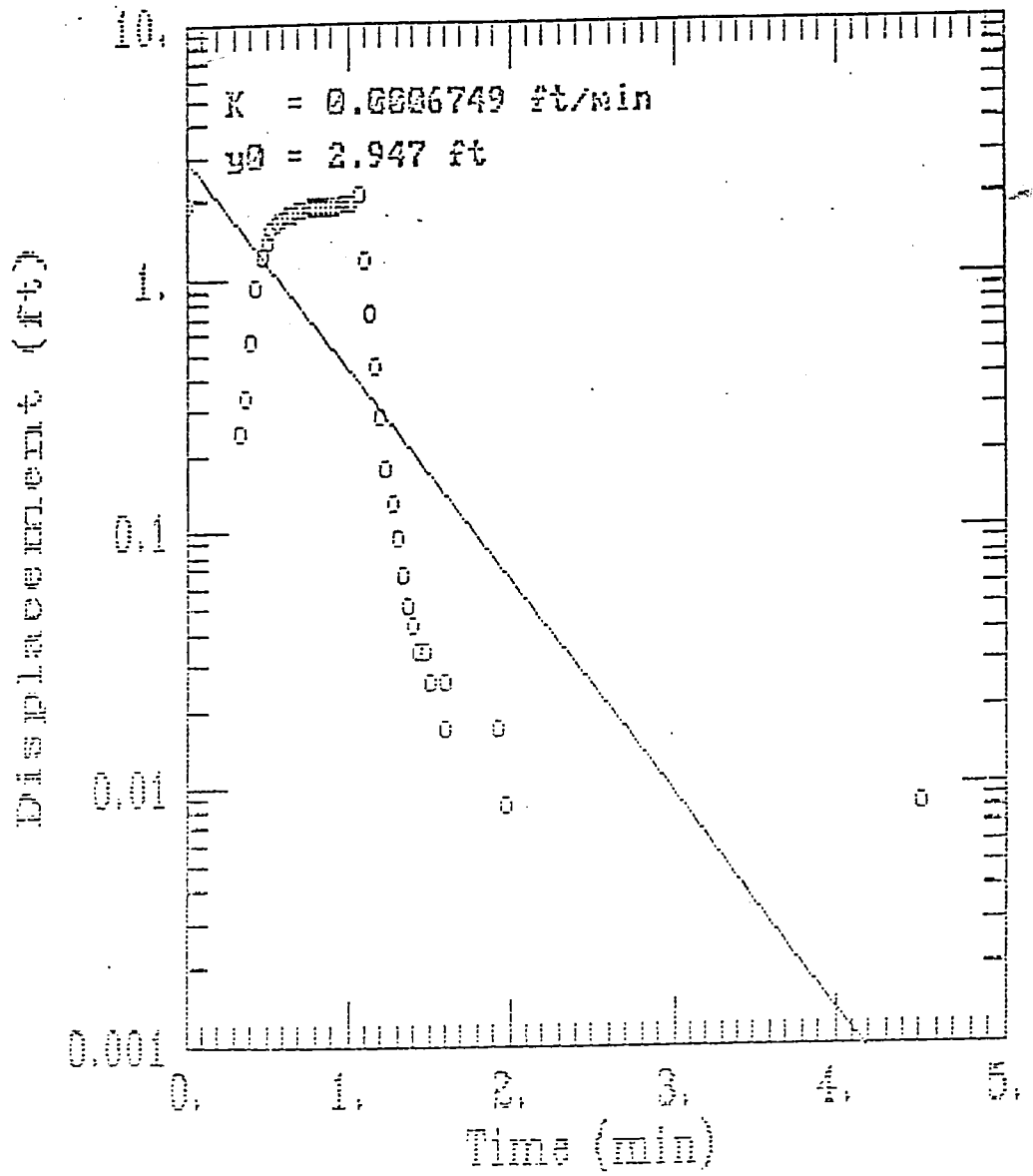
Patrick J. Brown
Staff Geologist

Michael J. Walsh, P.G.
Project Administrator

cc: File

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

Bronson Field, Site 1140 NE



AQTESOLV

GERAGHTY & MILLER, INC.

Modeling Group

SMT 8000E-03A-SH-3098 Block 1

Program: STEP TEST
Readings: 139
Start Time: 14:43:37
Start Date: 03/11
Range: 0015 PSI
Channels: 1
Units: FH2O

Step 1
Interval 00:00:02
Readings 300

Time	Chnl 1						
0.00	+5.9145	1.13	+5.2047	2.27	+5.9060	3.40	+5.9060
0.03	+5.9145	1.17	+5.4751	2.30	+5.9060	3.43	+5.9060
0.07	+5.9145	1.20	+5.6357	2.33	+5.9060	3.47	+5.9060
0.10	+5.9145	1.23	+5.7370	2.37	+5.9060	3.50	+5.9060
0.13	+5.9145	1.27	+5.7877	2.40	+5.9060	3.53	+5.9060
0.17	+5.9145	1.30	+5.8215	2.43	+5.9060	3.57	+5.9060
0.20	+5.9145	1.33	+5.8468	2.47	+5.9060	3.60	+5.9060
0.23	+5.9145	1.37	+5.8638	2.50	+5.9060	3.63	+5.9060
0.27	+5.9145	1.40	+5.8722	2.53	+5.9060	3.67	+5.9060
0.30	+5.9145	1.43	+5.8807	2.57	+5.9060	3.70	+5.9060
0.33	+5.8695	1.47	+5.8807	2.60	+5.9060	3.73	+5.9060
0.37	+5.5785	1.50	+5.8891	2.63	+5.9060	3.77	+5.9060
0.40	+5.3399	1.53	+5.8891	2.67	+5.9060	3.80	+5.9060
0.43	+4.9935	1.57	+5.8891	2.70	+5.9060	3.83	+5.9060
0.47	+4.7147	1.60	+5.8976	2.73	+5.9060	3.87	+5.9060
0.50	+4.5203	1.63	+5.8976	2.77	+5.9060	3.90	+5.9060
0.53	+4.3767	1.67	+5.8976	2.80	+5.9060	3.93	+5.9060
0.57	+4.2569	1.70	+5.8976	2.83	+5.9060	3.97	+5.9060
0.60	+4.1993	1.73	+5.8976	2.87	+5.9060	4.00	+5.9060
0.63	+4.1486	1.77	+5.8976	2.90	+5.9060	4.03	+5.9060
0.67	+4.1232	1.80	+5.8976	2.93	+5.9060	4.07	+5.9060
0.70	+4.0894	1.83	+5.8976	2.97	+5.9060	4.10	+5.9060
0.73	+4.0641	1.87	+5.8976	3.00	+5.9060	4.13	+5.9060
0.77	+4.0472	1.90	+5.8976	3.03	+5.9060	4.17	+5.9060
0.80	+4.0303	1.93	+5.8976	3.07	+5.9060	4.20	+5.9060
0.83	+4.0218	1.97	+5.9060	3.10	+5.9060	4.23	+5.9060
0.87	+4.0049	2.00	+5.9060	3.13	+5.9060	4.27	+5.9060
0.90	+3.9965	2.03	+5.9060	3.17	+5.9060	4.30	+5.9060
0.93	+3.9880	2.07	+5.9060	3.20	+5.9060	4.33	+5.9060
0.97	+3.9796	2.10	+5.9060	3.23	+5.9060	4.37	+5.9060
1.00	+3.9711	2.13	+5.9060	3.27	+5.9060	4.40	+5.9060
1.03	+3.9627	2.17	+5.9060	3.30	+5.9060	4.43	+5.9060
1.07	+3.9106	2.20	+5.9060	3.33	+5.9060	4.47	+5.9060
1.10	+4.7400	2.23	+5.9060	3.37	+5.9060	4.50	+5.9060

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

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

Step 1
Interval 00:00:02
Readings 300

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

Test 1 aborted at Step 1

APPENDIX C

LITHOLOGIC LOG

LOG OF MONITORING WELL

Project Name: Bronson Field

Job # P95-25537

Location: 1120

Facility: NAS

Start Date/Time: 5/24/95

MW Number: MW7

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: 17'

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	2" pvc riser	
							Brown fine to med grained sand	Grout	
							1'		
5								Bentonite Seal	
10							Tan fine to med grained sand	0.010 slotted Screen	
			Y	120	N			16/40 silica Sand	
15	X		Y						
							17' End of Boring		
20									
25									

C-1

WELL SAMPLE RECORD

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

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

WELL I.D.	DEPTH TO WATER (FT. BMP)	TOTAL WELL DEPTH (FT. BMP)	WELL TYPE AND DIAMETER	WATER VOLUME IN WELL (GAL.)	PURGE RATE (GPM)	DURATION OF PURGING (MIN.)	VOLUME PURGED (GAL.)	PURGE METHOD	METHOD OF SAMPLE COLLECTION	DATE OF SAMPLE COLLECTION	TIME OF SAMPLE COLLECTION	SAMPLE TEMP. (°C)	SAMPLE PH / ODOR	SAMPLE CONDUCTIVITY UMHOS/CM	COMMENTS (ODOR, COLOR, ETC.)
MW1	15.5	24.3	2" pvc	1.5	~0.5	15	~8	C	TB	5/30/95	1220		None		*In lieu of temp,
MW2	14.1	25.15		1.9		13	~10				1230		Slight petro		pH and Conductivity
MW3	14.8	24.85		1.7		20	~10				1235		None		all 18 wells were
MW4	13.12	24.6		1.95		14	~10				1237		None		purged 5 volumes
MW5	14.35	24.6		1.74		19	~9				1248		None		
MW6	7.00	14.8		1.32		9	~7				1355		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 1120	LOGGED BY: Victor A. Spooner, P.G.	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW2	Start Date: 03/28/96	Completed: 03/29/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1405	Finish Time: 0815 (pad/cover)
Delivery Order 0012	Contract No. N65114-95-D-2126	CONTAMINATION DATA

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HSA				100%	0	0' - 14': Tan/Grey/White, Silty (qtz), Sand (v. fine - fine); No Odors/Sheens; OVA Cuttings Above Water Table = 0 ppm.	0	NR	0
				100%	4		0	NR	0
				100%	8		0	NR	0
				100%	12		0	NR	0
							0	NR	0
HA			Water Table @ Approx 15' BLS	100%	16	14' - 16': Grey, Clayey (10%), Silty (qtz), Quartz Sand (v. fine - fine); Petroleum Odor Detected In Cuttings Below Water Table; OVA = 30 ppm.	30		30
				100%	20	16' - 24': Tan/White, Silty (qtz), Sand (v. fine - fine); Grain Size Range Increasing With Depth (to v. fine - coarse). End of Boring @ 24' BLS	30	NR	30

I certify that this lithologic log, including geologic and hydrogeologic interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Prepared by: Victor A. Spooner, P.G., C.P.G
Florida Professional Geologist No. 0001615

Date 03/29/96

Site 1120	LOGGED BY: Victor A. Spooner, P.G.	SHEET 1 OF 1	
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobile B61HDX
MONITORING WELL NO.: MW3	Start Date: 03/28/96	Completed:	03/29/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1420	Finish Time:	0830 (pad/cover)
Delivery Order 0012	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HSA HA				100%	0	0' - 14': Tan/Grey/White, Silty (qtz), Sand (v. fine - fine); No Odors/Sheens; OVA Cuttings Above Water Table = 0 ppm.	0	NR	0
				100%	4		0	NR	0
				100%	8		0	NR	0
				100%	12		0	NR	0
			Water Table @ Approx 15' BLS	100%	16	14' - 16': Grey, Clayey (10%), Silty (qtz), Quartz Sand (v. fine - fine); Petroleum Odor Detected In Cuttings Below Water Table; OVA = 60 ppm.	60		60
				100%	20	16' - 24': Tan/White, Silty (qtz), Sand (v. fine - fine); Grain Size Range Increasing With Depth (to v. fine - coarse). End of Boring @ 24' BLS	60	NR	60

I certify that this lthologic log, including geologic and hydrogeologic interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Prepared by: Victor A. Spooner, P.G., C.P.G
Florida Professional Geologist No. 0001615

Date 03/29/96

Site 1120	LOGGED BY: Victor A. Spooner, P.G.	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW4	Start Date: 03/28/96	Completed: 03/29/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1445	Finish Time: 0845 (pad/cover)
Delivery Order 0012	Contract No. N65114-95-D-2126	CONTAMINATION DATA

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HSA				100%	0	0' - 14': Tan/Grey/White, Silty (qtz), Sand (v. fine - fine); No Odors/Sheens; OVA Cuttings Above Water Table = 0 ppm.	0	NR	0
				100%	4		0	NR	0
				100%	8		0	NR	0
				100%	12		0	NR	0
							0	NR	0
HA			Water Table @ Approx 15' BLS	100%	16	14' - 16': Grey, Clayey (10%), Silty (qtz), Quartz Sand (v. fine - fine); Petroleum Odor Detected In Cuttings Below Water Table; OVA =70 ppm.	70		70
				100%	20	16' - 23': Tan/White, Silty (qtz), Sand (v. fine - fine); Grain Size Range Increasing With Depth (to v. fine - coarse). End of Boring @ 23' BLS	70	NR	70

I certify that this lithologic log, including geologic and hydrogeologic interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Prepared by: Victor A. Spooner, P.G., C.P.G
Florida Professional Geologist No. 0001615

Date 03/29/96

Site 1120	LOGGED BY: Victor A. Spooner, P.G.	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW5	Start Date: 03/28/96	Completed: 03/29/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1535	Finish Time: 0900 (pad/cover)
Delivery Order 0012	Contract No. N65114-95-D-2126	CONTAMINATION DATA

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HSA				100%	0	0' - 14': Tan/Grey/White, Silty (qtz), Sand (v. fine - fine); No Odors/Sheens; OVA Cuttings Above Water Table = 0 ppm.	0	NR	0
				100%	4		0	NR	0
				100%	8		0	NR	0
				100%	12		0	NR	0
							0	NR	0
HA			Water Table @ Approx 15' BLS	100%	16	14' - 16': Grey, Clayey (10%), Silty (qtz), Quartz Sand (v. fine - fine); Petroleum Odor Detected In Cuttings Below Water Table; OVA =40 ppm.	40		40
				100%	20	16' - 23': Tan/White, Silty (qtz), Sand (v. fine - fine); Grain Size Range Increasing With Depth (to v. fine - coarse). End of Boring @ 23' BLS	40	NR	40

I certify that this lthologic log, including geologic and hydrogeologic interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Prepared by: Victor A. Spooner, P.G., C.P.G
Florida Professional Geologist No. 0001615

Date 03/29/96

Site 1120	LOGGED BY: Victor A. Spooner, P.G.	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW6	Start Date: 03/28/96	Completed: 03/29/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1625	Finish Time: 0930 (pad/cover)
Delivery Order 0012	Contract No. N65114-95-D-2126	CONTAMINATION DATA

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HSA HA				100%	0	0' - 14': Tan/Grey/White, Silty (qtz), Sand (v. fine - fine); No Odors/Sheens; OVA Cuttings Above Water Table = 0 ppm.	0	NR	0
				100%	4		0	NR	0
							0	NR	0
				100%	8				
							0	NR	0
				100%	12		0	NR	0
			Water Table @ Approx 15' BLS			14' - 16': Grey, Clayey (10%), Silty (qtz), Quartz Sand (v. fine - fine);			
				100%	16	Petroleum Odor Detected In Cuttings Below Water Table; OVA =40 ppm.	40		40
						16' - 23': Tan/White, Silty (qtz), Sand (v. fine - fine); Grain Size Range	40	NR	40
				100%	20	Increasing With Depth (to v. fine - coarse). End of Boring @ 23' BLS			

I certify that this lithologic log, including geologic and hydrogeologic interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

Prepared by: Victor A. Spooner, P.G., C.P.G
Florida Professional Geologist No. 0001615

Date 03/29/96

Site 1120	LOGGED BY: Patrick Brown	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW-7	Start Date: 05/14/96	Completed: 05/14/96
	Start Time: 1015	Finish Time: 1100
Delivery Order 0019	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%	0	0'-1'; Humus, Brown Fine Grained Sand w/organics.	0	NR	0
				100%	4		0	NR	0
						1'-13'; Brown Silty Fine Grained Sand	0	NR	0
HOLLOW STEM AUGER				100%	8	Trace of Clay.			
							0	NR	0
				100%	12				
						13'-19'; Dark Brown /Tan Clayey; Fine Grained Sand.	0	NR	0
			Water Table @ Approx 14' BLS						
				100%	16				
				100%	20	19'-23'; Light Brown Medium Grained Sand becoming Light Grey with Depth; Less Clay. Petroleum odor @ 20'.			
						End of Boring @ 23' BLS			
					24				

I certify that this lthologic log, including geologic and hydrogeologic interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida 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 1120	LOGGED BY: Patrick Brown	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW-8	Start Date: 05/14/96	Completed: 05/14/96
	Start Time: 1100	Finish Time: 1145
Delivery Order 0019	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.				100%	0	0'-1'; Humus, Brown Fine			
H.						Grained Sand w/organics.	0	NR	0
				100%	4		0	NR	0
						1'-13'; Brown Silty Fine Grained Sand	0	NR	0
H				100%	8	Trace of Clay.			
O									
L							0	NR	0
L									
O									
W				100%	12				
						13'-19'; Dark Brown /Tan Clayey; Fine	0	NR	0
S			Water Table @ Approx 14' BLS			Grained Sand.			
T									
E				100%	16				
M						19'-23'; Light Brown Medium			
						Grained Sand becoming			
A						Light Grey with Depth.			
U				100%	20				
G									
E									
R						End of Boring @ 23' BLS			
					24				

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

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Site 1120	LOGGED BY: Patrick Brown	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW-9	Start Date: 05/14/96	Completed: 05/14/96
	Start Time: 1145	Finish Time: 1230
Delivery Order 0019	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%	0	0'-1'; Humus, Brown Fine Grained Sand w/organics.	0	NR	0
				100%	4		0	NR	0
HOLLOW STEM AUGER				100%	8	1'-13'; Lt. Brown Silty Fine Grained Sand Trace of Clay.	0	NR	0
							0	NR	0
				100%	12				
			Water Table @ Approx 14' BLS			13'-19'; Dark Brown Clayey, Fine Grained Sand.	0	NR	0
				100%	16				
				100%	20	19'-23'; Light Brown Medium Grained Sand becoming Grey/Blue with Depth; Trace of Clay.			
						End of Boring @ 23' BLS			
					24				

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Site 1120	LOGGED BY: Patrick Brown	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW-10	Start Date: 05/14/96	Completed: 05/14/96
	Start Time: 1345	Finish Time: 1430
Delivery Order 0019	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%	0	0'-1'; Humus, Brown Fine Grained Sand w/organics.	0	NR	0
				100%	4		0	NR	0
HOLLOW STEM AUGER				100%	8	1'-13'; Lt. Brown Silty Fine Grained Sand Trace of Clay.	0	NR	0
				100%	12		0	NR	0
			Water Table @ Approx 14' BLS			13'-19'; Dark Brown Clayey, Fine Grained Sand.	0	NR	0
				100%	16				
				100%	20	19'-22'; Light Brown Medium Grained Sand becoming Grey/Blue with Depth; Trace of Clay.			
						End of Boring @ 22' BLS			
					24				

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Site 1120	LOGGED BY: Patrick Brown	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW-11	Start Date: 05/14/96	Completed: 05/14/96
	Start Time: 1430	Finish Time: 1515
Delivery Order 0019	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.				100%	0	0'-1'; Humus, Brown Fine			
H.						Grained Sand w/organics.	0	NR	0
				100%	4		0	NR	0
H									
O						1'-10'; Brown Silty Fine Grained Sand.	0	NR	0
L				100%	8				
L							0	NR	0
O									
W						10'-14'; Dark Brown Clayey, Fine Grained			
				100%	12	Sand.			
S							0	NR	0
T			Water Table @ Approx 14' BLS						
E						14'-17'; Blue/Grey Fine Grained Sand;			
M				100%	16	Trace of Clay.			
A									
U						17'-22'; Tan Fine-Medium			
G				100%	20	Grained Sand.			
E									
R						End of Boring @ 22' BLS			
					24				

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Site 1120	LOGGED BY: Patrick Brown	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW-12	Start Date: 05/14/96	Completed: 05/14/96
	Start Time: 1515	Finish Time: 1600
Delivery Order 0019	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%	0	0'-1'; Humus, Brown Fine Grained Sand w/organics	0	NR	0
↓				100%	4		0	NR	0
HOLLOW STEM AUGER				100%	8	1'-10'; Brown Silty Fine Grained Sand.	0	NR	0
							0	NR	0
				100%	12	10'-14'; Dark Brown Clayey, Fine Grained Sand.	0	NR	0
			Water Table @ Approx 14' BLS						
				100%	16	14'-17'; Blue/Grey Fine Grained Sand; Trace of Clay.			
				100%	20	17'-22'; White/Blue Medium Grained Sand.			
						End of Boring @ 22' BLS			
					24				

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Site 1120	LOGGED BY: Patrick Brown	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW-13	Start Date: 05/15/96	Completed: 05/15/96
	Start Time: 945	Finish Time: 1030
Delivery Order 0019	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
P. H.				100%	0	0'-1'; Humus, Brown Fine Grained Sand w/organics.	0	NR	0	
				100%	4		0	NR	0	
HOLLOW STEM AUGER				100%	8	1'-13'; Lt. Brown, Silty Fine Grained Sand.	0	NR	0	
				100%	12	13'-15'; Dark Brown Clayey, Fine Grained Sand.	0	NR	0	
			Water Table @ Approx 14' BLS				0	NR	0	
				100%	16	15'-17'; Blue/Grey Fine Grained Sand; Trace of Clay.				
				100%	20	20-23'; White Coarse Grained Sand.				
						End of Boring @ 23' BLS				
					24					

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Site 1120	LOGGED BY: Stoney L. Pope	SHEET 1 OF 1	
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobile B61HDX
MONITORING WELL NO.: MW14	Start Date: 07/31/96	Completed:	07/31/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1405	Finish Time:	1425
Delivery Order 0026	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HSA				100%	0	0' - 4': Medium Brown Silty (qtz) Sand; No Odors/Sheens; OVA Cuttings Above Water Table = 0 ppm.	0	NR	0
				100%	4	4' - 7': Medium Brown Silty (qtz) Sand;	0	NR	0
				100%	8	7' - 10': Light Brown to Tan Silty (qtz) Sand;	0	NR	0
						10' - 13': Light Tan Silty (qtz) Sand;	0	NR	0
				100%	12	13' - 14': Tan to Copper Silty (qtz) Sand; 14' - 22': Copper to Gray Silty (qtz) Sand;	0	NR	0
HA			Water Table @ Approx 15' BLS	100%	16	Petroleum Odor Detected In Cuttings Below Water Table; End of Boring @ 24' BLS			
				100%	20				

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Florida Professional Geologist No. 0001181

Date: 08/19/96

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

Site 1120	LOGGED BY: Stoney L. Pope	SHEET 1 OF 1	
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobile B61HDX
MONITORING WELL NO.: MW15	Start Date: 07/31/96	Completed:	07/31/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1435	Finish Time:	1455
Delivery Order 0026	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NET	NOTES
POST HOLE HSA				100%	0	0' - 2': Red Silty (qtz) Sand; No Odors; OVA Cuttings Above Water Table	0	NR	0	
						2' - 4': Red to Tan Silty (qtz) Sand;				
				100%	4	4' - 7': Tan Silty (qtz) Sand;	0	NR	0	
						7' - 10': Tan / Copper Silty (qtz) Sand;	0	NR	0	
				100%	8					
						10' - 13': Lt Tan / Cream Silty (qtz) Sand;	0	NR	0	
				100%	12					
						13' - 14': Tan / White Silty (qtz) Sand;	0	NR	0	
						14' - 22': White / Gray Silty (qtz) Sand;				
			Water Table @ Approx 15' BLS			Petroleum Odor Detected In Cuttings				
				100%	16	Below Water Table;				
						End of Boring @ 22' BLS				
				100%	20					

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PROFESSIONAL GEOLOGIST

C-16

Site 1120	LOGGED BY: Stoney L. Pope	SHEET 1 OF 1	
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobile B61HDX
MONITORING WELL NO.: MW16	Start Date: 07/31/96	Completed:	07/31/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1505	Finish Time:	1525
Delivery Order 0026	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HSA				100%	0	0' - 1': Lt Red / Tan Silty (qtz) Sand; 1' - 2': Tan / Med Brown Silty (qtz) Sand; 2' - 4': Tan Silty (qtz) Sand;	0	NR	0
				100%	4	4' - 5': Tan Silty (qtz) Sand; 5' - 7': Copper Silty (qtz) Sand;	0	NR	0
				100%	8	7' - 11': Cream Silty (qtz) Sand;	0	NR	0
				100%	12	11' - 13': White Silty (qtz) Sand;	0	NR	0
						13' - 18': Copper Silty (qtz) Sand;	0	NR	0
			Water Table @ Approx 15' BLS						
				100%	16				
				100%	20	18' - 22': Copper / Lt Gray Silty (qtz) Sand; Petroleum Odor Detected In Cuttings Below Water Table; End of Boring @ 22' BLS			

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STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

Site 1120	LOGGED BY: Stoney L. Pope	SHEET 1 OF 1	
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobile B61HDX
MONITORING WELL NO.: MW17	Start Date: 08/01/96	Completed:	08/01/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1127	Finish Time:	1154
Delivery Order 0026	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HSA				100%	0	0' - 1': Red / Brown Silty (qtz) Sand; 1' - 2': Med Brown Silty (qtz) Sand; 2' - 8': Tan / Copper Silty (qtz) Sand;	0	NR	0
				100%	4		0	NR	0
							0	NR	0
				100%	8	8' - 10': Lt Tan Silty (qtz) Sand;			
						10' - 15': White Silty (qtz) Sand;	0	NR	0
				100%	12		0	NR	0
HA			Water Table @ Approx 15' BLS	100%	16	15' - 22': White / Lt Gray Silty (qtz) Sand; Petroleum Odor Detected In Cuttings Below Water Table; End of Boring @ 22' BLS			
				100%	20				

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

Date: 08/19/96

Site 1120	LOGGED BY: Stoney L. Pope	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW18	Start Date: 08/01/96	Completed: 08/01/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1205	Finish Time: 1230
Delivery Order 0026	Contract No. N65114-95-D-2126	CONTAMINATION DATA

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NET	NOTES
POST				100%	0	0' - 1': Red / Tan Silty (qtz) Sand; 1' - 8': Tan / Copper Silty (qtz) Sand;	0	NR	0	
HOLE				100%	4		0	NR	0	
						7' - 15': Lt Tan Silty (qtz) Sand;	0	NR	0	
				100%	8					
HSA							0	NR	0	
				100%	12		0	NR	0	
HA			Water Table @ Approx 15' BLS			15' - 22': Lt Tan / White Silty (qtz) Sand;				
				100%*	16	Petroleum Odor Detected In Cuttings Below Water Table; End of Boring @ 22' BLS				
				100%	20					

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

Date 08/19/96

Site 1120	LOGGED BY: Stoney L. Pope	SHEET 1 OF 1	
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobile B61HDX
MONITORING WELL NO.: MW19	Start Date: 08/01/96	Completed:	08/01/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1240	Finish Time:	1300
Delivery Order 0026	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST				100%	0	0' - 1': Tan / Lt Brown Silty (qtz) Sand; 1' - 5': Copper Silty (qtz) Sand;	0	NR	0
HOLE				100%	4	5' - 11': Lt Tan Silty (qtz) Sand;	0	NR	0
				100%	8		0	NR	0
HSA				100%	12	7' - 14': Lt Tan / White Silty (qtz) Sand;	0	NR	0
						14' - 22': White Silty (qtz) Sand;	0	NR	0
HA			Water Table @ Approx 15' BLS	100%	16	Petroleum Odor Detected In Cuttings Below Water Table; End of Boring @ 22' BLS			
				100%	20				

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Site 1120	LOGGED BY: Stoney L. Pope	SHEET 1 OF 1	
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobile B61HDX
MONITORING WELL NO.: MW20	Start Date: 08/01/96	Completed:	08/01/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1310	Finish Time:	1335
Delivery Order 0026	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HSA				100%	0	0' - 1': Lt Red / Med Brown Silty (qtz) Sand; 1' - 2': Medium Brown Silty (qtz) Sand; 2' - 4': Tan / Copper Silty (qtz) Sand;	0	NR	0
				100%	4	4' - 5': Copper Silty (qtz) Sand; 5' - 10': Lt Tan Silty (qtz) Sand;	0	NR	0
				100%	8		0	NR	0
				100%	12	10' - 11': Lt Tan / White Silty (qtz) Sand; 11' - 18': White Silty (qtz) Sand;	0	NR	0
			Water Table @ Approx 15' BLS				0	NR	0
HA				100%	16				
				100%	20	14' - 22': Lt Tan Silty (qtz) Sand; Petroleum Odor Detected In Cuttings Below Water Table; End of Boring @ 22' BLS			

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Site 1120	LOGGED BY: Stoney L. Pope	SHEET 1 OF 1	
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobile B61HDX
MONITORING WELL NO.: MW21	Start Date: 08/01/96	Completed:	08/01/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1345	Finish Time:	1415
Delivery Order 0026	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HSA				100%	0	0' - 1': Red Silty (qtz) Sand;			
						1' - 2': Red / Copper Silty (qtz) Sand;	0	NR	0
						2' - 4': Copper Silty (qtz) Sand;			
				100%	4	4' - 5': Copper / Tan Silty (qtz) Sand;	0	NR	0
						5' - 10': Lt Tan Silty (qtz) Sand;			
							0	NR	0
				100%	8				
						10' - 11': White Silty (qtz) Sand;	0	NR	0
						11' - 14': White / Lt Tan Silty (qtz) Sand;			
				100%	12				
							0	NR	0
						14' - 18': Lt Tan Silty (qtz) Sand;			
			Water Table @ Approx 15' BLS						
				100%	16				
						18' - 22': Lt Tan / Copper Silty (qtz) Sand;			
						Petroleum Odor Detected In Cuttings			
				100%	20	Below Water Table;			
						End of Boring @ 22' BLS			

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Site 1120	LOGGED BY: Pat Brown	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW-22	Start Date: 09/18/96	Completed: 09/18/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1300	Finish Time: 1350
Delivery Order 0031	Contract No. N65114-95-D-2126	CONTAMINATION DATA

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HSA				100%	0	0' - 1'; Humus, Brown, Fine Sand	0	NR	0
				100%	4	1'-15'; Red/Brown, Fine to Medium, Silty Sand to Clay	0	NR	0
				100%	8		0	NR	0
				100%	12		0	NR	0
HA			Water Table @ Approx 17' BLS	100%	16	15'-24.5'; increasingly Lighter Brown to White, Coarse Sand with Shell Fragments throughout	0	NR	0
				100%	20	End of Boring @ 24.5' BLS			

I certify that this lithologic log, including geologic and hydrogeologic interpretations, has been prepared under my direct supervision and meets the minimal technical requirements as set forth in Chapter 492 of the Florida Statues.

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

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

10/08/96
Date

Site 1120	LOGGED BY: Pat Brown	SHEET 1 OF 1	
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobile B61HDX
MONITORING WELL NO.: MW-23	Start Date: 09/18/96	Completed:	09/18/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1400	Finish Time:	1440
Delivery Order 0031	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HSA				100%	0	0' - 1'; Humus, Brown, Fine Sand	0	NR	0
				100%	4	1'-15'; Red/Brown, Fine to Medium, Silty Sand to Clay	0	NR	0
				100%	8		0	NR	0
				100%	12		0	NR	0
							0	NR	0
HA			Water Table @ Approx 17' BLS	100%	16	15'-23.5'; increasingly Lighter Brown to White, Coarse Sand with Shell Fragments throughout			
				100%	20	End of Boring @ 23.5' BLS			

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

Date: 10/08/96

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

Site 1120	LOGGED BY: Pat Brown	SHEET 1 OF 1	
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobile B61HDX
MONITORING WELL NO.: MW-24	Start Date: 09/18/96	Completed:	09/18/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1450	Finish Time:	1540
Delivery Order 0031	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NET	NOTES
POST HOLE HSA				100%	0	0' - 1'; Humus, Brown, Fine Sand	0	NR	0	
				100%	4	1'-15'; Red/Brown, Fine to Medium, Silty Sand to Clay	0	NR	0	
							0	NR	0	
				100%	8					
							0	NR	0	
				100%	12					
							0	NR	0	
HA			Water Table @ Approx 17' BLS	100%	16	15'-23.5'; increasingly Lighter Brown to White, Coarse Sand with Shell Fragments throughout				
				100%	20	End of Boring @ 23.5' BLS				

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PROFESSIONAL GEOLOGIST

Prepared by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181
10/08/96
Date

Site 1120	LOGGED BY: Pat Brown	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW-25	Start Date: 09/19/96	Completed: 09/19/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1000	Finish Time: 1050
Delivery Order 0031	Contract No. N65114-95-D-2126	CONTAMINATION DATA

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NET	NOTES
POST HOLE HSA				100%	0	0' - 1'; Humus	0	NR	0	
				100%	4	1'-15'; Red/Brown, Silty, Fine to Medium Sand to Clay	0	NR	0	
				100%	8		0	NR	0	
				100%	12		0	NR	0	
HA			Water Table @ Approx 17' BLS	100%	16	15'-24.5'; increasingly Lighter Brown, Medium, Coarse Sand with Trace of Clay and Small Fungus (< 5%)				
				100%	20	End of Boring @ 24.5' BLS				

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

10/08/96
Date

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

Site 1120	LOGGED BY: Pat Brown	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW-26	Start Date: 09/19/96	Completed: 09/19/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1100	Finish Time: 1145
Delivery Order 0031	Contract No. N65114-95-D-2126	CONTAMINATION DATA

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NET	NOTES
POST HOLE HSA				100%	0	0' - 1'; Humus	0	NR	0	
				100%	4	1'-15'; Red/Brown, Silty, Fine to Medium Sand to Clay	0	NR	0	
				100%	8		0	NR	0	
				100%	12		0	NR	0	
HA			Water Table @ Approx 17' BLS	100%	16	15'-24.5'; increasingly Lighter Brown, Medium, Coarse Sand with Trace of Clay and Small Fungus (< 5%)				
				100%	20	End of Boring @ 24.5' BLS				

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

10/08/96
Date

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

Site 1120	LOGGED BY: Pat Brown	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW-27	Start Date: 10/22/96	Completed: 10/22/9
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1000	Finish Time: 10
Delivery Order 0037	Contract No. N65114-95-D-2126	CONTAMINATION DATA

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NET	NOTES
POST HOLE HSA				100%	2	0' - 1'; Humus, Dark brown with organics	0	NR	0	
						1'-10'; Red/Brown, Silty, Fine sand				
				100%	4					
					6					
				100%	8		0	NR	0	
				100%	10	10-17' ; Lighter to white, Fine sand, Silty with clay traces	0	NR	0	
					12					
				100%	14		0	NR	0	
				100%	16		0	NR	0	
				100%	18	17-23' ; Red/Brown, Med. to coarse silty clay and sand	0	NR	0	
			Water Table @ Approx 19' BLS							
					20					
					22					
					24	23-26' ; Lighter red/brown, Med. light clay w/ sand				
						End of boring @25' BLS				
					26					
					28					
					30					

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Prepared by: Michael J. Walsh, PLORIDA
Florida Professional Geologist No. 0001181

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

10/04/96
Date

Site 1120	LOGGED BY: Pat Brown	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW-28	Start Date: 10/22/96	Completed: 10/22/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1100	Finish Time: 1200
Delivery Order 0037	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%	2	0' - 1'; Humus, Dark brown with organics	0	NR	0
						1'-10'; Red/Brown, Silty, Fine sand			
				100%	4				
					6				
				100%			0	NR	0
					8				
				100%	10	10-17' ; Lighter to white, Fine sand, Silty with clay traces	0	NR	0
					12				
				100%			0	NR	0
					14				
				100%	16		0	NR	0
HA				100%	18	17-23' ; Red/Brown, Med. to coarse silty clay and sand	0	NR	0
			Water Table @ Approx 19' BLS						
					20				
					22				
					24	23-26' ; Lighter red/brown, Med. light clay w/ sand			
						End of boring @25' BLS			
					26				
					28				
					30				

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Prepared by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181
11/04/96
Date

MICHAEL J. WALSH
PROFESSIONAL LICENSE
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

Site 1120	LOGGED BY: Pat Brown	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW-29	Start Date: 10/22/96	Completed: 10/22/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1245	Finish Time: 1330
Delivery Order 0037	Contract No. N65114-95-D-2126	CONTAMINATION DATA

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HSA HA				100%	2	0' - 1'; Humus, Dark brown with organics	0	NR	0
						1'-10'; Red/Brown, Silty, Fine sand			
				100%	4				
					6				
				100%	8		0	NR	0
				100%	10	10-17' ; Lighter to white, Fine sand, Silty with clay traces	0	NR	0
					12				
				100%	14		0	NR	0
				100%	16		0	NR	0
						17-23' ; Red/Brown, Med. to coarse silty			
				100%	18	clay and sand	0	NR	0
			Water Table @ Approx 19' BLS						
					20				
					22				
						23-26' ; Lighter red/brown, Med. light clay			
					24	w/ sand			
						End of boring @25' BLS			
					26				
					28				
					30				

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

11/04/96
Date

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

Site 1120	LOGGED BY: Pat Brown	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW-30	Start Date: 10/22/96	Completed: 10/22/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1345	Finish Time: 143(
Delivery Order 0037	Contract No. N65114-95-D-2128	CONTAMINATION DATA

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HSA HA									
				100%	2	0' - 1'; Humus, Dark brown with organics	0	NR	0
						1'-10'; Red/Brown, Silty, Fine sand			
				100%	4				
					6				
				100%			0	NR	0
					8				
				100%	10	10-17' ; Lighter to white, Fine sand, Silty with clay traces	0	NR	0
					12				
				100%			0	NR	0
					14				
				100%	16		0	NR	0
						17-23' ; Red/Brown, Med. to coarse silty			
				100%	18	clay and sand	0	NR	0
			Water Table @ Approx 19' BLS						
					20				
					22				
						23-26' ; Lighter red/brown, Med. light clay			
					24	w/ sand			
						End of boring @25' BLS			
					26				
					28				
					30				

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

Prepared by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181
11/04/96
Date

Site 1120	LOGGED BY: Pat Brown	SHEET 1 OF 1	
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobile B61HDX
MONITORING WELL NO.: MW-31	Start Date: 10/22/96	Completed:	10/22/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1445	Finish Time:	1530
Delivery Order 0037	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				100%	2	0' - 1'; Humus, Dark brown with organics	0	NR	0
						1'-10'; Red/Brown, Silty, Fine sand			
				100%	4				
HOLE					6				
				100%	8		0	NR	0
				100%	10	10-17' ; Lighter to white, Fine sand, Silty with clay traces	0	NR	0
HSA					12				
				100%	14		0	NR	0
				100%	16		0	NR	0
HA				100%	18	17-23' ; Red/Brown, Med. to coarse silty clay and sand	0	NR	0
			Water Table @ Approx 19' BLS						
					20				
					22				
					24	23-26' ; Lighter red/brown, Med. light clay w/ sand			
						End of boring @25' BLS			
					26				
					28				
					30				

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

11/04/96
Date

Site 1120	LOGGED BY: Pat Brown	SHEET 1 OF 1	
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobile B61HDX
MONITORING WELL NO.: MW-32	Start Date: 12/10/96	Completed:	12/10/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 930	Finish Time:	1015
Delivery Order 0043	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%	2	0' - 1'; Humus, Dark brown with organics	0	NR	0	
						1'-7'; Brown, Medium sand				
				100%	4		0	NR	0	
					6					
				100%		7-13' ; Light brown to beige, med. sand	0	NR	0	
					8					
				100%	10		0	NR	0	
					12					
				100%		13-16' ; Beige, medium sand	0	NR	0	
					14					
				100%	16		0	NR	0	
						16-23' ; Red/Brown, Med. to coarse sand				
					18					
				100%			0	NR	0	
			Water Table @ Approx 20' BLS							
					22					
						23-25' ; White, coarse sand				
					24					
						End of boring @25' BLS				
					26					
					28					
					30					

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

12/16/96
Date

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

Site 1120	LOGGED BY: Pat Brown	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: MW-33	Start Date: 12/10/96	Completed: 12/10/96
(MW1 RESERVED FOR EXISTING PIT-AREA MON. WELL)	Start Time: 1530	Finish Time: 1630
Delivery Order 0043	Contract No N65114-95-D-2126	CONTAMINATION DATA

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HSA HA									
				100%	2	0' - 1'; Humus, Dark brown with organics	0	NR	0
						1'-7'; Brown, Medium sand			
				100%	4		0	NR	0
					6				
				100%		7-13' ; Beige, med. sand	0	NR	0
					8				
				100%	10		0	NR	0
					12				
				100%		13-16' ; Light beige, medium sand	0	NR	0
					14				
				100%	16		0	NR	0
						16-25' ; Brown, medium sand			
					18				
				100%			0	NR	0
			Water Table @ Approx 20' BLS						
					22				
					24				
						End of boring @25' BLS			
					26				
					28				
					30				

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

12/16/96
Date

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

Site 1120	LOGGED BY: Patrick J. Brown	SHEET 1 OF 1
Bronson Field	Contractor: W.E.S., Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobile B61HDX
MONITORING WELL NO.: DMW- 34	Start Date: 01/29/97	Completed: 01/29/97
	Start Time: 1000	Finish Time: 1230
Delivery Order 0046	Contract No N65114-95-D-2126	CONTAMINATION DATA

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HSA HA									
				100%	3	0' - 7'; Tan, Silty, Fine, sand	45	NR	45
				100%			35	NR	35
					6				
				100%		7'-10'; Brown, Silty, Fine, sand	35	NR	35
					9				
				100%		10-16'; Gray, Fine to Medium sand	25	NR	25
					12	with clay traces			
				100%			8	NR	8
				100%	15	16-17' ; Beige, Fine to Medium	24	NR	24
				100%		Clayey sand	45	2	43
			Water Table @ 18' BLS						
					21	17-40'; White, Extra fine to fine sand w/ dark accessory minerals			
					24				
					27				
					30				
					33				
					36				
					39				
						End of Boring @ 40' BLS			
					42				
					45				

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Prepared by: Michael J. Walsh, P.G.
Florida Professional Geologist No. PG0001181
Date: 02/03/97

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

APPENDIX D

SOIL AND GROUNDWATER ANALYTICAL RESULTS

Navy Public Works Center
Environmental Laboratory

Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500
Phone 904-452-3642/4758
Autovon 922-3642

Laboratory Report
Volatiles by Method 8260

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

Lab ID Number: 9407185A
Sample Date: 6 July 94
Received Date: 6 July 94
Sample Site: Bronson Field
Job Order #: 120 6810

Sample ID#		1- 4774			2- 4775			3-			4-		
Sample Name		Bldg 1120 - Small pile			Bldg 1120 - Large pile								
Collector Name		M. Chambers			M. Chambers								
Date/Time	Comp start												
Collected	Comp stop												
(Military)	Grab	6 July 94 @ 0936			6 July 94 @ 0940								
Sample Type	Comp/Grab	Grab			Grab								
Analyst		Joe Moore			Joe Moore								
Date of Analysis		8 July 94			8 July 94								
Sample Matrix		UST Soil			UST Soil								
Dilution		Dilution	X	1	Dilution	X	1	Dilution	X	1	Dilution	X	1
PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Volatiles by GCMS (Capillary)	METHOD #	1- 4774	units	Limit	2- 4775	units	Limit	3-	units	Limit	4-	units	Limit
Benzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Bromobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Bromochloromethane	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2		ug/kg	2		ug/kg	2
Bromodichloromethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Bromoform	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Bromomethane	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2		ug/kg	2		ug/kg	2
n-Butylbenzene	EPA 8260	BDL	ug/kg	1	3	ug/kg	1		ug/kg	1		ug/kg	1
sec-Butylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
tert-Butylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Carbon Tetrachloride	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Chlorobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Chloroethane	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2		ug/kg	2		ug/kg	2
Chloroform	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Chloromethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
2-Chlorotoluene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
4-Chlorotoluene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Dibromochloromethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
1,2-Dibromo-3-chloropropane	EPA 8260	BDL	ug/kg	5	BDL	ug/kg	5		ug/kg	5		ug/kg	5
1,2-Dibromoethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Dibromomethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
1,2-Dichlorobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
1,3-Dichlorobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
1,4-Dichlorobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Dichlorodifluoromethane	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2		ug/kg	2		ug/kg	2
1,1-Dichloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
1,2-Dichloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
1,1-Dichloroethene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
cis-1,2-Dichloroethene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
trans-1,2-Dichloroethene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
1,2-Dichloropropane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
1,3-Dichloropropane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
2,2-Dichloropropane	EPA 8260	BDL	ug/kg	4	BDL	ug/kg	4		ug/kg	4		ug/kg	4
1,1-Dichloropropene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Ethylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Hexachlorobutadiene	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2		ug/kg	2		ug/kg	2
Isopropylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
p-Isopropyltoluene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Methylene chloride	EPA 8260	BDL	ug/kg	1	BDL	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 Department
Address: Bldg. 3691
NAS pensacola, FL 32508
Phone #: 452-3094
Contact: Mr. Paul Semmes

Lab ID Number: 9407185A
Sample Date: 6 July 94
Received Date: 6 July 94
Sample Site: Bronson Field
Job Order #: 120 6810

PARAMETER Volatiles by GCMS (Capillary)	METHOD #	ID# 1- 4774	units	Det. Limit	ID# 2- 4775	units	Det. Limit	ID# 3-	units	Det. Limit	ID# 4-	units	Det. Limit
Naphthalene	EPA 8260	5	ug/kg	1	90	ug/kg	1		ug/kg	1		ug/kg	1
n-Propylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Styrene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
1,1,1,2-Tetrachloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
1,1,2,2-Tetrachloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Tetrachloroethene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Toluene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
1,2,3-Trichlorobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
1,2,4-Trichlorobenzene	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2		ug/kg	2		ug/kg	2
1,1,1-Trichloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
1,1,2-Trichloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Trichloroethene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
Trichlorofluoromethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
1,2,3-Trichloropropane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
1,2,4-Trimethylbenzene	EPA 8260	BDL	ug/kg	1	13	ug/kg	1		ug/kg	1		ug/kg	1
1,3,5-Trimethylbenzene	EPA 8260	BDL	ug/kg	1	5	ug/kg	1		ug/kg	1		ug/kg	1
Vinyl Chloride	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
o-Xylene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1
m,p-Xylene	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2		ug/kg	2		ug/kg	2
Methyl-tert-butyl ether	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1		ug/kg	1

Surrogate Recoveries Compound	Acceptance Limits				
1,2-Dichloroethane-d4	70-121	100	104		
Toluene-d8	84-138	98	101		
Bromofluorobenzene	59-113	93	102		

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

Approved by: Jerry Dees, Laboratory Director Date: 02-Aug-94 @ 14:08

PWC5090/14

End of Report

D-2

Navy Public Works Center
Environmental Laboratory

Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500
Phone 904-452-3642/4758
Autovon 922-3642

Requester: PWC Environmental
Address: Bldg. 3691
NAS, Pensacola 32508
Phone #: 904-452-3094
Contact: Mr. Paul Semmes

Laboratory Report
BNA Extracables by 8270A

Lab ID Number: 9407185B
Received Date: 06 July 94
Sample Site: BLDG 1120 Bronson Field
Job Order #: 1206810

Sample ID#	Lab	1- 4774	2- 4775	3-	4-
Sample Name	Requester	Bldg 1120 – Small pile	Bldg 1120 – Large pile		
Collector Name		M. Chambers	M. Chambers		
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	6 July 94 @ 0936	6 July 94 @ 0940		
Sample Type	Comp/Grab	Grab			
Analyst		M. Chambers	M. Chambers		
Date of Analysis		8 July 94	8 July 94		
Sample Matrix		UST/Soil	UST/ Soil		
Dilution		Dilution X 33	Dilution X 33	Dilution X 1	Dilution X 1

PARAMETER BNA Extr.:	METHOD #	ID# 1- 4774	units	Det. Limit	ID# 2- 4775	units	Det. Limit	ID# 3-	units	Det. Limit	ID# 4-	units	Det. Limit
Acenaphthene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Acenaphthylene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Acetophenone	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
2-Acetylaminofluorene	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
Aldrin	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
4-Aminobiphenyl	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Aniline	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Anthracene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Aramite	EPA 8270A	BDL	ug/kg	825	BDL	ug/kg	825		ug/kg	25		ug/kg	25
Benzidine	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	50		ug/kg	50
Benzoic Acid	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Benz(a)anthracene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Benzo(b)fluoranthene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Benzo(k)fluoranthene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Benzo(g,h,i)perylene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Benzo(a)pyrene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
p-Benzoquinone	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Benzyl alcohol	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
alpha-BHC	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
beta-BHC	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
delta-BHC	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
gamma-BHC (Lindane)	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
Bis(2-chloroethoxy)methane	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Bis(2-chloroethyl)ether	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Bis(2-chloroisopropyl)ether	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Bis(2-ethylhexyl)phthalate	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
4-Bromophenyl phenyl ether	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Butyl benzyl phthalate	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
4-Chloroaniline	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
Chlorobenzilate	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
4-Chloro-3-methylphenol	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
2-Chloronaphthalene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
2-Chlorophenol	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
4-Chlorophenyl phenyl ether	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Chrysene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
4,4'-DDD	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
4,4'-DDE	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
4,4'-DDT	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Dibenzo(a,h)anthracene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Dibenzofuran	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Di-n-butyl phthalate	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
1,2-Dichlorobenzene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
1,3-Dichlorobenzene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5

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 Extracables by 8270A

Requester: PWC Environmental
Address: Bldg. 3691
NAS, Pensacola 32508
Phone #: 904-452-3094
Contact: Mr. Paul Semmes

Lab ID Number: 9407185B
Received Date: 06 July 94
Sample Site: BLDG 1120 Bronson Field
Job Order #: 1206810

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
BNA Extr.:	METHOD #	1- 4774	units	Limit	2- 4775	units	Limit	3-	units	Limit	4-	units	Limit
1,4-Dichlorobenzene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
3,3-Dichlorobenzidine	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
2,4-Dichlorophenol	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
2,6-Dichlorophenol	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Dieldrin	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
Diethyl phthalate	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Dimethoate	EPA 8270A	BDL	ug/kg	825	BDL	ug/kg	825		ug/kg	25		ug/kg	25
Dimethylaminazobenzene	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
7,12-Dimethylbenz(a)anthracene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
3,3'-Dimethylbenzidine	EPA 8270A	BDL	ug/kg	825	BDL	ug/kg	825		ug/kg	25		ug/kg	25
a,a,-Dimethylphenethylamine	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
2,4-Dimethylphenol	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Dimethyl phthalate	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
4,6-Dinitro-o-cresol	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
2,4-Dinitrophenol	EPA 8270A	BDL	ug/kg	825	BDL	ug/kg	825		ug/kg	25		ug/kg	25
2,4-Dinitrotoluene	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
2,6-Dinitrotoluene	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
1,2-Diphenylhydrazine	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
Di-n-octyl phthalate	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
Endosulfan-I	EPA 8270A	BDL	ug/kg	660	BDL	ug/kg	660		ug/kg	20		ug/kg	20
Endosulfan-II	EPA 8270A	BDL	ug/kg	660	BDL	ug/kg	660		ug/kg	20		ug/kg	20
Endosulfan Sulfate	EPA 8270A	BDL	ug/kg	660	BDL	ug/kg	660		ug/kg	20		ug/kg	20
Endrin	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
Endrin aldehyde	EPA 8270A	BDL	ug/kg	660	BDL	ug/kg	660		ug/kg	20		ug/kg	20
Endrin ketone	EPA 8270A	BDL	ug/kg	660	BDL	ug/kg	660		ug/kg	20		ug/kg	20
Ethyl methanesulfonate	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
Fluoranthene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Fluorene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Heptachlor	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
Heptachlor epoxide	EPA 8270A	BDL	ug/kg	660	BDL	ug/kg	660		ug/kg	20		ug/kg	20
Hexachlorobenzene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Hexachlorobutadiene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Hexachlorocyclopentadiene	EPA 8270A	BDL	ug/kg	825	BDL	ug/kg	825		ug/kg	25		ug/kg	25
Hexachloroethane	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Indeno(1,2,3-cd)pyrene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Isodrin	EPA 8270A	BDL	ug/kg	825	BDL	ug/kg	825		ug/kg	25		ug/kg	25
Isophorone	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
3-Methylcholanthrene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Methyl methanesulfonate	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
2-Methylnaphthalene	EPA 8270A	BDL	ug/kg	165	460	ug/kg	165		ug/kg	5		ug/kg	5
o-Cresol	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
m,p-Cresols	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Naphthalene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
1,4-Naphthoquinone	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
1-Naphthylamine	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
2-Naphthylamine	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
2-Nitroaniline	EPA 8270A	BDL	ug/kg	825	BDL	ug/kg	825		ug/kg	25		ug/kg	25
3-Nitroaniline	EPA 8270A	BDL	ug/kg	825	BDL	ug/kg	825		ug/kg	25		ug/kg	25
4-Nitroaniline	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
Nitrobenzene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
2-Nitrophenol	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
4-Nitrophenol	EPA 8270A	BDL	ug/kg	825	BDL	ug/kg	825		ug/kg	25		ug/kg	25

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 Extracables by 8270A

Requester: PWC Environmental
Address: Bldg. 3691
NAS, Pensacola 32508
Phone #: 904-452-3094
Contact: Mr. Paul Semmes

Lab ID Number: 9407185B
Received Date: 06 July 94
Sample Site: BLDG 1120 Bronson Field
Job Order #: 1206810

PARAMETER BNA Extr.:	METHOD #	ID# 1- 4774	units	Det. Limit	ID# 2- 4775	units	Det. Limit	ID# 3-	units	Det. Limit	ID# 4-	units	Det. Limit
5-Nitro-o-toluidine	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
N-nitrosodibutylamine	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
N-nitrosodiethylamine	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
N-nitrosodimethylamine	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
N-nitrosomethylethylamine	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
N-nitrosodiphenylamine	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
N-nitrosodi-n-propylamine	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
N-nitrosomorpholine	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
N-nitrosopiperidine	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
N-nitrosopyrrolidine	EPA 8270A	BDL	ug/kg	660	BDL	ug/kg	660		ug/kg	20		ug/kg	20
Pentachlorobenzene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Pentachloronitrobenzene	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
Pentachlorophenol	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
Phenacetin	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
Phenanthrene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Phenol	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
1,4-Phenylenediamine	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Phorate	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
2-Picoline	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
Pronamide	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Pyrene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
Pyridine	EPA 8270A	BDL	ug/kg	825	BDL	ug/kg	825		ug/kg	25		ug/kg	25
Safrole	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
2,3,4,6-Tetrachlorophenol	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
Thionazine	EPA 8270A	BDL	ug/kg	825	BDL	ug/kg	825		ug/kg	25		ug/kg	25
o-Toluidine	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
1,2,4-Trichlorobenzene	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
2,4,5-Trichlorophenol	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
2,4,6-Trichlorophenol	EPA 8270A	BDL	ug/kg	165	BDL	ug/kg	165		ug/kg	5		ug/kg	5
1,3,5-Trinitrobenzene	EPA 8270A	BDL	ug/kg	330	BDL	ug/kg	330		ug/kg	10		ug/kg	10
Total extractable petroleum hydrocarbons (est.)		BDL	ug/kg	1000	BDL	ug/kg	1000		ug/kg	1000		ug/kg	1000

SURROGATE RECOVERIES Compound	Acceptance Limits				
Nitrobenzene-d5	23-120	67	53		
2-Fluorobiphenyl	30-115	93	117		
Terphenyl-d14	18-137	86	73		
Phenol-d5	24-125	105	133		
2-Fluorophenol	25-121	77	74		
2,4,6-Tribromophenol	19-122	99	128		

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.
Sample # 4775 also had 270 ug/kg of 1-Methylnaphthalene.

Approved by: Jerry Dees, Laboratory Director Date: 02-Aug-94 @ 14:09

PWC5090/14

Navy Public Works Center
Environmental Laboratory

Laboratory Report

Tentative Identification of Compounds (BNA)

Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500
Phone 904-452-3642/4756
Autovon 922-3642

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

Lab ID Number: 9408240A
Sample Date: 6 Jul 94
Received Date: 6 Jul 94
Sample Site: Bronson Field
Job Order #: 170 6647

Sample ID#	Lab	1- 4774	2- 4775	3-	4-
Sample Name	Requester	Bldg 1120 - Small Pile	Bldg 1120 - Large Pile		
Collector Name		M. Chambers	M. Chambers		
Time/Date	Comp start				
Sample Collected	Comp stop				
(Military)	Grab	6 Jul 94 @ 0936	6 Jul 94 @ 0940		
Sample Type	Comp/Grab	Grab	Grab		
Analyst		J. Moore	J. Moore		
Date of Analysis		8 Jul 94	8 Jul 94		
Sample Matrix		Soil	Soil		
Dilution		Dilution X 1	Dilution X 1	Dilution X 1	Dilution X 1

Compound	Est. Conc.	Units	R.T.(min)	Qvalue	Est. Conc.	Units	R.T.(min)	Qvalue	Est. Conc.	Units	R.T.(min)	Qvalue	Est. Conc.	Units	R.T.(min)	Qvalue
No TIC's for ID #4774																
Heptadecane					3300	ug/kg	24.9	97								
2,6,10,14-Tetramethyl pentadecane					1800	ug/kg	25	91								
Nonadecane					1700	ug/kg	27.7	98								
Pentadecane					1300	ug/kg	21.8	96								
Eicosane					1300	ug/kg	29.1	98								
2,6,10,14-Tetramethyl hexadecane					1200	ug/kg	26.4	91								
Hexadecane					890	ug/kg	23.4	96								
Tridecane					790	ug/kg	18.2	95								
Octadecane					690	ug/kg	21.3	91								
Tetradecane					650	ug/kg	20.8	97								
2,6,10-Trimethyl pentadecane					630	ug/kg	24.1	72								
1,3-Dimethyl naphthalene					500	ug/kg	20.8	98								
Undecane					450	ug/kg	21.1	87								
2,3,6-Trimethyl naphthalene					300	ug/kg	22.5	97								
1,5-Dimethyl naphthalene					260	ug/kg	20.5	97								

Comments: The library search routine identifies the 20 largest peaks in a mass spectrometer run that have not previously been identified in the target compound list as being either an internal standard, surrogate spike compound or a target compound. The area of these identified peaks must be at least 10% of the area of the nearest internal standard. The unknowns reported are determined by: 1) Relative concentration, 2) Q-value rating (a measure of the match between the unknown mass spectrum and the reference library spectrum), 3) Probability that the compounds are "real" compounds that might exist in nature, and not some chemical that happens to have a mass spectrum that matches one of the 138,000 compounds in the library, and 4) the experience of the analyst in weighing the above factors.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 03-Aug-94 @ 14:50
Report Generation Date

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
TPH's by IR

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

Lab ID Number: 9408240
Sample Date: 6 Jul 94
Received Date: 6 Jul 94
Sample Site: Bronson Field
Job Order #: 170 6647

Sample ID#	Lab	1- 4774	2- 4775	3-	4-
Sample Name	Requester	B1120 Small Dirt Pile	B1120 Large Dirt Pile		
Collector Name		P. Semmes/M. Chambers	P. Semmes/M. Chambers		
Time/Date Sample Collected (Military)	Comp start				
	Comp stop				
	Grab	6 Jul 94 @ 0936	6 Jul 94 @ 0940		
Sample Type	Comp/Grab	Grab	Grab		
Analyst		LAW Environmental	LAW Environmental		
Date of Analysis					
Sample Matrix		Soil	Soil		
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- 4774	units	Limit	2- 4775	units	Limit	3-	units	Limit	4-	units	Limit
TPH's by IR	EPA 418.1	35	mg/kg	11	67	mg/kg	11		mg/kg	10		mg/kg	10

Comments: mg/kg=milligrams per kilogram (ppm).

Approved by: _____ **Date:** 17-Aug-94 @ 08:34

Jerry Dees, Laboratory Director

PWC 5090/14

End of Report

D-2

Navy Public Works Center
Environmental Laboratory

Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500
Phone 904-452-3642/4758
Autovon 922-3642

Laboratory Report
TCLP Metals

Requester:	NPWC Environmental	Lab ID Number:	9408240B
Address:	Bldg. 3691	Sample Date:	6 Jul 94
	NAS Pensacola, FL 32508	Received Date:	6 Jul 94
Phone #:	452-3094	Sample Site:	Bronson Field
Contact:	Paul Semmes	Job Order #:	120 6810

Sample ID#	Lab	1- 4774	2- 4775	3-	4-	Analyst(s):
Sample Name	Requester	B1120 Small Dirt Pile	B1120 Large Dirt Pile			Jim Taylor
Collector Name		P. Semmes/M. Chambers	P. Semmes/M. Chambers			Brian Nelson
Date/Time Collected (Military)	Comp start					Date(s) of analysis:
	Comp stop					
	Grab	6 Jul 94 @ 0936	6 Jul 94 @ 0940			
Sample Type	Comp/Grab	Grab	Grab			
Sample Matrix		TCLP Extract	TCLP Extract			

PARAMETER TCLP Metals:	SW-846 METHOD #	ID# 1- 4774	units	Det. Limit	ID# 2- 4775	units	Det. Limit	ID# 3-	units	Det. Limit	ID# 4-	units	Det. Limit	Preservative(s)
Arsenic(As)	EPA 6010A	X <0.5	mg/l	0.5	X <0.5	mg/l	0.5		mg/l	0.5		mg/l	0.5	None
Barium(Ba)	EPA 6010A	X <1.0	mg/l	1.0	X <1.0	mg/l	1.0		mg/l	1.0		mg/l	1.0	None
Cadmium(Cd)	EPA 6010A	X <0.1	mg/l	0.1	X <0.1	mg/l	0.1		mg/l	0.1		mg/l	0.1	None
Chromium(Cr)	EPA 6010A	X <0.5	mg/l	0.5	X <0.5	mg/l	0.5		mg/l	0.5		mg/l	0.5	None
Lead(Pb)	EPA 6010A	X <0.5	mg/l	0.5	X <0.5	mg/l	0.5		mg/l	0.5		mg/l	0.5	None
Mercury(Hg)*	EPA 7470	X <0.0002	mg/l	0.0002	X <0.0002	mg/l	0.0002		mg/l	0.02		mg/l	0.02	None
Selenium(Se)	EPA 6010A	X <0.1	mg/l	0.1	X <0.1	mg/l	0.1		mg/l	0.1		mg/l	0.1	None
Silver(Ag)	EPA 7761	X <0.0005	mg/l	0.0005	X <0.0005	mg/l	0.0005		mg/l	0.0005		mg/l	0.0005	None

D-8

Comments: mg/l=milligrams per liter. * – Analysis performed by LAW Environmental.

TCLP limits are: Arsenic<5, Barium<100, Cadmium<1, Chromium<5, Lead<5, Mercury<0.2, Selenium<1, Silver<5.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 15-Aug-94 08:19

End of Report

PWC 5090/14

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

Lab ID Number: 9407224A
Received Date: 19 Jul 94
Sample Site: Bronson Field
Job Order #: 120 6810

Sample ID#	Lab	1- 5014	2- 5015	3- 5016	2- 5017
Sample Name	Requester	B1120 Center	B1120'South	B1120 East	B1120 West
Collector Name		J. Moore/M. Chambers	J. Moore/M. Chambers	J. Moore/M. Chambers	J. Moore/M. Chambers
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	19 Jul 94 @ 1350	19 Jul 94 @ 1353	19 Jul 94 @ 1356	19 Jul 94 @ 1358
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab
Analyst		J. W. Moore	J. W. Moore	J. W. Moore	J. W. Moore
Date of Analysis		19 Jul 94	19 Jul 94	19 Jul 94	19 Jul 94
Sample Matrix		Soil	Soil	Soil	Soil
Dilution		Dilution X 1	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Volatiles by GCMS (Capillary)	METHOD #	1- 5014	units	Limit	2- 5015	units	Limit	3- 5016	units	Limit	2- 5017	units	Limit
Benzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Bromobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Bromochloromethane	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2
Bromodichloromethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Bromoform	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Bromomethane	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2
n-Butylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
sec-Butylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
tert-Butylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Carbon Tetrachloride	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Chlorobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Chloroethane	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2
Chloroform	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Chloromethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
2-Chlorotoluene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
4-Chlorotoluene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Dibromochloromethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
1,2-Dibromo-3-chloropropane	EPA 8260	BDL	ug/kg	5	BDL	ug/kg	5	BDL	ug/kg	5	BDL	ug/kg	5
1,2-Dibromoethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Dibromomethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
1,2-Dichlorobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
1,3-Dichlorobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
1,4-Dichlorobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Dichlorodifluoromethane	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2
1,1-Dichloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
1,2-Dichloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
1,1-Dichloroethene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
cis-1,2-Dichloroethene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
trans-1,2-Dichloroethene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
1,2-Dichloropropane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
1,3-Dichloropropane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
2,2-Dichloropropane	EPA 8260	BDL	ug/kg	4	BDL	ug/kg	4	BDL	ug/kg	4	BDL	ug/kg	4
1,1-Dichloropropene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Ethylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Hexachlorobutadiene	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2
Isopropylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
p-Isopropyltoluene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Methylene chloride	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1

Navy Public Works Center
Environmental Laboratory

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

Lab ID Number: 9407224A
Received Date: 19 Jul 94
Sample Site: Bronson Field
Job Order #: 120 6810

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Volatiles by GCMS (Capillary)	METHOD #	1- 5014	units	Limit	2- 5015	units	Limit	3- 5016	units	Limit	2- 5017	units	Limit
Naphthalene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
n-Propylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Styrene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
1,1,1,2-Tetrachloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
1,1,2,2-Tetrachloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Tetrachloroethene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Toluene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
1,2,3-Trichlorobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
1,2,4-Trichlorobenzene	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2
1,1,1-Trichloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
1,1,2-Trichloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Trichloroethene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Trichlorofluoromethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
1,2,3-Trichloropropane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
1,2,4-Trimethylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
1,3,5-Trimethylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Vinyl Chloride	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
o-Xylene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
m,p-Xylene	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2

Surrogate Recoveries Compound	Acceptance Limits				
1,2-Dichloroethane-d4	70-121	111	105	107	106
Toluene-d8	84-138	100	103	102	102
Bromofluorobenzene	59-113	102	103	102	103

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

Approved by: Jerry Dees, Laboratory Director Date: 27-Jul-94 @ 10:38

PWC5090/14

End of Report

D-10

Navy Public Works Center
Environmental Laboratory

Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500
Phone 904-452-3642/4758
Autovon 922-3642

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

Laboratory Report
Volatiles by Method 8260

Lab ID Number: 9407224B
Received Date: 19 Jul 94
Sample Site: Bronson Field
Job Order #: 120 6810

Sample ID#	Lab	1- 5018	2- 5019	3- 5020	2-
Sample Name	Requester	B1120 North	B1120 Disposal North	B1120 Disposal South	
Collector Name		J. Moore/M. Chambers	J. Moore/M. Chambers	J. Moore/M. Chambers	
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	19 Jul 94 @ 1401	19 Jul 94 @ 1402	19 Jul 94 @ 1412	
Sample Type	Comp/Grab	Grab	Grab	Grab	
Analyst		J. W. Moore	J. W. Moore	J. W. Moore	
Date of Analysis		20 Jul 94	20 Jul 94	20 Jul 94	
Sample Matrix		Soil	Soil	Soil	
Dilution		Dilution X 1	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER Volatiles by GCMS (Capillary)	METHOD #	ID# 1- 5018	units	Det. Limit	ID# 2- 5019	units	Det. Limit	ID# 3- 5020	units	Det. Limit	ID# 2-	units	Det. Limit
Benzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Bromobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Bromochloromethane	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2		ug/kg	2
Bromodichloromethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Bromoform	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Bromomethane	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2		ug/kg	2
n-Butylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
sec-Butylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
tert-Butylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Carbon Tetrachloride	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Chlorobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Chloroethane	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2		ug/kg	2
Chloroform	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Chloromethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
2-Chlorotoluene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
4-Chlorotoluene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Dibromochloromethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
1,2-Dibromo-3-chloropropane	EPA 8260	BDL	ug/kg	5	BDL	ug/kg	5	BDL	ug/kg	5		ug/kg	5
1,2-Dibromoethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Dibromomethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
1,2-Dichlorobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
1,3-Dichlorobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
1,4-Dichlorobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Dichlorodifluoromethane	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2		ug/kg	2
1,1-Dichloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
1,2-Dichloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
1,1-Dichloroethene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
cis-1,2-Dichloroethene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
trans-1,2-Dichloroethene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
1,2-Dichloropropane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
1,3-Dichloropropane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
2,2-Dichloropropane	EPA 8260	BDL	ug/kg	4	BDL	ug/kg	4	BDL	ug/kg	4		ug/kg	4
1,1-Dichloropropene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Ethylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Hexachlorobutadiene	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2		ug/kg	2
Isopropylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
p-Isopropyltoluene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Methylene chloride	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	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: 9407224B
Received Date: 19 Jul 94
Sample Site: Bronson Field
Job Order #: 120 6810

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Volatiles by GCMS (Capillary)	METHOD #	1- 5018	units	Limit	2- 5019	units	Limit	3- 5020	units	Limit	2-	units	Limit
Naphthalene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
n-Propylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Styrene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
1,1,1,2-Tetrachloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
1,1,2,2-Tetrachloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Tetrachloroethene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Toluene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
1,2,3-Trichlorobenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
1,2,4-Trichlorobenzene	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2		ug/kg	2
1,1,1-Trichloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
1,1,2-Trichloroethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Trichloroethene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Trichlorofluoromethane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
1,2,3-Trichloropropane	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
1,2,4-Trimethylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
1,3,5-Trimethylbenzene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
Vinyl Chloride	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
o-Xylene	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1		ug/kg	1
m,p-Xylene	EPA 8260	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2		ug/kg	2

Surrogate Recoveries Compound	Acceptance Limits				
1,2-Dichloroethane-d4	70-121	103	103	107	
Toluene-d8	84-138	102	104	103	
Bromofluorobenzene	59-113	101	98	99	

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.
Other compounds identified: Sample ID #5018 - MEK @ 30 ug/kg.

Approved by: Jerry Dees, Laboratory Director **Date:** 27-Jul-94 @ 10:42

PWC5090/14

End of Report

D-12

Navy Public Works Center
Environmental Laboratory

Bldg. 3691, Code 920
NAS Pensacola, Fl. 32508
Phone (904) 452-4728/3642
Autovon 922-4728/3642

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

Laboratory Report

Volatile Aromatics by Method 8260

Lab ID Number: 9506018 A
Sample Date: 30 May 95
Received Date: 31 May 95
Sample Site: Bronson Field
Job Order #: 168 4195

Sample ID#	Lab	1- 53092	2- 53093	3- 53094	4- 53095
Sample Name	Requester	MW13/1101	MW7/1120	MW15/1113	MW14/1143
Collector Name		JJ/DG	JJ/DG	JJ/DG	JJ/DG
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	30 May 95 @ 1452	30 May 95 @ 1515	30 May 95 @ 1542	30 May 95 @ 1559
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab
Analyst		J. Moore	J. Moore	J. Moore	J. Moore
Date of Analysis		5 Jun 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- 53092	units	Limit	2- 53093	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	2	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	2	ug/l	1		ug/l	1		ug/l	1		ug/l	1

Surrogate Recoveries Compound	Acceptance Limits				
1,2-Dichloroethane-d4	76-114	110	92	90	93
Toluene-d8	88-110	107	100	107	102
Bromofluorobenzene	86-115	113	111	97	104

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.
Please Note: Sample ID #53092 had MEK and MIBK present at 38 and 16 ug/l respectively.

Approved by: Jerry Deas, Laboratory Director
Date/Time: 09-Jun-95 @ 10:55
Report Generated

PWC 5090/14

End of Report

D-13

Navy Public Works Center
Environmental Laboratory

Bldg. 3691, Code 920
NAS Pensacola, Fl. 32508
Phone (904) 452-4720/3642
Autovon 922-4720/3642

Laboratory Report
PAH's by Method 8270A

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

Lab ID Number: 9506018 B
Sample Date: 30 May 95
Received Date: 31 May 95
Sample Site: Bronson Field
Job Order #: 168 4195

Sample ID#	Lab	1- 53092	2- 53093	3- 53094	4- 53095
Sample Name	Requester	MW13/1101	MW7/1120	MW15/1113	MW14/1143
Collector Name		JJ/DG	JJ/DG	JJ/DG	JJ/DG
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	30 May 95 @ 1452	30 May 95 @ 1515	30 May 95 @ 1542	30 May 95 @ 1559
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab
Analyst		J. Moore	J. Moore	J. Moore	J. Moore
Date of Analysis		6 Jun 95	2 Jun 95	5 Jun 95	5 Jun 95
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Dilution		Dilution X 10	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Polynuclear Aromatics (PAH's)	METHOD #	1- 53092	units	Limit	2- 53093	units	Limit	3- 53094	units	Limit	4- 53095	units	Limit
Acenaphthene	SW 8270A	370	ug/l	50	18	ug/l	5	BDL	ug/l	5	BDL	ug/l	5
Acenaphthylene	SW 8270A	BDL	ug/l	50	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5
Anthracene	SW 8270A	BDL	ug/l	20	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2
Benzo(a)anthracene	SW 8270A	BDL	ug/l	30	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
Benzo(a)pyrene	SW 8270A	BDL	ug/l	20	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2
Benzo(b)fluoranthene	SW 8270A	BDL	ug/l	40	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4
Benzo(g,h,i)perylene	SW 8270A	BDL	ug/l	30	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
Benzo(k)fluoranthene	SW 8270A	BDL	ug/l	40	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4
Chrysene	SW 8270A	BDL	ug/l	30	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
Dibenzo(a,h)anthracene	SW 8270A	BDL	ug/l	30	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
Fluoranthene	SW 8270A	BDL	ug/l	20	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2
Fluorene	SW 8270A	270	ug/l	40	5	ug/l	4	BDL	ug/l	4	BDL	ug/l	4
Indeno(1,2,3-cd)pyrene	SW 8270A	BDL	ug/l	20	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2
Naphthalene	SW 8270A	BDL	ug/l	70	BDL	ug/l	7	BDL	ug/l	7	BDL	ug/l	7
Phenanthrene	SW 8270A	150	ug/l	30	4	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
Pyrene	SW 8270A	BDL	ug/l	30	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
1-Methylnaphthalene*	SW 8270A	330	ug/l	50	36	ug/l	5	BDL	ug/l	5	BDL	ug/l	5
2-Methylnaphthalene	SW 8270A	230	ug/l	70	37	ug/l	7	BDL	ug/l	7	BDL	ug/l	7

SURROGATE RECOVERIES Compound	Acceptance Limits				
Nitrobenzene-d5	35-114	84	66	55	62
2-Fluorobiphenyl	43-116	95	68	61	65
Terphenyl-d14	33-141	93	66	55	66

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 @ 10:24
Report Generated
End of Report

PWC 5090/14

D-14

Navy Public Works Center
Environmental Laboratory

Bldg 3887, Code 920
NAS Pensacola, FL 32508-5303
Phone (904) 452-4728
DSN 922-4728
FAX (904) 452-2387/2799

Laboratory Report

601/602 Volatiles by Method 8260

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

Report Number: 9604019 B
Sample Date: 4 Apr 96
Received Date: 5 Apr 96
Sample Site: Bronson Field, Bldg. 1120
Job Order #: 130 5001

Sample ID#		1- 61368	2- 61369	3- 61370	4- 61371
Sample Name		MW-2	MW-3	MW-4	MW-5
Collector Name		P. J. B.	P. J. B.	P. J. B.	P. J. B.
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	4 Apr 96 @ 1400	4 Apr 96 @ 1330	4 Apr 96 @ 1530	4 Apr 96 @ 1500
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab
Analyst		J. Moore	J. Moore	J. Moore	J. Moore
Date of Analysis		11 Apr 96	6 Apr 96	11 Apr 96	6 Apr 96
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Dilution		Dilution X 1	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER Volatiles by GCMS (Capillary)	METHOD #	1- ID# 61368	units	Det. Limit	2- ID# 61369	units	Det. Limit	3- ID# 61370	units	Det. Limit	4- ID# 61371	units	Det. 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 8280	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	9	ug/l	1	6	ug/l	1	8	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	38	ug/l	2	13	ug/l	2	18	ug/l	2	4	ug/l	2

Surrogate Recoveries Compound	Acceptance Limits				
1,2-Dichloroethane-d4	76-114	104	98	105	95
Toluene-d8	88-110	100	104	100	104
Bromofluorobenzene	86-115	107	100	104	98

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 03-May-96 @ 13:52
Report Generated

D-15

PWC 5090/14

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg 3887, Code 920
NAS Pensacola, FL 32508-5303
Phone (904) 452-4728
DSN 922-4728
FAX (904) 452-2387/2799

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: 9604020 B
Sample Date: 4 Apr 96
Received Date: 5 Apr 96
Sample Site: Bronson Field, Bldg. 1120
Job Order #: 130 5001

Sample ID#		1- 61372	2- 61373	3- 61374	4- 61375
Sample Name		MW-6	Duplicate	Eq. Blank	Trip Blank
Collector Name		P. J. B.	P. J. B.	P. J. B.	P. J. B.
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	4 Apr 96 @ 1430	4 Apr 96 @ N/S	4 Apr 96 @ 1315	4 Apr 96 @ N/S
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab
Analyst		J. Moore	J. Moore	J. Moore	J. Moore
Date of Analysis		11 Apr 96	11 Apr 96	8 Apr 96	6 Apr 96
Sample Matrix		Groundwater	Groundwater	Deionized Water	Deionized Water
Dilution		Dilution X 1	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Volatiles by GCMS (Capillary)	METHOD #	1- 61372	units	Limit	2- 61373	units	Limit	3- 61374	units	Limit	4- 61375	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	10	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Methylene chloride	SW 8260	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5
Methyl-tert-butyl Ether (MTBE)	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,1,2,2-Tetrachloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Tetrachloroethene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Toluene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,1,1-Trichloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,1,2-Trichloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Trichloroethene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Trichlorofluoromethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Vinyl Chloride	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Xylenes (Total)	SW 8260	BDL	ug/l	2	17	ug/l	2	BDL	ug/l	2	BDL	ug/l	2

Surrogate Recoveries Compound	Acceptance Limits				
1,2-Dichloroethane-d4	76-114	107	104	98	93
Toluene-d8	88-110	99	100	101	98
Bromoflourobenzene	86-115	105	102	99	98

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: 03-May-96 @ 13:54
Report Generated

D-16

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: 9604019 C
Sample Date: 4 Apr 96
Received Date: 5 Apr 96
Sample Site: Bronson Field, Bldg. 1120
Job Order #: 130 5001

Sample ID#	Lab	1- 61368			2- 61369			3- 61370			4- 61371		
Sample Name	Requester	MW-2			MW-3			MW-4			MW-5		
Collector Name		P. J. B.			P. J. B.			P. J. B.			P. J. B.		
Date/Time	Comp start												
Collected	Comp stop												
(Military)	Grab	4 Apr 96	@	1400	4 Apr 96	@	1330	4 Apr 96	@	1530	4 Apr 96	@	1500
Sample Type	Comp/Grab	Grab			Grab			Grab			Grab		
Analyst		J. Moore			J. Moore			J. Moore			J. Moore		
Date of Analysis		22 Apr 96			22 Apr 96			22 Apr 96			22 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- 61368	units	Limit	2- 61369	units	Limit	3- 61370	units	Limit	4- 61371	units	Limit
Acenaphthene	SW846 8270	BDL	ug/l	5	9	ug/l	5	58	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	93	ug/l	4	20	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	620	ug/l	140	12	ug/l	7	180	ug/l	7	BDL	ug/l	7
Phenanthrene	SW846 8270	74	ug/l	3	18	ug/l	3	60	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	1500	ug/l	100	480	ug/l	100	530	ug/l	50	BDL	ug/l	5
2-Methylnaphthalene	SW846 8270	2300	ug/l	140	630	ug/l	140	890	ug/l	70	BDL	ug/l	7

SURROGATE RECOVERIES Compound	Acceptance Limits				
Nitrobenzene-d5	35-114	90	110	113	103
2-Fluorobiphenyl	43-116	62	102	82	103
Terphenyl-d14	33-141	116	115	102	115

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 03-May-96 @ 13:50
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: 9604020 C
Sample Date: 4 Apr 96
Received Date: 5 Apr 96
Sample Site: Bronson Field, Bldg. 1120
Job Order #: 130 5001

Sample ID#	Lab	1- 61372	2- 61373	3- 61374	4-
Sample Name	Requester	MW-6	Duplicate	Eq. Blank	
Collector Name		P. J. B.	P. J. B.	P. J. B.	
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	4 Apr 96 @ 1430	4 Apr 96 @ N/S	4 Apr 96 @ 1315	
Sample Type	Comp/Grab	Grab	Grab	Grab	
Analyst		J. Moore	J. Moore	J. Moore	
Date of Analysis		22 Apr 96	22 Apr 96	23 Apr 96	
Sample Matrix		Groundwater	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- 61372	units	Limit	2- 61373	units	Limit	3- 61374	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	76	ug/l	40	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	290	ug/l	70	BDL	ug/l	7		ug/l	7
Phenanthrene	SW846 8270	BDL	ug/l	3	76	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	13	ug/l	5	700	ug/l	50	BDL	ug/l	5		ug/l	5
2-Methylnaphthalene	SW846 8270	22	ug/l	7	1200	ug/l	70	BDL	ug/l	7		ug/l	7

SURROGATE RECOVERIES Compound	Acceptance Limits				
Nitrobenzene-d5	35-114	112	107	97	
2-Fluorobiphenyl	43-116	99	85	93	
Terphenyl-d14	33-141	101	109	114	

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: 03-May-96 @ 13:51
Report Generated

End of Report

PWC 5090/14

Navy Public Works Center
Environmental Laboratory

Bldg 3887, Code 920
NAS Pensacola, FL 32508-5303
Phone (904) 452-4728
DSN 922-4728
FAX (904) 452-2387/2799

Laboratory Report
Total Lead

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

Report Number: 9604019 D
Sample Date: 4 Apr 96
Received Date: 5 Apr 96
Sample Site: Bronson Field, Bldg. 1120
Job Order #: 130 5001

Sample ID#	Lab	1- 61368	2- 61369	3- 61370	4- 61371	Analyst(s):
Sample Name	Requester	MW-2	MW-3	MW-4	MW-5	ICP - Brian Nelson
Collector Name		P. J. B.	P. J. B.	P. J. B.	P. J. B.	
Date/Time Collected (Military)	Comp start					
	Comp stop					Date(s) of analysis:
	Grab	4 Apr 96 @ 1400	4 Apr 96 @ 1330	4 Apr 96 @ 1530	4 Apr 96 @ 1500	ICP - 16 Apr 96
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab	
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	

PARAMETER Metals:	METHOD #	ID# 1- 61368	units	Det. Limit	ID# 2- 61369	units	Det. Limit	ID# 3- 61370	units	Det. Limit	ID# 4- 61371	units	Det. Limit	Preservative(s)
Lead(Pb)	SW 6010	X 0.05	mg/l	0.05	X 0.48	mg/l	0.05	X 0.16	mg/l	0.05	X 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: 22-Apr-96 11:27

End of Report

PWC 5090/14

D-19

Navy Public Works Center
Environmental Laboratory

Bldg 3887, Code 920
NAS Pensacola, FL 32508-5303
Phone (904) 452-4728
DSN 922-4728
FAX (904) 452-2387/2799

Laboratory Report
Total Lead

Requester:	NPWC Environmental	**Report Number:**	9604020 D
Address:	Bldg. 3887	**Sample Date:**	4 Apr 96
	NAS Pensacola, Fl 32508	**Received Date:**	5 Apr 96
Phone #:	452-4728	**Sample Site:**	Bronson Field, Bldg. 1120
Contact:	Greg Campbell	**Job Order #:**	130 5001

Sample ID#	Lab	1- 61372	2- 61373	3- 61374	4-	Analyst(s):
Sample Name	Requester	MW-6	Duplicate	Eq. Blank		ICP – Brian Nelson
Collector Name		P. J. B.	P. J. B.	P. J. B.		
Date/Time	Comp start					
Collected	Comp stop					Date(s) of analysis:
(Military)	Grab	4 Apr 96 @ 1430	4 Apr 96 @ N/S	4 Apr 96 @ 1315		ICP – 16 Apr 96
Sample Type	Comp/Grab	Grab	Grab	Grab		
Sample Matrix		Groundwater	Groundwater	Groundwater		

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.	
Metals:	METHOD #	1- 61372	units	Limit	2- 61373	units	Limit	3- 61374	units	Limit	4-	units	Limit	Preservative(s)
Lead(Pb)	SW 6010	X 0.26	mg/l	0.05	X 0.21	mg/l	0.05	X BDL	mg/l	0.05	X	mg/l	0.05	None

D-20

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 22-Apr-96 12:27

End of Report

PWC 5090/14

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508-5303
Phone (904) 452-4728/3642
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: 9604019 A
Sample Date: 4 Apr 96
Received Date: 5 Apr 96
Sample Site: Bronson Field, Bldg. 1120
Job Order #: 130 5001

Sample ID#	Lab	1- 61368	2- 61369	3- 61370	4- 61371
Sample Name	Requester	MW-2	MW-3	MW-4	MW-5
Collector Name		P. J. B.	P. J. B.	P. J. B.	P. J. B.
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	4 Apr 96 @ 1400	4 Apr 96 @ 1330	4 Apr 96 @ 1530	4 Apr 96 @ 1500
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab
Analyst		B. Jacquart	B. Jacquart	B. Jacquart	B. Jacquart
Date of Analysis		14 Apr 96	14 Apr 96	14 Apr 96	14 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.
Volatiles by GCMS (Capillary)	METHOD #	1- 61368	units	Limit	2- 61369	units	Limit	3- 61370	units	Limit	4- 61371	units	Limit
Ethylene Dibromide	EPA 504	BDL	ug/l	0.02	BDL	ug/l	0.02	BDL	ug/l	0.02	BDL	ug/l	0.02

SURROGATE RECOVERIES Compound	Acceptance Limits				
2,4,5,6-Tetrachloro-m-xylene	60-140	116	87	120	104

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 03-May-96 @ 13:44
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: 9604020 A
Sample Date: 4 Apr 96
Received Date: 5 Apr 96
Sample Site: Bronson Field, Bldg. 1120
Job Order #: 130 5001

Sample ID#	Lab	1- 61372			2- 61373			3- 61374			4-		
Sample Name	Requester	MW-6			Duplicate			Eq. Blank					
Collector Name		P. J. B.			P. J. B.			P. J. B.					
Date/Time	Comp start												
Collected	Comp stop												
(Military)	Grab	4 Apr 96	@	1430	4 Apr 96	@	N/S	4 Apr 96	@	1315			
Sample Type	Comp/Grab	Grab			Grab			Grab					
Analyst		B. Jacquart			B. Jacquart			B. Jacquart					
Date of Analysis		14 Apr 96			14 Apr 96			14 Apr 96					
Sample Matrix		Groundwater			Groundwater			Deionized Water					
Dilution		Dilution	X	1	Dilution	X	1	Dilution	X	1	Dilution	X	1
PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Volatiles by GCMS (Capillary)	METHOD #	1- 61372	units	Limit	2- 61373	units	Limit	3- 61374	units	Limit	4-	units	Limit
Ethylene Dibromide	EPA 504	BDL	ug/l	0.02	BDL	ug/l	0.02	BDL	ug/l	0.02		ug/l	0.02

SURROGATE RECOVERIES Compound	Acceptance Limits				
2,4,5,6-Tetrachloro-m-xylene	60-140	82	111	96	

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 03-May-96 @ 13:46
Report Generated

PWC 5090/14

Page 1 of 1

End of Report

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"FINAL REPORT FORMAT - SINGLE"

Accession: 604259
Client: NAS, CO, PWC
Project Number: CALL #9029
Project Name: FLPRO
Project Location: BRONSON 1120, 1101
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

Lab Id: 001
Client Sample Id: 61368 BRONSON 1120 MW2

Sample Date/Time: 04-APR-96 1400
Received Date: 12-APR-96

Batch: FPW032
Blank: B Dry Weight %: N/A

Extraction Date: 13-APR-96
Analysis Date: 19-APR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	110000	1000	
NONATRIACONTANE	%REC/SURR	66	42-193	
ORTHO TER PHENYL	%REC/SURR	117	82-142	
ANALYST	INITIALS	KS		

Comments:

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"FINAL REPORT FORMAT - SINGLE"

Accession: 604259
Client: NAS, CO, PWC
Project Number: CALL #9029
Project Name: FLPRO
Project Location: BRONSON 1120, 1101
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

Lab Id: 002 Sample Date/Time: 04-APR-96 1330
Client Sample Id: 61369 BRONSON 1120 MW3 Received Date: 12-APR-96

Batch: FPW032 Extraction Date: 13-APR-96
Blank: B Dry Weight %: N/A Analysis Date: 19-APR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	31000	100	
NONATRIACONTANE	%REC/SURR	97	42-193	
ORTHO TER PHENYL	%REC/SURR	112	82-142	
ANALYST	INITIALS	KS		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 604259
Client: NAS, CO, PWC
Project Number: CALL #9029
Project Name: FLPRO
Project Location: BRONSON 1120, 1101
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

Lab Id: 003 Sample Date/Time: 04-APR-96 1530
Client Sample Id: 61370 BRONSON 1120 MW4 Received Date: 12-APR-96

Batch: FPW032 Extraction Date: 13-APR-96
Blank: B Dry Weight %: N/A Analysis Date: 18-APR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	6300	100	
NONATRIACONTANE	%REC/SURR	67	42-193	
ORTHO TER PHENYL	%REC/SURR	95	82-142	
ANALYST	INITIALS	KS		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 604259
Client: NAS, CO, PWC
Project Number: CALL #9029
Project Name: FLPRO
Project Location: BRONSON 1120, 1101
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

Lab Id: 004 Sample Date/Time: 04-APR-96 1500
Client Sample Id: 61371 BRONSON 1120 MW5 Received Date: 12-APR-96

Batch: FPW032 Extraction Date: 13-APR-96
Blank: B Dry Weight %: N/A Analysis Date: 18-APR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	4800	100	
NONATRIACONTANE	%REC/SURR	51	42-193	
ORTHO TER PHENYL	%REC/SURR	101	82-142	
ANALYST	INITIALS	KS		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 604259
Client: NAS, CO, PWC
Project Number: CALL #9029
Project Name: FLPRO
Project Location: BRONSON 1120, 1101
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

Lab Id: 005 Sample Date/Time: 04-APR-96 1430
Client Sample Id: 61372 BRONSON 1120 MW6 Received Date: 12-APR-96

Batch: FPW032 Extraction Date: 13-APR-96
Blank: B Dry Weight %: N/A Analysis Date: 18-APR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	15000	100	
NONATRIACONTANE	%REC/SURR	64	42-193	
ORTHO TER PHENYL	%REC/SURR	90	82-142	
ANALYST	INITIALS	KS		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 604259
Client: NAS, CO, PWC
Project Number: CALL #9029
Project Name: FLPRO
Project Location: BRONSON 1120, 1101
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

Lab Id: 006 Sample Date/Time: 04-APR-96 N/S
Client Sample Id: 61373 BRONSON 1120 DUP Received Date: 12-APR-96

Batch: FPW032 Extraction Date: 13-APR-96
Blank: B Dry Weight %: N/A Analysis Date: 19-APR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	47000	500	
NONATRIACONTANE	%REC/SURR	69	42-193	
ORTHO TER PHENYL	%REC/SURR	96	82-142	
ANALYST	INITIALS	KS		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession:	604259
Client:	NAS, CO, PWC
Project Number:	CALL #9029
Project Name:	FLPRO
Project Location:	BRONSON 1120, 1101
Test:	FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method:	PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method:	3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix:	WATER
QC Level:	I

Lab Id:	007	Sample Date/Time:	04-APR-96 1315
Client Sample Id:	61374 BRONSON 1120 EQ BLNK	Received Date:	12-APR-96
Batch: FPW032		Extraction Date:	13-APR-96
Blank: B	Dry Weight %: N/A	Analysis Date:	18-APR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	ND	100	
NONATRIACONTANE	%REC/SURR	86	42-193	
ORTHO TER PHENYL	%REC/SURR	92	82-142	
ANALYST	INITIALS	KS		

Comments:

"Method Report Summary"

Accession Number: 604259
Client: NAS, CO, PWC
Project Number: CALL #9029
Project Name: FLPRO
Project Location: BRONSON 1120, 1101
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40

Client Sample Id:	Parameter:	Unit:	Result:
61368 BRONSON 1120 MW2	TOTAL PETROLEUM HYDROCARBON	UG/L	110000
61369 BRONSON 1120 MW3	TOTAL PETROLEUM HYDROCARBON	UG/L	31000
61370 BRONSON 1120 MW4	TOTAL PETROLEUM HYDROCARBON	UG/L	6300
61371 BRONSON 1120 MW5	TOTAL PETROLEUM HYDROCARBON	UG/L	4800
61372 BRONSON 1120 MW6	TOTAL PETROLEUM HYDROCARBON	UG/L	15000
61373 BRONSON 1120 DUP	TOTAL PETROLEUM HYDROCARBON	UG/L	47000
61381 BRONSON 1101 MW2	TOTAL PETROLEUM HYDROCARBON	UG/L	670
61382 BRONSON 1101 MW3	TOTAL PETROLEUM HYDROCARBON	UG/L	1800
61383 BRONSON 1101 MW4	TOTAL PETROLEUM HYDROCARBON	UG/L	930
61384 BRONSON 1101 MW5	TOTAL PETROLEUM HYDROCARBON	UG/L	21000
61385 BRONSON 1101 MW6	TOTAL PETROLEUM HYDROCARBON	UG/L	4300
61386 BRONSON 1101 DUP	TOTAL PETROLEUM HYDROCARBON	UG/L	810
61387 BRONSON 1101 EQ BLNK	TOTAL PETROLEUM HYDROCARBON	UG/L	210

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

Quality Control Report

Analysis: FLPRO\PETRO. HYDROCARBON RANGE C8-C40

Accession:	604259
Client:	NAS, CO, PWC
Project Number:	CALL #9029
Project Name:	FLPRO
Project Location:	BRONSON 1120, 1101
Department:	SEMI-VOLATILE FUELS

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

Date 23-Apr-96

"QC Report"

Title: Water Blank
Batch: FPW032
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992

Blank Id: B Date Analyzed: 18-APR-96 Date Extracted: 13-APR-96

Parameters:	Units:	Results:	Reporting Limits:
TOTAL PETROLEUM HYDROCARBON	UG/L	ND	100
ORTHO TER PHENYL	%REC/SURR	82	37-140
ANALYST	INITIALS	KS	
C-39	UG/L	78	42-193

Comments:

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"QC Report"

Title: Water Reagent
Batch: FPW032
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992

RS Date Analyzed: 16-APR-96
RSD Date Analyzed: 16-APR-96
RS Date Extracted: 11-APR-96
RSD Date Extracted: 11-APR-96

Parameters:	Spike Added	Sample Conc	RS Conc	RS %Rec	RSD Conc	RSD %Rec	RPD	RPD Lmts	Rec Lmts
TOTAL PETROLEUM HYDROCARBON	294	<100	249	85	241	82	4	30	57-122
Surrogates:									
ORTHO TER PHENYL				114		107			82-142
C-39				75		73			42-193

Comments:

Notes:
N/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT
UG/L = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.
SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

Common notation for Organic reporting

N/S = NOT SUBMITTED
N/A = NOT APPLICABLE
D = DILUTED OUT
UG = MICROGRAMS
UG/L = PARTS PER BILLION.
UG/KG = PARTS PER BILLION.
MG/M3 = MILLIGRAM PER CUBIC METER.
PPMV = PART PER MILLION BY VOLUME.
MG/KG = PARTS PER MILLION.
MG/L = PARTS PER MILLION.
< = LESS THAN DETECTION LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS

SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

ORGANIC SOILS ARE REPORTED ON A DRYWEIGHT BASIS.

ND = NOT DETECTED ABOVE REPORTING LIMIT.

RPT LIMIT = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION)

ATI/GC/FID
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME IONIZATION DETECTOR (FID).

ATI/GC/FIX
ATI GAS CHROMATOGRAPHIC METHOD FOR ANALYSIS OF FIXED GASES EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD) AND FLAME IONIZATION DETECTOR (FID).

ATI/GC/FPD
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME PHOTOMETRIC DETECTOR (FPD) IN SULFUR-SPECIFIC MODE.

ATI/GC/PID
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH PHOTOIONIZATION DETECTOR (PID).

ATI/GC/TCD
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD).

LJT = LISA THOMASON
SW = STEVE WILHITE
KW = KAREN WADSWORTH
PL = PAUL LESCHENSKY
RW = ROBERT WOLFE
BV = BEN VAUGHN
BC = BETH COLEMAN
KS = KENDALL SMITH
KK = KERRY KUST
DWB = DAVID W. BOWERS
RP = ROB PEREZ

8363/227

Analytical Technologies, Inc.
11 East Olive Road • Pensacola, Florida 32514 • (904) 474-1001

CHAIN OF CUSTODY

pg 1 of 2

PART 1 - Bottle Shipment Information ATI ACCESSION #: 604259

CLIENT: NPWC ENV. LAB | CLIENT PROJECT NUMBER: STUB 6102-6170

QUANTITY OF SAMPLE CONTAINERS SHIPPED	PRESERVATIVE							PLASTIC CONTAINERS							GLASS CONTAINERS									NOTES
	H_2SO_4	HNO3	HCL	Zn Acetate	$Na_2S_2O_3$	Unpreserved	NaOH	8 oz.	16 oz.	32 oz.	½ gallon	1 gallon	Whirl-pak	100-ML Cup	120 ml (A)	1 liter (A)	1 liter (C)	40 ml Vial	4 oz. wm	8 oz. wm	16 oz. wm	32 oz. wm	D.I. Trip Blank	
28																✓								

Relinquished By:	Time	Date	Received By:	Time	Date

PART 2 - Sample/Project Information

SAMPLE MATRIX CODES

DW DRINKING WATER
WW WASTEWATER
GW GROUNDWATER
AI AIR
SO SOIL
OI OIL
SW SURFACE WATER
SL SLUDGE
ST STORMWATER

DI DEIONIZED

PARAMETERS AND PRESERVATIVES REQUESTED

SAMPLE I.D.	SAMPLE DATE	SAMPLE TIME	MATRIX	FL PRO											TOTAL # OF BOTTLES
1120 61368 BRONSON MW2	4/4/96	1400	GW	✓										1	+2
61369 MW3		1330		✓										2	+2
61370 MW4		1530		✓										3	+2
61371 MW5		1500		✓										4	+2
61372 MW6		1430		✓										5	+2
61373 DUP		NS	↓	✓										6	+2
61374 EQ BLNK	↓	1315	DI	✓										7	+2
1101 61381 MW2	4/5/96	1030	GW	✓										8	+2
61382 MW3		0930		✓										9	+2
61383 ↓ MW4	↓	1000	↓	✓										10	+2

Total Number of Bottles/Containers: ~~10~~ 20

Relinquished By	Date	Time	Received By	Date	Time
Kathy Reed	4/12/96	1120	[illegible]	4-12-96	1120
[illegible]	4/12/96	1325	Linda L. Kitt	4/12/96	1325

Client NPWC ENV. LAB CODE 920			Purchase Order Number STUB 6102-6170
Address BLDG 3297			Project Number CALL #9029
City PENSACOLA	State FL	Zip 32508	Project Name FL PRO
Phone Number (904) 452-3642	Fax Number (904) 452-2799		Project Location BRONSON 1120, 1101
Project Manager JERRY DEES			Sampled By PJB

TURNAROUND TIMES	check below	SPECIAL INSTRUCTIONS
Standard - 14-21 days	✓	STUB 6102-6170 VERBAL DUE 4/19/96
RUSH (must be approved in advance)		CALL 9029 WRITTEN DUE 4/20/96
<- 48 hours - 2x standard price		JON 1305001
3-7 days - 1.5x standard price		FTEN #007
TCLP - 1 week rush 1.5x standard price		D-35
QC Level none I II III IV (circle one)		Copies of report needed 1

FORM # 12694 — METRO PRINTING, INC., HUNTSVILLE, ALABAMA 35801 WHITE — LAB CANARY — REPORT PINK — CLIENT

Analytical Technologies, Inc.
11 East Olive Road • Pensacola, Florida 32514 • (904) 474-1001

CHAIN OF CUSTODY

pg 2 of 2

ATI ACCESSION #: 604259

PART 1 - Bottle Shipment Information

CLIENT:

CLIENT PROJECT NUMBER: 6102-6170

QUANTITY OF SAMPLE CONTAINERS SHIPPED	PRESERVATIVE							PLASTIC CONTAINERS							GLASS CONTAINERS									NOTES
	H_2SO_4	HNO3	HCL	Zn Acetate	$Na_2S_2O_3$	Unpreserved	NaOH	8 oz.	16 oz.	32 oz.	½ gallon	1 gallon	Whirl-pak	100-ML Cup	120 ml (A)	1 liter (A)	1 liter (C)	40 ml Vial	4 oz. wm	8 oz. wm	16 oz. wm	32 oz. wm	D.I. Trip Blank	

Relinquished By:	Time	Date	Received By:	Time	Date

PART 2 - Sample/Project Information

SAMPLE MATRIX CODES

DW DRINKING WATER
WW WASTEWATER
GW GROUNDWATER
AI AIR
SO SOIL
OI OIL
SW SURFACE WATER
SL SLUDGE
ST STORMWATER

PARAMETERS AND PRESERVATIVES REQUESTED

SAMPLE I.D.	SAMPLE DATE	SAMPLE TIME	MATRIX	FL PRO											TOTAL # OF BOTTLES
61384 BRONSON #01 MW5	4/5/96	1100	GW	✓										11	+ 2
61385 MW6		0900		✓										12	+ 2
61386 DUP		NS		✓										13	+ 2
61387 EQ BLNK	✓	0830	DI	✓										14	+ 2

Total Number of Bottles/Containers: 48

Relinquished By	Date	Time	Received By	Date	Time
Kathy Bennett	4/12/96	1120	[illegible]	4-12-96	1120
[illegible]	4-12-96	1325	Linda L. Rutt	4/12/96	1325

Client NPWC ENV LAB CODE 920			Purchase Order Number STUB 6102-6170
Address BLDG 3297			Project Number CALL 9029
City PENSACOLA	State FL	Zip 32508	Project Name FL PRO
Phone Number (904) 452-3642	Fax Number (904) 452-2799		Project Location BRONSON 1120, 1101
Project Manager JERRY DEES			Sampled By PJB

TURNAROUND TIMES	check below	SPECIAL INSTRUCTIONS
Standard - 14-21 days	✓	STUB 6102-6170 VERBAL DUE 4/19/96
RUSH (must be approved in advance)		CALL 9029 WRITTEN DUE 4/26/96
<- 48 hours - 2x standard price		JON 1305001
3-7 days - 1.5x standard price		ITEM #007
TCLP - 1 week rush 1.5x standard price		D-36
QC Level none I II III IV (circle one)		Copies of report needed 1

FORM # 12694 — METRO PRINTING, INC., HUNTSVILLE, ALABAMA 35801

WHITE — LAB CANARY — REPORT PINK — CLIENT

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 820
NAS Pensacola, FL 32508-8500

Ph#-(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305001

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 4.04.96
Received Date: 4.05.96
Sample Site: BRONSON FIELD 1120
Lab Due Date:

Sample ID #	Lab	#1-61368	#2-61369	#3-61370	#4-61371	Notes:
Sample Name or Location	----------	MW-2	MW-3	MW-4	MW-5	XAG
Sampled by	----------	PJB	PJB	PJB	PJB	
Composite Date/Time Collected	Begin					
	Frequency					
	End					
Grab Time	----------	1400	1330	1530	1500	
Sample Matrix	----------	GW	GW	GW	GW	

PARAMETER by Method Name	METHOD #	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Ethylene Dibromide (EDB)	EPA 504	X	2 EDB	X	2 EDB	X	2 EDB	X	2 EDB	3	120ml A VOA/4 oz.	None/4° C
Purg. Halocarbons/GC	EPA 601									4	40 ml VOA Vial x 2	HCl/4° C
Purg. Aromatics/GC	EPA 602									3	40 ml VOA Vial x 2	HCl/4° C
Purg. Halo. & Aro./GC	EPA 601/602	X	3 VOA	X	3 VOA	X	3 VOA	X	3 VOA	6	40 ml VOA Vial x 2	HCl/4° C
Polynuclear Aromatics/HPLC	EPA 610									7	1L Amber x 2	4° C
Purgeables/GCMS	EPA 624									8	40 ml VOA Vial x 2	HCl/4° C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4° C
Gas Chromatography	EPA SW 8000									5	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Halo. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCl/4° C/None
Non-Halo. Vol. Org./GC	EPA SW 8015(MOD)									4	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCl/4° C/None
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									6	40ml VOAx2/4 oz.	HCl/4° C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4° C/None
VOC/GCMS	EPA SW 8240A									8	40ml VOAx2/4 oz.	HCl/4° C/None
VOC/GCMS-Cap.	EPA SW 8260									8	40ml VOAx2/4 oz.	HCl/4° C/None
Semivol. Org./GCMS-Cap.	EPA SW 8270A									16	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310	X	2 PAH	X	2 PAH	X	2 PAH	X	2 PAH		1Lx3/4 oz.	4° C/None

PARAMETER by Group Name	METHOD SOURCE	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Gasoline Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Kerosene Analytical Group	EPA SW-846	X		X		X		X			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: Patrick J. [signature]
Date/Time: 4.5.96 / 0800

Received by: Jason T. [signature]
Date/Time: 4/5/96 0800

PWC 9510/6

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 820
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: 4.04.96
Received Date: 4.05.96
Sample Site: BRONSON FIELD 1120
Lab Due Date:

Sample ID #	Lab	#1- 61372		#2- 61373		#3- 61374		#4- 61375		Notes:		
Sample Name or Location	----------	MW-6		Duplicate		EQ. BLANK		Trip Blank				
Sampled by	----------	PJB		PJB		PJB		PJB				
Composite Date/Time Collected	Begin											
	Frequency											
	End											
Grab Time	----------	1430		—		1315		—				
Sample Matrix	----------	GW		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	X	2 EDB	~~X~~	~~2 E~~	3	120ml A VOA/4 oz	None/4° C
Purg. Halocarbons/GC	EPA 601								PJB	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	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								PJB	18	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	X		X		X		~~X~~	PJB		Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	EPA 418.1	X	2 TPH	X	2 TPH	X	2 TPH				Consult Lab	Consult Lab
RCRA Metals (8)	EPA Various										Consult Lab	Consult Lab
TCLP Metals (8) w/extraction	EPA SW-846										Consult Lab	Consult Lab
Lead (Pb)	EPA 239.2	X	1 PB	X	1 PB	X	1 PB				250ml/4 oz	HNO/None
Other:												

Comments:

Relinquished by: Peter D. [illegible]
Date/Time: 4.5.96 / 0800

Received by: Sharon T. [illegible]
Date/Time: 4/5/96 0800

PWC 9510/8

Navy Public Works Center
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Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

601/602 Volatiles by Method 8260

Lab Report Number: 62323
Sample Date: 05/22/96
Received Date: 05/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62323
Sample Name / Location	MW -1 BF 1120
Collector's Name	RDH
Date & Time Collected	5/22/96 @ 1425
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- 62323	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	111
Toluene-d8	86-119	105
Bromoflourobenzene	85-116	108

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-39

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

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 62323
Sample Date: 05/22/96
Received Date: 05/23/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62323		
Sample Name / Location	MW -1 BF 1120		
Collector's Name	RDH		
Date & Time Collected	5/22/96 @ 1425		
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- 62323	units	Det. Limit
Acenaphthene	BDL	UG/L	5
Acenaphthylene	BDL	UG/L	5
Anthracene	BDL	UG/L	2
Benzo(a)anthracene	BDL	UG/L	3
Benzo(a)pyrene	BDL	UG/L	2
Benzo(b)flouranthene	BDL	UG/L	4
Benzo(g,h,i)perylene	BDL	UG/L	3
Benzo(k)flouranthene	BDL	UG/L	4
Chrysene	BDL	UG/L	3
Dibenz(a,h)anthracene	BDL	UG/L	3
Flouranthene	BDL	UG/L	2
Fluorene	BDL	UG/L	4
Indeno(1,2,3-cd)pyrene	BDL	UG/L	2
1-Methylnaphthalene	BDL	UG/L	7
2-Methylnaphthalene	BDL	UG/L	5
Naphthalene	BDL	UG/L	7
Phenanthrene	BDL	UG/L	3
Pyrene	BDL	UG/L	3

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
Nitrobenzene- d5	35-114	80
2-Flourobiphenyl	43-116	85
Terphenyl -d14	33-141	88

COMMENTS :

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

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

D-40

"FINAL REPORT FORMAT - SINGLE"

Accession: 605504
Client: NAS, CO, PWC
Project Number: CALL #9038
Project Name: J.N. #13005001
Project Location: BRONSON FIELD
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

Lab Id: 001 Sample Date/Time: 22-MAY-96 1425
Client Sample Id: MW-1 1120 Received Date: 23-MAY-96

Batch: FPW043 Extraction Date: 23-MAY-96
Blank: A Dry Weight %: N/A Analysis Date: 04-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	160	100	
NONATRIACONTANE	%REC/SURR	48	42-193	
ORTHO TER PHENYL	%REC/SURR	116	82-142	
ANALYST	INITIALS	KS		

Comments:

Navy Public Works Center
Environmental Laboratory

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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: 9606049
Sample Date: 22 May 96
Received Date: 23 May 96
Sample Site: Bronson Field Site 1120
Job Order #: 130 5001

Sample ID#	Lab	1- 62313	2- 62314	3- 62315	4- 62316	Analyst(s):
Sample Name	Requester	MW-2	Dup-1	MW-3	MW-4	ICP - Brian Nelson
Collector Name		RDH	RDH	RDH	RDH	
Date/Time Collected (Military)	Comp start					
	Comp stop					Date(s) of analysis:
	Grab	22 May 96 @ 1410	22 May 96 @ 1410	22 May 96 @ 1335	22 May 96 @ 1336	ICP - 12 Jun 96
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab	
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	

PARAMETER Metals:	METHOD #	ID# 1- 62313	units	Det. Limit	ID# 2- 62314	units	Det. Limit	ID# 3- 62315	units	Det. Limit	ID# 4- 62316	units	Det. 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

D-42

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 18-Jun-96 12:35

End of Report

PWC 5090/14

Navy Public Works Center
Environmental Laboratory

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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: 9606050
Sample Date: 22 May 96
Received Date: 23 May 96
Sample Site: Bronson Field Site 1120
Job Order #: 130 5001

Sample ID#	Lab	1- 62317	2- 62318	3- 62319	4-	Analyst(s):
Sample Name	Requester	MW-5	MW-6	MW-1		ICP - Brian Nelson
Collector Name		RDH	RDH	RDH		
Date/Time Collected (Military)	Comp start					
	Comp stop					Date(s) of analysis:
	Grab	22 May 96 @ 1300	22 May 96 @ 1301	22 May 96 @ 1425		ICP - 12 Jun 96
Sample Type	Comp/Grab	Grab	Grab	Grab		
Sample Matrix		Groundwater	Groundwater	Groundwater		

PARAMETER Metals:	METHOD #	ID# 1- 62317	units	Det. Limit	ID# 2- 62318	units	Det. Limit	ID# 3- 62319	units	Det. Limit	ID# 4-	units	Det. Limit	Preservative(s)
Lead(Pb)	SW 6010A	X BDL	mg/l	0.05	BDL	mg/l	0.05	BDL	mg/l	0.05		mg/l	0.05	None

D-43

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 18-Jun-96 12:36

End of Report

PWC 5090/14

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500

Ph# -(904)452-3642/4758
Autovon-922-3642

Requester:
Address:
Phone #: 452-2170
Contact: GREG CAMPBELL
Job Order #: 1305001

Report Required? Yes No DER? Yes No
Lab ID Number: 9606049
Sample Date: 5-22-96
Received Date: 5/23/96
Sample Site: BARRANCAS FIELD 1120
Lab Due Date:

Sample ID #	Lab	#1-62313	#2-62314	#3-62315	#4-62316	#5-62317	#6-62318	#7-62319	Notes:
Sample Name	----------	MW-2	DUP-1	MW-3	MW-4	MW-5	MW-6	MW-1	
or Location	----------	1120	1120	1120	1120	1120	1120	1120	
Sampled by	----------	RDH	RDH	RDH	RDH	RDH	RDH	RDH	
Composite	Begin	BT 1.	BT 2.	BT 3.	BT 4.	BT 5.	BT 6.	BT 7	
Date/Time	Frequency	5-22-96	5-22-96	5-22-96	5-22-96	5-22-96	5-22-96	5-22-96	
Collected	End								
Grab Time	----------	1410	1410	1335	1336	1300	1301	1425	
Sample Matrix	----------	GW	GW	GW	GW	GW	GW	GW	
PARAMETER	METHOD #								Preservative(s) Used
Field:									
Cl, Residual	EPA 330.5								Field
pH	EPA 150.1								Field
Temperature	EPA 170.1								Field
Lab:									
Alkalinity	EPA 310.1								Iced/4° C.
Ammonia(as N)	EPA 350.1								H_2SO_4-pH<2
Ammonia(union)	DER Draft 00619								Iced/4° C.
BOD_5	EPA 405.1								Iced/4° C.
$CBOD_5$	EPA 405.1								Iced/4° C.
Chloride(Cl^-)	EPA 325.2								Iced/4° C.
COD	EPA 410.4								H_2SO_4-pH<2
Coliform(fecal)	SM 9222D								Iced/$Na_2S_2O_3$
Coliform(total)	SM 9222B								Iced/$Na_2S_2O_3$
Conductivity	EPA 120.1								Iced/4° C.
Cyanide(total)	EPA 335.2 or 335.3								NaOH-pH>10
Detergents	EPA 425.1								Iced/4° C.
Fluoride(F^-)	EPA 340.2								None
Hardness	EPA 130.2								HNO_3-pH<2
NO_2NO_3	EPA 353.2								H_2SO_4-pH<2
Oil & Grease	EPA 413.1								HCl-pH<2
pH	EPA 150.1								Iced/4° C.
Phenols(total)	EPA 420.1								H_2SO_4-pH<2
Phosphate(T)	EPA 365.1								H_2SO_4-pH<2
Solids(TS)	EPA 160.3								Iced/4° C.
Solids(TVS)	EPA 160.4								Iced/4° C.
Solids(TSS)	EPA 160.2								Iced/4° C.
Solids(TDS)	EPA 160.0								Iced/4° C.
Solids(SS)	EPA 160.5								Iced/4° C.
Sulfide($S^=$)	EPA 376.1								ZnAc+NaOH
TKN	EPA 351.2								H_2SO_4-pH<2
Turbidity	EPA 180.1								Iced/4° C.
Metals:									
Arsenic(As)	EPA 206.2								HNO_3-pH<2
Barium(Ba)	EPA 208.1								HNO_3-pH<2
Cadmium(Cd)	EPA 213.2								HNO_3-pH<2
Chromium(Cr)	EPA 218.1								HNO_3-pH<2
Copper(Cu)	EPA 220.2								HNO_3-pH<2
Iron(Fe)	EPA 236.1								HNO_3-pH<2
Lead(Pb)	EPA 239.2	✓	✓	✓	✓	✓	✓	✓	HNO_3-pH<2
Mercury(Hg)	EPA 245.2								HNO_3-pH<2
Nickel(Ni)	EPA 249.1								HNO_3-pH<2
Selenium(Se)	EPA 270.2								HNO_3-pH<2
Silver(Ag)	EPA 272.2								HNO_3-pH<2
Zinc(Zn)	EPA 289.1								HNO_3-pH<2
Other:									

Comments:

Relinquished by: [signature]
Date/Time: 5-23-96 0750

Received by: [signature]
Date/Time: 5/23/96 0805

PWC 9510/6

Navy Public Works Center
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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: 62526
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62526			
Sample Name / Location	MW-7 BF-1120			
Collector's Name	PJB			
Date & Time Collected	6/5/96 @ 0915			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	06/7/96 / JM			
Date of Analysis	06/7/96			
Sample Matrix	GW			
Dilution	X		1	
Compound Name	**1- 62526**	**units**	**Det. Limit**	**Flags**
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	5	
Chloroform	BDL	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodiflouromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene *	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	5	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	5	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichloroflouromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
1,2-Dichloroethane-d4	75-133	104
Toluene-d8	86-119	108
Bromoflourobenzene	85-116	105

COMMENTS :

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

Approved by : Jerry Deas, Laboratory Director

Date: 6/24/96
Report Generated

 End of Report

D-45

Navy Public Works Center
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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: 62526
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62526**		
Sample Name / Location	MW-7 BF-1120		
Collector's Name	PJB		
Date & Time Collected	6/5/96 @ 0915		
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 1.3		
COMPOUND NAME	1- **62526**	units	Det. Limit
Acenaphthene	BDL	UG/L	7
Acenaphthylene	BDL	UG/L	7
Anthracene	BDL	UG/L	3
Benzo(a)anthracene	BDL	UG/L	4
Benzo(a)pyrene	BDL	UG/L	3
Benzo(b)flouranthene	BDL	UG/L	5
Benzo(g,h,i)perylene	BDL	UG/L	4
Benzo(k)flouranthene	BDL	UG/L	5
Chrysene	BDL	UG/L	4
Dibenz(a,h)anthracene	BDL	UG/L	4
Flouranthene	BDL	UG/L	3
lourene	BDL	UG/L	5
Indeno(1,2,3-cd)pyrene	BDL	UG/L	3
1-Methylnaphthalene *	BDL	UG/L	7
2-Methylnaphthalene	BDL	UG/L	9
Naphthalene	BDL	UG/L	9
Phenanthrene	BDL	UG/L	4
Pyrene	BDL	UG/L	4

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
Nitrobenzene- d5	35-114	74
2-Flourobiphenyl	43-116	70
Terphenyl -d14	33-141	79

COMMENTS :

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

Approved by : Date/Time : 6/5/96 1035

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NAS Pensacola, FL 32508 - 6500
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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: 62526 A
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62526			
Sample Name / Location	MW-7 BF-1120			
Collector's Name	PJB			
Date & Time Collected	6/5/96 @ 0915			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	06/12/96 -BJ			
Date of Analysis	06/12/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	**1- 62526**	**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	89 %

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
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Page 1 of 1 End of Report

Navy Public Works Center
Environmental Laboratory
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: 62527
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62527
Sample Name / Location	MW-8 BF-1120
Collector's Name	PJB
Date & Time Collected	6/5/96 @ 0930
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/7/96 / JM
Date of Analysis	06/7/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 62527	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	102
Toluene-d8	86-119	107
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-48

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: 62527
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62527**
Sample Name / Location	MW-8 BF-1120
Collector's Name	PJB
Date & Time Collected	6/5/96 @ 0930
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	6/10/96; JJ
Date of Analysis	6/13/96
Sample Matrix	GW
Dilution	X 1.3

COMPOUND NAME	1- **62527**	units	Det. Limit
Acenaphthene	BDL	UG/L	7
Acenaphthylene	BDL	UG/L	7
Anthracene	BDL	UG/L	3
Benzo(a)anthracene	BDL	UG/L	4
Benzo(a)pyrene	BDL	UG/L	3
Benzo(b)flouranthene	BDL	UG/L	5
Benzo(g,h,i)perylene	BDL	UG/L	4
Benzo(k)flouranthene	BDL	UG/L	5
Chrysene	BDL	UG/L	4
Dibenz(a,h)anthracene	BDL	UG/L	4
Flouranthene	BDL	UG/L	3
Flourene	BDL	UG/L	5
Indeno(1,2,3-cd)pyrene	BDL	UG/L	3
1-Methylnaphthalene *	28	UG/L	7
2-Methylnaphthalene	25	UG/L	9
Naphthalene	BDL	UG/L	9
Phenanthrene	BDL	UG/L	4
Pyrene	BDL	UG/L	4

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
Nitrobenzene- d5	35-114	74
2-Flourobiphenyl	43-116	72
Terphenyl -d14	33-141	81

COMMENTS :

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

Approved by : Date/Time : 6/25/96 1035

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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: 62527 A
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62527			
Sample Name / Location	MW-8 BF-1120			
Collector's Name	PJB			
Date & Time Collected	6/5/96 @ 0930			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	06/12/96 -BJ			
Date of Analysis	06/12/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	**1- 62527**	**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	80 %

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
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Page 1 of 1 End of Report

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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: 62528
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62528
Sample Name / Location	MW-9 BF-1120
Collector's Name	PJB
Date & Time Collected	6/5/96 @ 0945
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/7/96 / JM
Date of Analysis	06/7/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 62528	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	8	ug/L	1	
Methylene Chloride	BDL	ug/L	5	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	5	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	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)	26	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
1,2-Dichloroethane-d4	75-133	96
Toluene-d8	86-119	104
Bromoflourobenzene	85-116	104

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
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Page 1 of 1 End of Report

D-51

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

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 62528
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62528		
Sample Name / Location	MW-9 BF-1120		
Collector's Name	PJB		
Date & Time Collected	6/5/96 @ 0945		
Sample Type (composite or grab)	Grab		
Analyst	M. Chambers		
Date of Extraction / Initials	6/10/96; JJ		
Date of Analysis	6/13/96		
Sample Matrix	GW		
Dilution	X 1.4		
COMPOUND NAME	1- 62528	units	Det. Limit
Acenaphthene	BDL	UG/L	7
Acenaphthylene	BDL	UG/L	7
Anthracene	BDL	UG/L	3
Benzo(a)anthracene	BDL	UG/L	4
Benzo(a)pyrene	BDL	UG/L	3
Benzo(b)flouranthene	BDL	UG/L	6
Benzo(g,h,i)perylene	BDL	UG/L	4
Benzo(k)flouranthene	BDL	UG/L	6
Chrysene	BDL	UG/L	4
Dibenz(a,h)anthracene	BDL	UG/L	4
Flouranthene	BDL	UG/L	3
Fluorene *	11	UG/L	6
Indeno(1,2,3-cd)pyrene	BDL	UG/L	3
1-Methylnaphthalene *	170	UG/L	35
2-Methylnaphthalene	260	UG/L	50
Naphthalene	88	UG/L	10
Phenanthrene	7	UG/L	4
Pyrene	BDL	UG/L	4

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
Nitrobenzene- d5	35-114	75
2-Flourobiphenyl	43-116	72
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 1035

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: 62528 A
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62528			
Sample Name / Location	MW-9 BF-1120			
Collector's Name	PJB			
Date & Time Collected	6/5/96 @ 0945			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	06/12/96 -BJ			
Date of Analysis	06/12/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	**1- 62528**	**units**	**Det. Limit**	**Flags**
Ethylene Dibromide (EDB)	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	65 %

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
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Page 1 of 1 End of Report

Navy Public Works Center
Environmental Laboratory
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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

601/602 Volatiles by Method 8260

Lab Report Number: 62529
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62529
Sample Name / Location	MW-10 BF-1120
Collector's Name	PJB
Date & Time Collected	6/5/96 @ 1000
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/7/96 / JM
Date of Analysis	06/7/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 62529	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	15	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)	37	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
1,2-Dichloroethane-d4	75-133	88
Toluene-d8	86-119	103
Bromoflourobenzene	85-116	96

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated

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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: 62529
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62529		
Sample Name / Location	MW-10 BF-1120		
Collector's Name	PJB		
Date & Time Collected	6/5/96 @ 1000		
Sample Type (composite or grab)	Grab		
Analyst	M. Chambers		
Date of Extraction / Initials	6/10/96; JJ		
Date of Analysis	6/13/96		
Sample Matrix	GW		
Dilution	X 1.2		
COMPOUND NAME	1- 62529	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
lourene	9	UG/L	5
Indeno(1,2,3-cd)pyrene	BDL	UG/L	2
1-Methylnaphthalene *	100	UG/L	6
2-Methylnaphthalene	150	UG/L	8
Naphthalene	86	UG/L	8
Phenanthrene	8	UG/L	4
Pyrene	BDL	UG/L	4

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
Nitrobenzene- d5	35-114	72
2-Flourobiphenyl	43-116	70
Terphenyl -d14	33-141	74

COMMENTS :

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

Approved by : Date/Time : 6/25/96 1035

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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: 62529 A
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62529			
Sample Name / Location	MW-10 BF-1120			
Collector's Name	PJB			
Date & Time Collected	6/5/96 @ 1000			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	06/12/96 -BJ			
Date of Analysis	06/12/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	**1- 62529**	**units**	**Det. Limit**	**Flags**
Ethylene Dibromide (EDB)	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	91 %

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
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Navy Public Works Center
Environmental Laboratory
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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

601/602 Volatiles by Method 8260

Lab Report Number: 62530
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62530
Sample Name / Location	MW-11 BF-1120
Collector's Name	PJB
Date & Time Collected	6/5/96 @ 1015
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/7/96 / JM
Date of Analysis	06/7/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 62530	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	82
Toluene-d8	86-119	101
Bromoflourobenzene	85-116	96

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
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Navy Public Works Center
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Contac Greg Campbell

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 62530
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62530**		
Sample Name / Location	MW-11 BF-1120		
Collector's Name	PJB		
Date & Time Collected	6/5/96 @ 1015		
Sample Type (composite or grab)	Grab		
Analyst	M. Chambers		
Date of Extraction / Initials	6/10/96; JJ		
Date of Analysis	6/13/96		
Sample Matrix	GW		
Dilution		X	1.3
COMPOUND NAME	1- **62530**	units	Det. Limit
Acenaphthene	BDL	UG/L	7
Acenaphthylene	BDL	UG/L	7
Anthracene	BDL	UG/L	3
Benzo(a)anthracene	BDL	UG/L	4
Benzo(a)pyrene	BDL	UG/L	3
Benzo(b)flouranthene	BDL	UG/L	5
Benzo(g,h,i)perylene	BDL	UG/L	4
Benzo(k)flouranthene	BDL	UG/L	5
Chrysene	BDL	UG/L	4
Dibenz(a,h)anthracene	BDL	UG/L	4
Flouranthene	BDL	UG/L	3
lourene *	BDL	UG/L	5
Indeno(1,2,3-cd)pyrene	BDL	UG/L	3
1-Methylnaphthalene *	BDL	UG/L	7
2-Methylnaphthalene	BDL	UG/L	9
Naphthalene	BDL	UG/L	9
Phenanthrene	BDL	UG/L	4
Pyrene	BDL	UG/L	4

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
Nitrobenzene- d5	35-114	80
2-Flourobiphenyl	43-116	79
Terphenyl -d14	33-141	90

COMMENTS :

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

Approved by Date/Time : 6/25/96 1035

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: 62530 A
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62530			
Sample Name / Location	MW-11 BF-1120			
Collector's Name	PJB			
Date & Time Collected	6/5/96 @ 1015			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	06/12/96 -BJ			
Date of Analysis	06/12/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	**1- 62530**	**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	75 %

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
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Page 1 of 1 End of Report

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Environmental Laboratory
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Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

601/602 Volatiles by Method 8260

Lab Report Number: 62531
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62531
Sample Name / Location	MW-12 BF-1120
Collector's Name	PJB
Date & Time Collected	6/5/96 @ 1030
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/7/96 / JM
Date of Analysis	06/7/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 62531	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)	1	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
1,2-Dichloroethane-d4	75-133	82
Toluene-d8	86-119	101
Bromoflourobenzene	85-116	93

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated

 End of Report

D-60

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: 62531
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62531		
Sample Name / Location	MW-12 BF-1120		
Collector's Name	PJB		
Date & Time Collected	6/5/96 @ 1030		
Sample Type (composite or grab)	Grab		
Analyst	M. Chambers		
Date of Extraction / Initials	6/10/96; JJ		
Date of Analysis	6/13/96		
Sample Matrix	GW		
Dilution	X 1.2		
COMPOUND NAME	1- 62531	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
lourene *	BDL	UG/L	5
Indeno(1,2,3-cd)pyrene	BDL	UG/L	2
1-Methylnaphthalene *	36	UG/L	6
2-Methylnaphthalene	34	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	87
2-Flourobiphenyl	43-116	85
Terphenyl -d14	33-141	90

COMMENTS :

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

Approved by : Date/Time : 6/25/96 1035

Navy Public Works Center
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Phone (904) 452-4728/3642
DSN 922-4728/3642

Analytical Report

Ethylene Dibromide by Method 504

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

Lab Report Number: 62531 A
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62531			
Sample Name / Location	MW-12 BF-1120			
Collector's Name	PJB			
Date & Time Collected	6/5/96 @ 1030			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	06/12/96 -BJ			
Date of Analysis	06/12/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	**1- 62531**	**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	106 %

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
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Page 1 of 1 End of Report

Navy Public Works Center
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Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

601/602 Volatiles by Method 8260

Lab Report Number: 62532
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62532
Sample Name / Location	MW-13 BF-1120
Collector's Name	PJB
Date & Time Collected	6/5/96 @ 1045
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/7/96 / JM
Date of Analysis	06/7/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 62532	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	80
Toluene-d8	86-119	100
Bromoflourobenzene	85-116	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: 6/24/96
Report Generated

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

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 62532
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62532**		
Sample Name / Location	MW-13 BF-1120		
Collector's Name	PJB		
Date & Time Collected	6/5/96 @ 1045		
Sample Type (composite or grab)	Grab		
Analyst	M. Chambers		
Date of Extraction / Initials	6/10/96; JJ		
Date of Analysis	6/13/96		
Sample Matrix	GW		
Dilution	X 1.4		
COMPOUND NAME	1- **62532**	units	Det. Limit
Acenaphthene	BDL	UG/L	7
Acenaphthylene	BDL	UG/L	7
Anthracene	BDL	UG/L	3
Benzo(a)anthracene	BDL	UG/L	4
Benzo(a)pyrene	BDL	UG/L	3
Benzo(b)flouranthene	BDL	UG/L	6
Benzo(g,h,i)perylene	BDL	UG/L	4
Benzo(k)flouranthene	BDL	UG/L	6
Chrysene	BDL	UG/L	4
Dibenz(a,h)anthracene	BDL	UG/L	4
Flouranthene	BDL	UG/L	3
Flourene *	BDL	UG/L	6
Indeno(1,2,3-cd)pyrene	BDL	UG/L	3
1-Methylnaphthalene *	BDL	UG/L	7
2-Methylnaphthalene	BDL	UG/L	10
Naphthalene	BDL	UG/L	10
Phenanthrene	BDL	UG/L	4
Pyrene	BDL	UG/L	4

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
Nitrobenzene- d5	35-114	76
2-Flourobiphenyl	43-116	78
Terphenyl -d14	33-141	90

COMMENTS :

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

Approved by : Date/Time : 6/5/96 1035

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: 62532 A
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62532			
Sample Name / Location	MW-13 BF-1120			
Collector's Name	PJB			
Date & Time Collected	6/5/96 @ 1045			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	06/12/96 -BJ			
Date of Analysis	06/12/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	**1- 62532**	**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
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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

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: 62533
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62533
Sample Name / Location	Duplicate BF1120
Collector's Name	PJB
Date & Time Collected	6/5/96 @
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/7/96 / JM
Date of Analysis	06/7/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 62533	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	7	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)	26	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
1,2-Dichloroethane-d4	75-133	81
Toluene-d8	86-119	102
Bromoflourobenzene	85-116	93

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated

 End of Report

D-66

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: 62533
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62533**
Sample Name / Location	Duplicate BF1120
Collector's Name	PJB
Date & Time Collected	6/5/96 @
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	6/10/96; JJ
Date of Analysis	6/13/96
Sample Matrix	GW
Dilution	X 1.5

COMPOUND NAME	1- **62533**	units	Det. Limit
Acenaphthene	BDL	UG/L	8
Acenaphthylene	BDL	UG/L	8
Anthracene	BDL	UG/L	3
Benzo(a)anthracene	BDL	UG/L	5
Benzo(a)pyrene	BDL	UG/L	3
Benzo(b)flouranthene	BDL	UG/L	6
Benzo(g,h,i)perylene	BDL	UG/L	5
Benzo(k)flouranthene	BDL	UG/L	6
Chrysene	BDL	UG/L	5
Dibenz(a,h)anthracene	BDL	UG/L	5
Flouranthene	BDL	UG/L	3
urene *	12	UG/L	6
Indeno(1,2,3-cd)pyrene	BDL	UG/L	3
1-Methylnaphthalene *	180	UG/L	40
2-Methylnaphthalene	290	UG/L	55
Naphthalene	120	UG/L	11
Phenanthrene	8	UG/L	5
Pyrene	BDL	UG/L	5

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
Nitrobenzene- d5	35-114	90
2-Flourobiphenyl	43-116	86
Terphenyl -d14	33-141	88

COMMENTS :

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

Approved by : Date/Time : 6/25/96 1035

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: 62533 A
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62533			
Sample Name / Location	Duplicate BF1120			
Collector's Name	PJB			
Date & Time Collected	6/5/96 @			
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- 62533**	**units**	**Det. Limit**	**Flags**
Ethylene Dibromide (EDB)	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	100 %

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
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Page 1 of 1 End of Report

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Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

601/602 Volatiles by Method 8260

Lab Report Number: 62534
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62534
Sample Name / Location	Equipment Blank BF-1120
Collector's Name	PJB
Date & Time Collected	6/5/96 @ 0900
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/7/96 / JM
Date of Analysis	06/7/96
Sample Matrix	DI Water
Dilution	X 1

Compound Name	1- 62534	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	102
Toluene-d8	86-119	104
Bromoflourobenzene	85-116	102

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated

Navy Public Works Center
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
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: 62534
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62534**
Sample Name / Location	Equipment Blank BF-1120
Collector's Name	PJB
Date & Time Collected	6/5/96 @ 0900
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	6/10/96; JJ
Date of Analysis	6/14/96
Sample Matrix	DI Water
Dilution	1 X 1

COMPOUND NAME	1- **62534**	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	59
2-Flourobiphenyl	43-116	59
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 1035

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: 62534 A
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62534			
Sample Name / Location	Equipment Blank BF-1120			
Collector's Name	PJB			
Date & Time Collected	6/5/96 @ 0900			
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- 62534**	**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
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: 62535
Sample Date: 06/5/96
Received Date: 06/5/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62535			
Sample Name / Location	Trip Blank BF - 1120			
Collector's Name	PJB			
Date & Time Collected	6/5/96 @ AM			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	06/7/96 / JM			
Date of Analysis	06/07/96			
Sample Matrix	DI Water			
Dilution	X 1			
Compound Name	**1- 62535**	**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 [1]	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichloroflouromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
1,2-Dichloroethane-d4	75-133	105
Toluene-d8	86-119	106
Bromoflourobenzene	85-116	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
Page 1 of 1 End of Report

D-72

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

1 of 3

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, FL 32508-6500
Ph#-(904) 452-4728
Autovon-922-4728

Report Required? Yes No DEP? Yes No

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305001

Lab ID Number:
Sample Date: 6.5.96
Received Date: 6.5.96
Sample Site: BF 1120
Lab Due Date:

Sample ID #	Lab	#1-6-2526	#2-6-2527	#3-6-2528	#4-6-2529
Sample Name or Location	----------	MW-7	MW-8	MW-9	MW-10
Sampled by	----------	PJB	PJB	PJB	PJB
Composite Date/Time Collected	Begin				
	Frequency				
	End				
Grab Time	----------	0915	0930	0945	1000
Sample Matrix	----------	GW	GW	GW	GW

Notes: XAG

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/Non
Halo. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCl/4° C/Non
Non-Halo. Vol. Org./GC	EPA SW 8015(MOD)									4	40mlx2/1Lx2/4 oz.	HCl/4° C/Non
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCl/4° C/Non
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									6	40ml VOAx2/4 oz.	HCl/4° C/Non
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4° C/None
VOC/GC/MS	EPA SW 8240A									8	40ml VOAx2/4 oz.	HCl/4° C/Non
VOC/GC/MS-Cap.	EPA SW 8260									8	40ml VOAx2/4 oz.	HCl/4° C/Non
Semivol. Org./GC/MS-Cap.	EPA SW 8270A									18	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310	X	2 PAH	X	2 PAH	X	2 PAH	X	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/Non
Other:												

Comments:

Relinquished by: [signature] / WES, Inc.
Date/Time: 6/5/96 1320

Received by: [signature]
Date/Time: 6/5/96 1320

PWC 9510/8

203

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 820
NAS Pensacola, FL 32508-4500
Ph#-(904) 452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305001

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 6·5·96
Received Date: 6·5·96
Sample Site: BF 1120
Lab Due Date:

Sample ID #	Lab	#1-6-2530	#2-6-2531	#3-6-2532	#4-6-2533
Sample Name or Location	----------	MW-11	MW-12	MW-13	Duplicate
Sampled by	----------	RTB	RTB	RTB	RTB
Composite Date/Time Collected	Begin				
	Frequency				
	End				
Grab Time	----------	1015	1030	1045	—
Sample Matrix	----------	GW	GW	GW	GW

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	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. Hals. & 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	40ml x2/1Lx2/4 oz.	HCl/4° C/None
Hals. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCl/4° C/None
Non-Hals. Vol. Org./GC	EPA SW 8015(MOD)									4	40ml x2/1Lx2/4 oz.	HCl/4° C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCl/4° C/None
Hals./Arom. Vol. Org./GC	EPA SW 8010/8020									6	40ml VOAx2/4 oz.	HCl/4° C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4° C/None
VOC/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	X	2 PAH	X	2 PAH	X	2 PAH	X	2 PAH		1Lx2/4 oz.	4° C/None

PARAMETER by Group Name	METHOD SOURCE	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Gasoline Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Kerosene Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	EPA 418.1	X	2 TPH	X	2 TPH	X	2 TPH	X	2 TPH		Consult Lab	Consult Lab
RCRA Metals (8)	EPA Various										Consult Lab	Consult Lab
TCLP Metals (8) w/extraction	EPA SW-846										Consult Lab	Consult Lab
Lead (Pb)	EPA 239.2										250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: [signature] / WES, Inc.
Date/Time: 6/5/96 1320

Received by: [signature]
Date/Time: 6/5/96 1320

PWC 8510/8

3 of 3

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg. 3297, Code #20
NAS Pensacola, FL 32508-6500

Ph#-(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305001

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 6.5.96
Received Date: 6.5.96
Sample Site: BF 1120
Lab Due Date:

Sample ID #	Lab	#1 6-2534	#2- 6-2535	#3- ~~6-2536~~	#4-
Sample Name or Location	----------	EQ. Blank	Trip blank		
Sampled by	----------	PJB	PJB		
Composite Date/Time Collected	Begin				
	Frequency				
	End				
Grab Time	----------	0900	AM		
Sample Matrix	----------	DI	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							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	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									18	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310	X	2 PAH								1Lx3/4 oz.	4° C/None

PARAMETER by Group Name	METHOD SOURCE	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Gasoline Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Kerosene Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	EPA 418.1	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: Patil D. Yan / WES, Inc.
Date/Time: 6/5/96 1320

Received by: [signature]
Date/Time: 6/5/96 1320

PWC 9510/8

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"FINAL REPORT FORMAT - SINGLE"

Accession:	606115
Client:	NAS, CO, PWC
Project Number:	9047
Project Name:	FL PRO
Project Location:	BRONSON SITE 1120
Test:	FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method:	PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method:	3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix:	GROUNDWATER
QC Level:	I

Lab Id:	001	Sample Date/Time:	05-JUN-96 0915
Client Sample Id:	62526 BF SITE 1120 (mw-7)	Received Date:	07-JUN-96
Batch: FPW051		Extraction Date:	11-JUN-96
Blank: A	Dry Weight %: N/A	Analysis Date:	15-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	13000	100	
NONATRIACONTANE	%REC/SURR	43	42-193	
ORTHO TER PHENYL	%REC/SURR	89	82-142	
ANALYST	INITIALS	KS		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession:	606115
Client:	NAS, CO, PWC
Project Number:	9047
Project Name:	FL PRO
Project Location:	BRONSON SITE 1120
Test:	FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method:	PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method:	3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix:	GROUNDWATER
QC Level:	I

Lab Id:	002	Sample Date/Time:	05-JUN-96 0930
Client Sample Id:	62527 BF SITE 1120 (mw-8)	Received Date:	07-JUN-96
Batch: FPW051		Extraction Date:	11-JUN-96
Blank: A	Dry Weight %: N/A	Analysis Date:	15-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	20000	100	
NONATRIACONTANE	%REC/SURR	53	42-193	
ORTHO TER PHENYL	%REC/SURR	90	82-142	
ANALYST	INITIALS	KS		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 606115
Client: NAS, CO, PWC
Project Number: 9047
Project Name: FL PRO
Project Location: BRONSON SITE 1120
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

Lab Id: 003
Client Sample Id: 62528 BF SITE 1120 (MW-9)
Sample Date/Time: 05-JUN-96 0945
Received Date: 07-JUN-96

Batch: FPW051
Blank: A
Dry Weight %: N/A
Extraction Date: 11-JUN-96
Analysis Date: 17-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	75000	1000	
NONATRIACONTANE	%REC/SURR	D	42-193	
ORTHO TER PHENYL	%REC/SURR	D	82-142	
ANALYST	INITIALS	KS		

Comments:
D = DILUTED OUT.

"FINAL REPORT FORMAT - SINGLE"

Accession: 606115
Client: NAS, CO, PWC
Project Number: 9047
Project Name: FL PRO
Project Location: BRONSON SITE 1120
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

Lab Id: 004 Sample Date/Time: 05-JUN-96 1000
Client Sample Id: 62529 BF SITE 1120 (mw-10) Received Date: 07-JUN-96

Batch: FPW051 Extraction Date: 11-JUN-96
Blank: A Dry Weight %: N/A Analysis Date: 17-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	41000	1000	
NONATRIACONTANE	%REC/SURR	D	42-193	
ORTHO TER PHENYL	%REC/SURR	D	82-142	
ANALYST	INITIALS	KS		

Comments:
D = DILUTED OUT.

"FINAL REPORT FORMAT - SINGLE"

Accession: 606115
Client: NAS, CO, PWC
Project Number: 9047
Project Name: FL PRO
Project Location: BRONSON SITE 1120
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

Lab Id: 005 Sample Date/Time: 05-JUN-96 1015
Client Sample Id: 62530 BF SITE 1120 (mw-11) Received Date: 07-JUN-96

Batch: FPW051 Extraction Date: 11-JUN-96
Blank: A Dry Weight %: N/A Analysis Date: 16-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	75000	1000	
NONATRIACONTANE	%REC/SURR	D	42-193	
ORTHO TER PHENYL	%REC/SURR	D	82-142	
ANALYST	INITIALS	KS		

Comments:
D = DILUTED OUT.

"FINAL REPORT FORMAT - SINGLE"

Accession:	606115
Client:	NAS, CO, PWC
Project Number:	9047
Project Name:	FL PRO
Project Location:	BRONSON SITE 1120
Test:	FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method:	PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method:	3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix:	GROUNDWATER
QC Level:	I

Lab Id:	006	Sample Date/Time:	05-JUN-96 1030
Client Sample Id:	62531 BF SITE 1120 (mw-12)	Received Date:	07-JUN-96
Batch: FPW051		Extraction Date:	11-JUN-96
Blank: A	Dry Weight %: N/A	Analysis Date:	19-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	87000	1000	
NONATRIACONTANE	%REC/SURR	D	42-193	
ORTHO TER PHENYL	%REC/SURR	D	82-142	
ANALYST	INITIALS	KS		

Comments:
D = DILUTED OUT.

"FINAL REPORT FORMAT - SINGLE"

Accession:	606115
Client:	NAS, CO, PWC
Project Number:	9047
Project Name:	FL PRO
Project Location:	BRONSON SITE 1120
Test:	FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method:	PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method:	3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix:	GROUNDWATER
QC Level:	I

Lab Id:	007	Sample Date/Time:	05-JUN-96 1045
Client Sample Id:	62532 BF SITE 1120 (MW-13)	Received Date:	07-JUN-96
Batch: FPW051		Extraction Date:	11-JUN-96
Blank: A	Dry Weight %: N/A	Analysis Date:	16-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	4800	100	
NONATRIACONTANE	%REC/SURR	46	42-193	
ORTHO TER PHENYL	%REC/SURR	98	82-142	
ANALYST	INITIALS	KS		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 606115
Client: NAS, CO, PWC
Project Number: 9047
Project Name: FL PRO
Project Location: BRONSON SITE 1120
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

Lab Id: 008
Client Sample Id: 62533 BF SITE 1120 (DUP)
Sample Date/Time: 05-JUN-96 N/S
Received Date: 07-JUN-96

Batch: FPW051
Blank: A
Dry Weight %: N/A
Extraction Date: 11-JUN-96
Analysis Date: 17-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	26000	1000	
NONATRIACONTANE	%REC/SURR	D	42-193	
ORTHO TER PHENYL	%REC/SURR	D	82-142	
ANALYST	INITIALS	KS		

Comments:
D = DILUTED OUT.

"FINAL REPORT FORMAT - SINGLE"

Accession: 606115
Client: NAS, CO, PWC
Project Number: 9047
Project Name: FL PRO
Project Location: BRONSON SITE 1120
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

Lab Id: 009
Client Sample Id: 62534 BF SITE 1120 (EQ. BLK)
Sample Date/Time: 05-JUN-96 0900
Received Date: 07-JUN-96

Batch: FPW051
Blank: A
Dry Weight %: N/A
Extraction Date: 11-JUN-96
Analysis Date: 16-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	ND	100	
NONATRIACONTANE	%REC/SURR	51	42-193	
ORTHO TER PHENYL	%REC/SURR	91	82-142	
ANALYST	INITIALS	KS		

Comments:

"Method Report Summary"

Accession Number: 606115
Client: NAS, CO, PWC
Project Number: 9047
Project Name: FL PRO
Project Location: BRONSON SITE 1120
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40

	Client Sample Id:	Parameter:	Unit:	Result:
mw-7	62526 BF SITE 1120	TOTAL PETROLEUM HYDROCARBON	UG/L	13000
mw-8	62527 BF SITE 1120	TOTAL PETROLEUM HYDROCARBON	UG/L	20000
mw-9	62528 BF SITE 1120	TOTAL PETROLEUM HYDROCARBON	UG/L	75000
mw-10	62529 BF SITE 1120	TOTAL PETROLEUM HYDROCARBON	UG/L	41000
mw-11	62530 BF SITE 1120	TOTAL PETROLEUM HYDROCARBON	UG/L	75000
mw-12	62531 BF SITE 1120	TOTAL PETROLEUM HYDROCARBON	UG/L	87000
	62532 BF SITE 1120	TOTAL PETROLEUM HYDROCARBON	UG/L	4800
mw-13	62533 BF SITE 1120	TOTAL PETROLEUM HYDROCARBON	UG/L	26000

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-100

Quality Control Report

Analysis: FLPRO\PETRO. HYDROCARBON RANGE C8-C40

Accession:	606115
Client:	NAS, CO, PWC
Project Number:	9047
Project Name:	FL PRO
Project Location:	BRONSON SITE 1120
Department:	SEMI-VOLATILE FUELS

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"QC Report"

Title: Water Blank
Batch: FPW051
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992

Blank Id: A Date Analyzed: 15-JUN-96 Date Extracted: 11-JUN-96

Parameters:	Units:	Results:	Reporting Limits:
TOTAL PETROLEUM HYDROCARBON	UG/L	ND	100
ORTHO TER PHENYL	%REC/SURR	88	82-142
ANALYST	INITIALS	KS	
C-39	%REC/SURR	47	42-193

Comments:

AMERICAN ENVIRONMENTAL NETWORK 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"QC Report"

Title: Water Reagent
Batch: FPW051
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992

RS Date Analyzed: 15-JUN-96
RSD Date Analyzed: 15-JUN-96

RS Date Extracted: 11-JUN-96
RSD Date Extracted: 11-JUN-96

Parameters:	Spike Added	Sample Conc	RS Conc	RS %Rec	RSD Conc	RSD %Rec	RPD	RPD Lmts	Rec Lmts
TOTAL PETROLEUM HYDROCARBON	4998	<100	4498	90	4441	89	1	30	57-122
Surrogates:									
ORTHO TER PHENYL				83		87			82-142
C-39				62		59			42-193

Comments:

Notes:
N/S = NOT SUBMITTED N/A = NOT APPLICABLE D = DILUTED OUT
UG/L = PARTS PER BILLION. < = LESS THAN REPORTING LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS.
SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

Common notation for Organic reporting

N/S = NOT SUBMITTED
N/A = NOT APPLICABLE
D = DILUTED OUT
UG = MICROGRAMS
UG/L = PARTS PER BILLION.
UG/KG = PARTS PER BILLION.
MG/M3 = MILLIGRAM PER CUBIC METER.
PPMV = PART PER MILLION BY VOLUME.
MG/KG = PARTS PER MILLION.
MG/L = PARTS PER MILLION.
< = LESS THAN DETECTION LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS

SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

ORGANIC SOILS ARE REPORTED ON A DRYWEIGHT BASIS.

ND = NOT DETECTED ABOVE REPORTING LIMIT.

RPT LIMIT = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION)

ATI/GC/FID
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME IONIZATION DETECTOR (FID).

ATI/GC/FIX
ATI GAS CHROMATOGRAPHIC METHOD FOR ANALYSIS OF FIXED GASES EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD) AND FLAME IONIZATION DETECTOR (FID).

ATI/GC/FPD
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME PHOTOMETRIC DETECTOR (FPD) IN SULFUR-SPECIFIC MODE.

ATI/GC/PID
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH PHOTOIONIZATION DETECTOR (PID).

ATI/GC/TCD
ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD).

LJT = LISA THOMASON
SW = STEVE WILHITE
KW = KAREN WADSWORTH
PL = PAUL LESCHENSKY
RW = ROBERT WOLFE
BV = BEN VAUGHN
BC = BETH COLEMAN
KS = KENDALL SMITH
KK = KERRY KUST
DWB = DAVID W. BOWERS
RP = ROB PEREZ

American Environmental Network, Inc.
11 East Olive Road • Pensacola, FL 32514 • (904) 474-1001

CHAIN OF CUSTODY

AEN ACCESSION #: 606115

PART 1 - Bottle Shipment Information

CLIENT: NPWC ENV LAB | CLIENT PROJECT NUMBER: 6150-9295

QUANTITY OF SAMPLE CONTAINERS SHIPPED	PRESERVATIVE							PLASTIC CONTAINERS							GLASS CONTAINERS									NOTES
	H_2SO_4	HNO3	HCL	Zn Acetate	$Na_2S_2O_3$	Unpreserved	NaOH	8 oz	16 oz.	32 oz.	½ gallon	1 gallon	Whirl-pak	100-ML Cup	120 ml (A)	1 liter (A)	1 liter (C)	40 ml Vial	4 oz. wm	8 oz. wm	16 oz. wm	32 oz. wm	D.I. Trip Blank	
18																✓								

Relinquished By:	Time	Date	Received By:	Time	Date

PART 2 - Sample/Project Information

SAMPLE MATRIX CODES

DW DRINKING WATER — AI AIR — SW SURFACE WATER
WW WASTEWATER — SO SOIL — SL SLUDGE
GW GROUNDWATER — QI OIL — ST STORMWATER

PARAMETERS AND PRESERVATIVES REQUESTED

SAMPLE I.D.	SAMPLE DATE	SAMPLE TIME	MATRIX	FL PRO	TOTAL OF BOTTLE
62526 BF SITE 1120	6/5/96	0915	GW	✓	2
62527		0930		✓	2
62528		0945		✓	2
62529		1000		✓	2
62530		1015		✓	2
62531		1030		✓	2
62532		1045		✓	2
62533		NS		✓	2
62534		0900	DI	✓	2

Total Number of Bottles/Containers: 18

Relinquished By	Date	Time	Received By	Date	Time
Kathy Bevels	6/7/96	1120	Ray Hicks	6/7/96	1120
Ray Hicks	6/7/96	1210	Linda L. Kitt	6/7/96	1210

Client NPWC ENV. LAB Code 920		Purchase Order Number 6150-9295	
Address BLDG 3292		Project Number 9047	
City PENSACOLA	State FL	Zip 32508	Project Name FL PRO
Phone Number 904)452-3642	Fax Number 904)452-2799	Project Location BRONSON SITE 1120	
Project Manager Jerry Dees		Sampled By PJB	

TURNAROUND TIMES	check below	SPECIAL INSTRUCTIONS
Standard - 14-21 days	✓	JON 130.5001
RUSH (must be approved in advance)		ITEM #015
<- 48 hours - 2x standard price		Verbals Due 6/14/96
3-7 days - 1.5x standard price		Written Due 6/21/96
TCLP - 1 week rush 1.5x standard price		D-90
QC Level none I II III IV (circle one)		Copies of report needed 1

FORM # 12694 WHITE — LAB CANARY — REPORT PINK — CL

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:	9607112 A
Sample Dates:	02-03 Jul 96
Received Date:	08 Jul 96
Sample Site:	Bronson Field Site 1120
Job Order #:	130 5001

Sample ID#	Lab	1- 62886	2- 62887	3- 62888	4- 62889	Analyst(s):
Sample Name	Requester	Site 1120 MW-11	Site 1120 MW-12	Site 1120 MW-10	Site 1120 MW-9	ICP- Brian Nelson
Collector Name		T.H.	T.H.	T.H.	T.H.	
Date/Time Collected (Military)	Comp start					
	Comp stop					Date(s) of analysis:
	Grab	02 Jul 96 @ 1430	02 Jul 96 @ 1615	02 Jul 96 @ 1740	02 Jul 96 @ 1830	ICP- 22 Jul 96
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab	
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	

PARAMETER Metals:	METHOD #	ID# 1- 62886	units	Det. Limit	ID# 2- 62887	units	Det. Limit	ID# 3- 62888	units	Det. Limit	ID# 4- 62889	units	Det. 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	N/S

Sample ID#	Lab	5- 62890	6- 62891	7- 62892	8- 62893	Analyst(s):
Sample Name	Requester	Site 1120 MW-8	Site 1120 FD-2	Site 1120 Rinse Blank	Site 1120 MW-7	ICP- Brian Nelson
Collector Name		T.H.	T.H.	T.H.	T.H.	
Date/Time Collected (Military)	Comp start					
	Comp stop					Date(s) of analysis:
	Grab	02 Jul 96 @ 2015	02 Jul 96 @ N/S	02 Jul 96 @ 2025	03 Jul 96 @ 1920	ICP- 22 Jul 96
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab	
Sample Matrix		Groundwater	Groundwater	Rinse Water	Groundwater	

PARAMETER Metals:	METHOD #	ID# 5- 62890	units	Det. Limit	ID# 6- 62891	units	Det. Limit	ID# 7- 62892	units	Det. Limit	ID# 8- 62893	units	Det. 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	N/S

D-91

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

Approved by: JaMoore, Chemist for Jerry Dees, Laboratory Director

Date/Time: 25-Jul-96 13:39

PWC 5090/14

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
Lead in Water

Requester:	PWC Environmental
Address:	Bldg. 3857
	NAS Pensacola, FL 32508
Phone #:	452-4728
Contact:	Greg Campbell

Lab ID Number:	9607113 A
Sample Date:	04 Jul 96
Received Date:	08 Jul 96
Sample Site:	Bronson Field Site 1120
Job Order #:	130 5001

Sample ID#	Lab	1- 62894	2-	3-	4-	Analyst(s):
Sample Name	Requester	Site 1120 MW-13				ICP- Brian Nelson
Collector Name		T.H.				
Date/Time	Comp start					
Collected	Comp stop					Date(s) of analysis:
(Military)	Grab	04 Jul 96 @ 1240				ICP-- 22 Jul 96
Sample Type	Comp/Grab	Grab				
Sample Matrix		Groundwater				

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.	
Metals:	METHOD #	1- 62894	units	Limit	2-	units	Limit	3-	units	Limit	4-	units	Limit	Preservative(s)
Lead(Pb)	SW 6010	X BDL	mg/l	0.05		mg/l	0.05		mg/l	0.05		mg/l	0.05	N/S

D-92

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

Approved by: for J W Moore, Chemist
Jerry Dees, Laboratory Director

Date/Time: 29-Jul-96 10:03

PWC 5090/14

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 63515
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63515
Sample Name / Location	MW - 14 BF 1120
Collector's Name	PJB
Date & Time Collected	08/13/96 @ 1200
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	08/15/96; JM
Date of Analysis	08/15/96
Sample Matrix	Groundwater
Dilution	X 1

Compound Name	1- 63515	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	20	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)	57	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	101
Toluene-d8	86-119	101
Bromoflourobenzene	85-116	101

COMMENTS :

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

D-93

Approved by : Jerry Dees, Laboratory Director

Date: 8/19/96
Report Generated

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 63515
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63515			
Sample Name / Location	MW - 14 BF 1120			
Collector's Name	PJB			
Date & Time Collected	08/13/96 @ 1200			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	08/14/96; JJ			
Date of Analysis	08/18/96; 08/19/96			
Sample Matrix	Groundwater			
Dilution	X 1.4			
Compound Name	1- 63515	units	Det. Limit	Flags
Acenaphthene	BDL	ug/L	7	
Acenaphthylene	BDL	ug/L	7	
Anthracene	BDL	ug/L	3	
Benzo(a)anthracene	BDL	ug/L	4	
Benzo(a)pyrene	BDL	ug/L	3	
Benzo(b)flouranthene	BDL	ug/L	6	
Benzo(g,h,i)perylene	BDL	ug/L	4	
Benzo(k)flouranthene	BDL	ug/L	6	
Chrysene	BDL	ug/L	4	
Dibenz(a,h)anthracene	BDL	ug/L	4	
Flouranthene	BDL	ug/L	3	
Flourene	15	ug/L	6	
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3	
1-Methylnaphthalene *	210	ug/L	14	
2-Methylnaphthalene	270	ug/L	20	
Naphthalene	170	ug/L	20	
Phenanthrene	9	ug/L	4	
Pyrene	BDL	ug/L	4	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	93
2-Flourobiphenyl	43-116	72
Terphenyl -d14	33-141	98

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 8/21/96
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Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 63515
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63515			
Sample Name / Location	MW - 14 BF 1120			
Collector's Name	PJB			
Date & Time Collected	08/13/96 @ 1200			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	08/16/96 bj			
Date of Analysis	08/16/96			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 63515	units	Det. Limit	Flags
Ethylene Dibromide (EDB)	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	103

COMMENTS :

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

Approved by : J G Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/11/96
Report Generated
Page 1 of 1 End of Report

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Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
Petroleum Range Organics by FLPRO

Lab Report Number: 63515
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63515		
Sample Name / Location	MW - 14 BF 1120		
Collector's Name	PJB		
Date & Time Collected	08/13/96 @ 1200		
Sample Type (composite or grab)	Grab		
Analyst	B. Jacquart		
Date of extraction / Initials	08/15/96 JJ		
Date of Analysis	09/11/96		
Sample Matrix	Groundwater		
Dilution		x	10
Parameter	**1- 63515**	**units**	**Det. Limit**
Petroleum Range Organics by FLPRO	22	mg/L	2.5

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	119
Nonatriacontane (C-39)	42-193 *	93

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Milligram per liter. mg/Kg = Milligram per kilogram.

Approved by : J W Moore Chemist for Jerry Dees, Laboratory Director

Date: 9/11/96

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NAS Pensacola, FL 32508 - 6500
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DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 63516
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- **63516**
Sample Name / Location	MW - 15 BF 1120
Collector's Name	PJB
Date & Time Collected	08/13/96 @ 1220
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	08/15/96; JM
Date of Analysis	08/15/96
Sample Matrix	Groundwater
Dilution	X 1

Compound Name	1- 63516	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	104
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.

D-97

Approved by : Jerry Dees, Laboratory Director

Date: 8/19/96
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Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 63516
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63516			
Sample Name / Location	MW - 15 BF 1120			
Collector's Name	PJB			
Date & Time Collected	08/13/96 @ 1220			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	08/14/96; JJ			
Date of Analysis	08/18/96			
Sample Matrix	Groundwater			
Dilution	X 1.2			
Compound Name	1- 63516	units	Det. Limit	Flags
Acenaphthene	BDL	ug/L	6	
Acenaphthylene	BDL	ug/L	6	
Anthracene	BDL	ug/L	2	
Benzo(a)anthracene	BDL	ug/L	4	
Benzo(a)pyrene	BDL	ug/L	2	
Benzo(b)flouranthene	BDL	ug/L	5	
Benzo(g,h,i)perylene	BDL	ug/L	4	
Benzo(k)flouranthene	BDL	ug/L	5	
Chrysene	BDL	ug/L	4	
Dibenz(a,h)anthracene	BDL	ug/L	4	
Flouranthene	BDL	ug/L	2	
Flourene	BDL	ug/L	5	
Indeno(1,2,3-cd)pyrene	BDL	ug/L	2	
1-Methylnaphthalene *	44	ug/L	6	
2-Methylnaphthalene	63	ug/L	8	
Naphthalene	BDL	ug/L	8	
Phenanthrene	BDL	ug/L	4	
Pyrene	BDL	ug/L	4	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	72
2-Flourobiphenyl	43-116	76
Terphenyl -d14	33-141	99

COMMENTS : T= Value reported is less than the laboratory detection limit. The data is reported for informational purposes only.

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

Approved by : _____
Jerry Dees, Laboratory Director

Date: 9/9/96
Report Generated

D-98

Navy Public Works Center
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DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 63516
Sample Date: 08/13/96
Received Date: 08/14/98
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63516			
Sample Name / Location	MW - 15 BF 1120			
Collector's Name	PJB			
Date & Time Collected	08/13/96 @ 1220			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	08/16/96 BJ			
Date of Analysis	08/16/96			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 63516	units	Det. Limit	Flags
Ethylene Dibromide (EDB)	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	109

COMMENTS :

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

Approved by : JW Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/11/96
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Page 1 of 1 End of Report

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Bldg. 3887, Code 920
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Phone (904) 452-4728/3642
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Analytical Report
Petroleum Range Organics by FLPRO

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 63516
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63516		
Sample Name / Location	MW - 15 BF 1120		
Collector's Name	PJB		
Date & Time Collected	08/13/96 @ 1220		
Sample Type (composite or grab)	Grab		
Analyst	B. Jacquart		
Date of extraction / Initials	08/15/96 JJ		
Date of Analysis	09/04/96		
Sample Matrix	Groundwater		
Dilution		x	1
Parameter	1- 63516	units	Det. Limit
Petroleum Range Organics by FLPRO	3.4	mg/L	0.25

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	124
Nonatriacontane (C-39)	42-193 *	81

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Milligram per liter. mg/Kg = Milligram per kilogram.

Approved by : J.G. Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/10/96

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Phone (904) 452-4728/3642
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Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 63517
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63517
Sample Name / Location	MW - 16 BF 1120
Collector's Name	PJB
Date & Time Collected	08/13/96 @ 1140
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	08/16/96; JM
Date of Analysis	08/16/96
Sample Matrix	Groundwater
Dilution	X 1

Compound Name	1- 63517	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	9	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)	59	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	95
Toluene-d8	86-119	99
Bromoflourobenzene	85-116	92

COMMENTS :

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

D101

Approved by : Jerry Dees, Laboratory Director

Date: 8/19/96
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Navy Public Works Center
Environmental Laboratory

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DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 63517
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63517			
Sample Name / Location	MW - 16 BF 1120			
Collector's Name	PJB			
Date & Time Collected	08/13/96 @ 1140			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	08/14/96; JJ			
Date of Analysis	08/18/96; 08/19/96			
Sample Matrix	Groundwater			
Dilution	X 1.4			
Compound Name	1- 63517	units	Det. Limit	Flags
Acenaphthene	BDL	ug/L	7	
Acenaphthylene	BDL	ug/L	7	
Anthracene	BDL	ug/L	3	
Benzo(a)anthracene	BDL	ug/L	4	
Benzo(a)pyrene	BDL	ug/L	3	
Benzo(b)flouranthene	BDL	ug/L	6	
Benzo(g,h,i)perylene	BDL	ug/L	4	
Benzo(k)flouranthene	BDL	ug/L	6	
Chrysene	BDL	ug/L	4	
Dibenz(a,h)anthracene	BDL	ug/L	4	
Flouranthene	BDL	ug/L	3	
Flourene	6	ug/L	6	
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3	
1-Methylnaphthalene *	160	ug/L	14	
2-Methylnaphthalene	200	ug/L	20	
Naphthalene	100	ug/L	20	
Phenanthrene	BDL	ug/L	4	
Pyrene	BDL	ug/L	4	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	71
2-Flourobiphenyl	43-116	66
Terphenyl -d14	33-141	106

COMMENTS : T= Value reported is less than the laboratory detection limit. The data is reported for informational purposes only.

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

Approved by : J C Moore, Chemist
for Jerry Dees, Laboratory Director

Date: 9/9/96
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Page 1 of 1 End of Report

Navy Public Works Center
Environmental Laboratory

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Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 63517
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63517			
Sample Name / Location	MW - 16 BF 1120			
Collector's Name	PJB			
Date & Time Collected	08/13/96 @ 1140			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	08/16/96 BJ			
Date of Analysis	08/16/96			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 63517	units	Det. Limit	Flags
Ethylene Dibromide (EDB)	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	109

COMMENTS :

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

Approved by : J C W Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/11/96
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Navy Public Works Center
Environmental Laboratory

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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 #:	452-4728
Contact:	Greg Campbell

Lab Report Number:	63517
Sample Date:	08/13/96
Received Date:	08/14/96
Sample Site:	BF 1120
Job Order No.:	1305002

LAB Sample ID#	1- 63517		
Sample Name / Location	MW - 16 BF 1120		
Collector's Name	PJB		
Date & Time Collected	08/13/96 @ 1140		
Sample Type (composite or grab)	Grab		
Analyst	B. Jacquart		
Date of extraction / Initials	08/15/96 JJ		
Date of Analysis	09/04/96		
Sample Matrix	Groundwater		
Dilution		x	1
Parameter	1- 63517	units	Det. Limit
Petroleum Range Organics by FLPRO	2.9	mg/L	0.25

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	122
Nonatriacontane (C-39)	42-193 *	92

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Milligram per liter. mg/Kg = Milligram per kilogram.

Approved by : J W Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/10/96

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 63518
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- **63518**
Sample Name / Location	MW - 17 BF 1120
Collector's Name	PJB
Date & Time Collected	08/13/96 @ 1100
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	08/15/96; JM
Date of Analysis	08/15/96
Sample Matrix	Groundwater
Dilution	X 1

Compound Name	1- 63518	units	Det. Limit	Flags
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	5	
Chloroform	BDL	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodiflouromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	5	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	5	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichloroflouromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	95
Toluene-d8	86-119	98
Bromoflourobenzene	85-116	98

COMMENTS :

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

D-105

Approved by : Jerry Dees, Laboratory Director

Date: 8/19/96
Report Generated

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 63518
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- **63518**
Sample Name / Location	MW - 17 BF 1120
Collector's Name	PJB
Date & Time Collected	08/13/96 @ 1100
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	08/14/96; JJ
Date of Analysis	08/18/96
Sample Matrix	Groundwater
Dilution	X 1.5

Compound Name	1- 63518	units	Det. Limit	Flags
Acenaphthene	BDL	ug/L	8	
Acenaphthylene	BDL	ug/L	8	
Anthracene	BDL	ug/L	3	
Benzo(a)anthracene	BDL	ug/L	5	
Benzo(a)pyrene	BDL	ug/L	3	
Benzo(b)flouranthene	BDL	ug/L	6	
Benzo(g,h,i)perylene	BDL	ug/L	5	
Benzo(k)flouranthene	BDL	ug/L	6	
Chrysene	BDL	ug/L	5	
Dibenz(a,h)anthracene	BDL	ug/L	5	
Flouranthene	BDL	ug/L	3	
Flourene	BDL	ug/L	6	
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3	
1-Methylnaphthalene *	BDL	ug/L	8	
2-Methylnaphthalene	BDL	ug/L	11	
Naphthalene	BDL	ug/L	11	
Phenanthrene	BDL	ug/L	5	
Pyrene	BDL	ug/L	5	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	64
2-Flourobiphenyl	43-116	70
Terphenyl -d14	33-141	109

COMMENTS : T= Value reported is less than the laboratory detection limit. The data is reported for informational purposes only.

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

Approved by : J W Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/9/96
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Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 63518
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63518			
Sample Name / Location	MW - 17 BF 1120			
Collector's Name	PJB			
Date & Time Collected	08/13/96 @ 1100			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	08/16/96 BJ			
Date of Analysis	08/16/96			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 63518	units	Det. Limit	Flags
Ethylene Dibromide (EDB)	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	77

COMMENTS :

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

Approved by : J.W. Moore Chemist for Jerry Dees, Laboratory Director

Date: 9/11/96
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Page 1 of 1 End of Report

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Bldg. 3887, Code 920
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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 #: 452-4728
Contact: Greg Campbell

Lab Report Number: 63518
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63518		
Sample Name / Location	MW - 17 BF 1120		
Collector's Name	PJB		
Date & Time Collected	08/13/96 @ 1100		
Sample Type (composite or grab)	Grab		
Analyst	B. Jacquart		
Date of extraction / Initials	08/15/96 JJ		
Date of Analysis	09/03/96		
Sample Matrix	Groundwater		
Dilution		x	1
Parameter	**1- 63518**	**units**	**Det. Limit**
Petroleum Range Organics by FLPRO	0.41	mg/L	0.25

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	100
Nonatriacontane (C-39)	42-193 *	76

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Milligram per liter. mg/Kg = Milligram per kilogram.

Approved by : J. W. Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/10/96

Page 1 of 1

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Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 63522
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63522
Sample Name / Location	MW - 18 BF 1120
Collector's Name	PJB
Date & Time Collected	08/13/96 @ 1120
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	08/17/96; JM
Date of Analysis	8/17/96
Sample Matrix	Groundwater
Dilution	X 1

Compound Name	1- 63522	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	82
Toluene-d8	86-119	95
Bromoflourobenzene	85-116	88

COMMENTS :

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

D-109

Approved by : Jerry Dees, Laboratory Director

Date: 8/19/96
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Environmental Laboratory

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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 63522
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- **63522**
Sample Name / Location	MW - 18 BF 1120
Collector's Name	PJB
Date & Time Collected	08/13/96 @ 1120
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	08/14/96; JJ
Date of Analysis	08/18/96
Sample Matrix	Groundwater
Dilution	X 1.2

Compound Name	1- 63522	units	Det. Limit	Flags
Acenaphthene	BDL	ug/L	6	
Acenaphthylene	BDL	ug/L	6	
Anthracene	BDL	ug/L	2	
Benzo(a)anthracene	BDL	ug/L	4	
Benzo(a)pyrene	BDL	ug/L	2	
Benzo(b)flouranthene	BDL	ug/L	5	
Benzo(g,h,i)perylene	BDL	ug/L	4	
Benzo(k)flouranthene	BDL	ug/L	5	
Chrysene	BDL	ug/L	4	
Dibenz(a,h)anthracene	BDL	ug/L	4	
Flouranthene	BDL	ug/L	2	
Flourene	BDL	ug/L	5	
Indeno(1,2,3-cd)pyrene	BDL	ug/L	2	
1-Methylnaphthalene *	BDL	ug/L	6	
2-Methylnaphthalene	BDL	ug/L	8	
Naphthalene	BDL	ug/L	8	
Phenanthrene	BDL	ug/L	4	
Pyrene	BDL	ug/L	4	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	48
2-Flourobiphenyl	43-116	60
Terphenyl -d14	33-141	98

COMMENTS : T= Value reported is less than the laboratory detection limit. The data is reported for informational purposes only.

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

Approved by : J C Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/9/96
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Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 63522
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63522			
Sample Name / Location	MW - 18 BF 1120			
Collector's Name	PJB			
Date & Time Collected	08/13/96 @ 1120			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	08/16/96 BJ			
Date of Analysis	08/16/96			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 63522	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	107

COMMENTS :

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

Approved by : J W Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/11/96
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Page 1 of 1 End of Report

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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 #:	452-4728
Contact:	Greg Campbell

Lab Report Number:	63522
Sample Date:	08/13/96
Received Date:	08/14/96
Sample Site:	BF 1120
Job Order No.:	1305002

LAB Sample ID#	1- 63522		
Sample Name / Location	MW - 18 BF 1120		
Collector's Name	PJB		
Date & Time Collected	08/13/96 @ 1120		
Sample Type (composite or grab)	Grab		
Analyst	B. Jacquart		
Date of extraction / Initials	08/15/96 JJ		
Date of Analysis	09/03/96		
Sample Matrix	Groundwater		
Dilution		x	1
Parameter	1- 63522	units	Det. Limit
Petroleum Range Organics by FLPRO	1.4	mg/L	0.25

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	105
Nonatriacontane (C-39)	42-193 *	95

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Milligram per liter. mg/Kg = Milligram per kilogram.

Approved by : JW Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/10/96

Navy Public Works Center
Environmental Laboratory

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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 63523
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63523
Sample Name / Location	MW - 19 BF 1120
Collector's Name	PJB
Date & Time Collected	08/13/96 @ 1000
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	08/15/96; JM
Date of Analysis	08/15/96
Sample Matrix	Groundwater
Dilution	X 1

Compound Name	1- 63523	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	75
Toluene-d8	86-119	97
Bromoflourobenzene	85-116	89

COMMENTS :

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

D-113

Approved by : Jerry Bees, Laboratory Director

Date: 8/19/96

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Navy Public Works Center
Environmental Laboratory

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Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 63523
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63523			
Sample Name / Location	MW - 19 BF 1120			
Collector's Name	PJB			
Date & Time Collected	08/13/96 @ 1000			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	08/14/96; JJ			
Date of Analysis	08/19/96			
Sample Matrix	Groundwater			
Dilution	X 1.2			
Compound Name	1- 63523	units	Det. Limit	Flags
Acenaphthene	BDL	ug/L	6	
Acenaphthylene	BDL	ug/L	6	
Anthracene	BDL	ug/L	2	
Benzo(a)anthracene	BDL	ug/L	4	
Benzo(a)pyrene	BDL	ug/L	2	
Benzo(b)flouranthene	BDL	ug/L	5	
Benzo(g,h,i)perylene	BDL	ug/L	4	
Benzo(k)flouranthene	BDL	ug/L	5	
Chrysene	BDL	ug/L	4	
Dibenz(a,h)anthracene	BDL	ug/L	4	
Flouranthene	BDL	ug/L	2	
Flourene	BDL	ug/L	5	
Indeno(1,2,3-cd)pyrene	BDL	ug/L	2	
1-Methylnaphthalene *	BDL	ug/L	6	
2-Methylnaphthalene	BDL	ug/L	8	
Naphthalene	BDL	ug/L	8	
Phenanthrene	BDL	ug/L	4	
Pyrene	BDL	ug/L	4	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	72
2-Flourobiphenyl	43-116	75
Terphenyl -d14	33-141	106

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 8/19/96
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Page 1 of 1 End of Report

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Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 63523
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63523			
Sample Name / Location	MW - 19 BF 1120			
Collector's Name	PJB			
Date & Time Collected	08/13/96 @ 1000			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	08/16/96 BJ			
Date of Analysis	08/16/96			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 63523	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	119

COMMENTS :

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

Approved by : J W Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/11/96
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Page 1 of 1 End of Report

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Environmental Laboratory

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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
Petroleum Range Organics by FLPRO

Lab Report Number: 63523
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63523		
Sample Name / Location	MW - 19 BF 1120		
Collector's Name	PJB		
Date & Time Collected	08/13/96 @ 1000		
Sample Type (composite or grab)	Grab		
Analyst	B. Jacquart		
Date of extraction / Initials	08/15/96 JJ		
Date of Analysis	09/03/96		
Sample Matrix	Groundwater		
Dilution		x	1
Parameter	**1- 63523**	**units**	**Det. Limit**
Petroleum Range Organics by FLPRO	0.31	mg/L	0.2

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	101
Nonatriacontane (C-39)	42-193 *	81

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Milligram per liter. mg/Kg = Milligram per kilogram.

Approved by : J W Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/10/96

D-116

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 63524
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63524
Sample Name / Location	MW - 20 BF 1120
Collector's Name	PJB
Date & Time Collected	08/13/96 @ 1020
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	08/16/96; JM
Date of Analysis	08/16/96
Sample Matrix	Groundwater
Dilution	X 1

Compound Name	1- 63524	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	82
Toluene-d8	86-119	101
Bromoflourobenzene	85-116	90

COMMENTS :

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

D-117

Approved by : Jerry Dees, Laboratory Director

Date: 8/19/96
Report Generated

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 63524
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63524			
Sample Name / Location	MW - 20 BF 1120			
Collector's Name	PJB			
Date & Time Collected	08/13/96 @ 1020			
Sample Type (composite or grab)	Grab			
Analyst	M Chambers			
Date of Extraction / Initials	08/14/96; JJ			
Date of Analysis	08/19/96			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 63524	units	Det. Limit	Flags
Acenaphthene	BDL	ug/L	5	
Acenaphthylene	BDL	ug/L	5	
Anthracene	BDL	ug/L	2	
Benzo(a)anthracene	BDL	ug/L	3	
Benzo(a)pyrene	BDL	ug/L	2	
Benzo(b)flouranthene	BDL	ug/L	4	
Benzo(g,h,i)perylene	BDL	ug/L	3	
Benzo(k)flouranthene	BDL	ug/L	4	
Chrysene	BDL	ug/L	3	
Dibenz(a,h)anthracene	BDL	ug/L	3	
Flouranthene	BDL	ug/L	2	
Flourene	BDL	ug/L	4	
Indeno(1,2,3-cd)pyrene	BDL	ug/L	2	
1-Methylnaphthalene *	BDL	ug/L	5	
2-Methylnaphthalene	BDL	ug/L	7	
Naphthalene	BDL	ug/L	7	
Phenanthrene	BDL	ug/L	3	
Pyrene	BDL	ug/L	3	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	71
2-Flourobiphenyl	43-116	66
Terphenyl -d14	33-141	89

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 8/19/96
Report Generated
Page 1 of 1 End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 63524
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63524			
Sample Name / Location	MW - 20 BF 1120			
Collector's Name	PJB			
Date & Time Collected	08/13/96 @ 1020			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	08/16/96 BJ			
Date of Analysis	08/16/96			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 63524	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	113

COMMENTS :

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

Approved by : JW Moore Chemist for Jerry Dees, Laboratory Director

Date: 9/11/96
Report Generated
Page 1 of 1 End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
Petroleum Range Organics by FLPRO

Lab Report Number: 63524
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63524		
Sample Name / Location	MW - 20 BF 1120		
Collector's Name	PJB		
Date & Time Collected	08/13/96 @ 1020		
Sample Type (composite or grab)	Grab		
Analyst	B. Jacquart		
Date of extraction / Initials	08/15/96 JJ		
Date of Analysis	09/03/96		
Sample Matrix	Groundwater		
Dilution	x 1		
Parameter	1- 63524	units	Det. Limit
Petroleum Range Organics by FLPRO	3.1	mg/L	0.25

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	102
Nonatriacontane (C-39)	42-193 *	94

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Milligram per liter. mg/Kg = Milligram per kilogram.

Approved by : J.W. Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/10/96

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 63525
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63525
Sample Name / Location	MW - 21 BF 1120
Collector's Name	PJB
Date & Time Collected	08/13/96 @ 1040
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	08/15/96; JM
Date of Analysis	08/15/96
Sample Matrix	Groundwater
Dilution	X 1

Compound Name	1- 63525	units	Det. Limit	Flags
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	5	
Chloroform	BDL	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodiflouromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	5	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	5	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichloroflouromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	92
Toluene-d8	86-119	99
Bromoflourobenzene	85-116	95

COMMENTS :

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

D-121

Approved by : Jerry Dees, Laboratory Director

Date: 8/19/96
Report Generated

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 63525
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63525
Sample Name / Location	MW - 21 BF 1120
Collector's Name	PJB
Date & Time Collected	08/13/96 @ 1040
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	08/14/96; JJ
Date of Analysis	08/19/96
Sample Matrix	Groundwater
Dilution	X 1.2

Compound Name	1- 63525	units	Det. Limit	Flags
Acenaphthene	BDL	ug/L	6	
Acenaphthylene	BDL	ug/L	6	
Anthracene	BDL	ug/L	2	
Benzo(a)anthracene	BDL	ug/L	4	
Benzo(a)pyrene	BDL	ug/L	2	
Benzo(b)flouranthene	BDL	ug/L	5	
Benzo(g,h,i)perylene	BDL	ug/L	4	
Benzo(k)flouranthene	BDL	ug/L	5	
Chrysene	BDL	ug/L	4	
Dibenz(a,h)anthracene	BDL	ug/L	4	
Flouranthene	BDL	ug/L	2	
Flourene	BDL	ug/L	5	
Indeno(1,2,3-cd)pyrene	BDL	ug/L	2	
1-Methylnaphthalene *	BDL	ug/L	6	
2-Methylnaphthalene	BDL	ug/L	8	
Naphthalene	BDL	ug/L	8	
Phenanthrene	BDL	ug/L	4	
Pyrene	BDL	ug/L	4	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	72
2-Flourobiphenyl	43-116	75
Terphenyl -d14	33-141	105

COMMENTS :

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

Approved by : Jerry Deen, Laboratory Director

Date: 8/19/96
Report Generated

Page 1 of 1 End of Report

D-122

Navy Public Works Center

Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 63525
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63525			
Sample Name / Location	MW - 21 BF 1120			
Collector's Name	PJB			
Date & Time Collected	08/13/96 @ 1040			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	08/16/96 BJ			
Date of Analysis	08/16/96			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 63525	units	Det. Limit	Flags
Ethylene Dibromide (EDB)	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	120

COMMENTS :

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

Approved by : JCJ Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/11/96
Report Generated
Page 1 of 1 End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
Petroleum Range Organics by FLPRO

Lab Report Number: 63525
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63525		
Sample Name / Location	MW - 21 BF 1120		
Collector's Name	PJB		
Date & Time Collected	08/13/96 @ 1040		
Sample Type (composite or grab)	Grab		
Analyst	B. Jacquart		
Date of extraction / Initials	08/15/96 JJ		
Date of Analysis	09/03/96		
Sample Matrix	Groundwater		
Dilution		x	1
Parameter	1- 63525	units	Det. Limit
Petroleum Range Organics by FLPRO	0.33	mg/L	0.25

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	95
Nonatriacontane (C-39)	42-193 *	79

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Milligram per liter. mg/Kg = Milligram per kilogram.

Approved by : J W Moore for Jerry Dees, Laboratory Director

Date: 9/10/96

Joe

1.3

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Report Required? (Yes) No DEP? Yes (No)

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500

Ph#-(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305002

Lab ID Number:
Sample Date: (8.13.96)
Received Date: 8.14.96
Sample Site: BF 1120
Lab Due Date:

Sample ID #	Lab	#1 6-3575	#2 6-3576	#3 6-3577	#4 6-3578	Notes:
Sample Name or Location	----------	MW-14	MW-15	MW-16	MW-17	
Sampled by	----------	PJB	PJB	PJB	PJB	KAG (Less Pb)
Composite Date/Time Collected	Begin / Frequency / End					
Grab Time	----------	1200	1220	1140	1100	
Sample Matrix	----------	GW	GW	GW	GW	

PARAMETER by Method Name	METHOD #	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Ethylene Dibromide (EDB)	EPA 504	X	2 EDB	X	2 EDB	X	2 EDB	X	2 EDB	3	120ml A VOA/4 oz.	None/4° C
Purg. Halocarbons/GC	EPA 601									4	40 ml VOA Vial x 2	HCl/4° C
Purg. Aromatics/GC	EPA 602	X	4 VOA	X	4 VOA	X	4 VOA	X	4 VOA	3	40 ml VOA Vial x 2	HCl/4° C
Purg. Halo. & Aro./GC	EPA 601/602									6	40 ml VOA Vial x 2	HCl/4° C
Polynuclear Aromatics/HPLC	EPA 610									7	1L Amber x 2	4° C
Purgeables/GCMS	EPA 624									6	40 ml VOA Vial x 2	HCl/4° C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4° C
Gas Chromatography	EPA SW 8000									5	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Halo. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCl/4° C/None
Non-Halo. Vol. Org./GC	EPA SW 8015(MOD)									4	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCl/4° C/None
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									6	40ml VOAx2/4 oz.	HCl/4° C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4° C/None
VOC/GCMS	EPA SW 8240A									8	40ml VOAx2/4 oz.	HCl/4° C/None
VOC/GCMS-Cap.	EPA SW 8260									8	40ml VOAx2/4 oz.	HCl/4° C/None
Semivol. Org./GCMS-Cap.	EPA SW 8270A									16	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310	X	2 PAH	X	2 PAH	X	2 PAH	X	2 PAH		1Lx3/4 oz.	4° C/None

PARAMETER by Group Name	METHOD SOURCE	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Gasoline Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Kerosene Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	EPA 418.1	X	2 TPH	X	2 TPH	X	2 TPH	X	2 TPH		Consult Lab	Consult Lab
RCRA Metals (8)	EPA Various										Consult Lab	Consult Lab
TCLP Metals (8) w/extraction	EPA SW-846										Consult Lab	Consult Lab
Lead (Pb)	EPA 239.2										250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: [signature] WES, Inc.
Date/Time: 8.14.96 / 0845

Received by: [signature]
Date/Time: 8/14/96 0843

D-125

PWC 9510/6

2.3

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 #: 130500

Report Required? Yes No DEP? Yes No

Lab ID Number:
Sample Date: 8.13.96
Received Date: 8.14.96
Sample Site: BF 1120
Lab Due Date:

Sample ID #	Lab	#1-6-3519	#2-6-3520	#3-6-3521	#4-
Sample Name	----------				
or Location	----------	EQ. BLANK	DUPLICATE	Trip Blank	
Sampled by	----------	PJB	PJB	PJB	
Composite	Begin				
Date/Time	Frequency				
Collected	End				
Grab Time	----------	0945	—	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	HCl/4° C
Purg. Aromatics/GC	EPA 602	X	4 VOA	X	4 VOA	X	3 VOA			3	40 ml VOA Vial x 2	HCl/4° C
Purg. Halo. & Aro./GC	EPA 601/602									6	40 ml VOA Vial x 2	HCl/4° C
Polynuclear Aromatics/HPLC	EPA 610									7	1L Amber x 2	4° C
Purgeables/GCMS	EPA 624									8	40 ml VOA Vial x 2	HCl/4° C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4° C
Gas Chromatography	EPA SW 8000									5	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Halo. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCl/4° C/None
Non-Halo. Vol. Org./GC	EPA SW 8015(MOD)									4	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCl/4° C/None
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									6	40ml VOAx2/4 oz.	HCl/4° C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4° C/None
VOC/GCMS	EPA SW 8240A									8	40ml VOAx2/4 oz.	HCl/4° C/None
VOC/GCMS-Cap.	EPA SW 8260									8	40ml VOAx2/4 oz.	HCl/4° C/None
Semivol. Org./GCMS-Cap.	EPA SW 8270A									16	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310	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: [signature] WES, Inc.
Date/Time: 8.14.96 / 0845

Received by: [signature]
Date/Time: 8/14/96 0845

D-126

PWC 9510/6

3·3

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Report Required? (Yes) No DEP? Yes (No)

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500

Ph#-(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305002

Lab ID Number:
Sample Date: 8·13·96
Received Date: 8·14·96
Sample Site: BF 1120
Lab Due Date:

Sample ID #	Lab	#1-6-3522	#2-6-3523	#3-6-3524	#4-6-3525	Notes:
Sample Name or Location	----------	MW-18	MW-19	MW-20	MW-21	K.A.G. (Less Pb)
Sampled by	----------	PJB	PJB	PJB	PJB	
Composite Date/Time Collected	Begin / Frequency / End					
Grab Time	----------	1120	1000	1020	1040	
Sample Matrix	----------	GW	GW	GW	GW	

PARAMETER by Method Name	METHOD #	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Ethylene Dibromide (EDB)	EPA 504	X	2 EDB	X	2 EDB	X	2 EDB	X	2 EDB	3	120ml A VOA/4 oz.	None/4° C
Purg. Halocarbons/GC	EPA 601									4	40 ml VOA Vial x 2	HCl/4° C
Purg Aromatics/GC	EPA 602	X	4 VOA	X	4 VOA	X	4 VOA	X	4 VOA	3	40 ml VOA Vial x 2	HCl/4° C
Purg. Halo. & Aro /GC	EPA 601/602									8	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									8	40ml VOAx2/4 oz.	HCl/4° C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4° C/None
VOC/GCMS	EPA SW 8240A									8	40ml VOAx2/4 oz.	HCl/4° C/None
VOC/GCMS-Cap.	EPA SW 8260									8	40ml VOAx2/4 oz.	HCl/4° C/None
Semivol. Org. /GCMS-Cap.	EPA SW 8270A									16	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310	X	2 PAH	X	2 PAH	X	2 PAH	X	2 PAH		1Lx3/4 oz.	4° C/None

PARAMETER by Group Name	METHOD SOURCE	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Gasoline Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Kerosene Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	EPA 418.1	X	2 TPH	X	2 TPH	X	2 TPH	X	2 TPH		Consult Lab	Consult Lab
RCRA Metals (8)	EPA Various										Consult Lab	Consult Lab
TCLP Metals (8) w/extraction	EPA SW-846										Consult Lab	Consult Lab
Lead (Pb)	EPA 239.2										250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: WES, Inc.
Date/Time: 8·14·96 / 0845

Received by:
Date/Time: 8/14/96 0845

PWC 9510/8

D-127

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
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Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 63521
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63521
Sample Name / Location	Trip Blank BF 1120
Collector's Name	PJB
Date & Time Collected	08/13/96 @ AM
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	08/15/96; JM
Date of Analysis	08/15/96
Sample Matrix	Distilled Water
Dilution	X 1

Compound Name	1- 63521	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	101
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-128

Approved by : Jerry Dees, Laboratory Director

Date: 8/19/96
Report Generated

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 63520
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63520
Sample Name / Location	Duplicate BF 1120
Collector's Name	PJB
Date & Time Collected	08/13/96
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	08/17/96; JM
Date of Analysis	08/17/96
Sample Matrix	Groundwater
Dilution	X 1

Compound Name	1- 63520	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	16	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)	54	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	103
Toluene-d8	86-119	98
Bromoflourobenzene	85-116	95

COMMENTS :

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

D-129

Approved by : Jerry Dees, Laboratory Director

Date: 8/19/96
Report Generated

Navy Public Works Center
Environmental Laboratory

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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 63520
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63520			
Sample Name / Location	Duplicate BF 1120			
Collector's Name	PJB			
Date & Time Collected	08/13/96			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	08/14/96; JJ			
Date of Analysis	08/18/96; 08/19/96			
Sample Matrix	Groundwater			
Dilution	X 1.4			
Compound Name	1- 63520	units	Det. Limit	Flags
Acenaphthene	BDL	ug/L	7	
Acenaphthylene	BDL	ug/L	7	
Anthracene	BDL	ug/L	3	
Benzo(a)anthracene	BDL	ug/L	4	
Benzo(a)pyrene	BDL	ug/L	3	
Benzo(b)flouranthene	BDL	ug/L	6	
Benzo(g,h,i)perylene	BDL	ug/L	4	
Benzo(k)flouranthene	BDL	ug/L	6	
Chrysene	BDL	ug/L	4	
Dibenz(a,h)anthracene	BDL	ug/L	4	
Flouranthene	BDL	ug/L	3	
Flourene	18	ug/L	6	
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3	
1-Methylnaphthalene *	260	ug/L	35	
2-Methylnaphthalene	360	ug/L	50	
Naphthalene	170	ug/L	50	
Phenanthrene	11	ug/L	4	
Pyrene	BDL	ug/L	4	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	102
2-Flourobiphenyl	43-116	73
Terphenyl -d14	33-141	97

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 8/21/96
Report Generated

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Environmental Laboratory

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Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 63520
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63520			
Sample Name / Location	Duplicate BF 1120			
Collector's Name	PJB			
Date & Time Collected	08/13/96			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	08/16/96 BJ			
Date of Analysis				
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 63520	units	Det. Limit	Flags
Ethylene Dibromide (EDB)	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	96

COMMENTS :

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

Approved by : J.W. Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/11/96
Report Generated
Page 1 of 1 End of Report

Navy Public Works Center
Environmental Laboratory

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DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
Petroleum Range Organics by FLPRO

Lab Report Number: 63520
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63520		
Sample Name / Location	Duplicate BF 1120		
Collector's Name	PJB		
Date & Time Collected	08/13/96		
Sample Type (composite or grab)	Grab		
Analyst	B. Jacquart		
Date of extraction / Initials	8/15/96 JJ		
Date of Analysis	09/05/96		
Sample Matrix	Groundwater		
Dilution	x 1		
Parameter	1- 63520	units	Det. Limit
Petroleum Range Organics by FLPRO	14	mg/L	0.25

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	116
Nonatriacontane (C-39)	42-193 *	57

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 : JWMoore, Chemist for Jerry Deed, Laboratory Director

Date: 9/10/96

Navy Public Works Center

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Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 63519
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63519
Sample Name / Location	Equipment Blank BF 1120
Collector's Name	PJB
Date & Time Collected	08/13/96 @ 0945
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	08/14/96; JJ
Date of Analysis	08/18/96
Sample Matrix	Distilled Water
Dilution	X 1

Compound Name	1- 63519	units	Det. Limit	Flags
Acenaphthene	BDL	ug/L	5	
Acenaphthylene	BDL	ug/L	5	
Anthracene	BDL	ug/L	2	
Benzo(a)anthracene	BDL	ug/L	3	
Benzo(a)pyrene	BDL	ug/L	2	
Benzo(b)flouranthene	BDL	ug/L	4	
Benzo(g,h,i)perylene	BDL	ug/L	3	
Benzo(k)flouranthene	BDL	ug/L	4	
Chrysene	BDL	ug/L	3	
Dibenz(a,h)anthracene	BDL	ug/L	3	
Flouranthene	BDL	ug/L	2	
Flourene	BDL	ug/L	4	
Indeno(1,2,3-cd)pyrene	BDL	ug/L	2	
1-Methylnaphthalene *	BDL	ug/L	5	
2-Methylnaphthalene	BDL	ug/L	7	
Naphthalene	BDL	ug/L	7	
Phenanthrene	BDL	ug/L	3	
Pyrene	BDL	ug/L	3	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	62
2-Flourobiphenyl	43-116	69
Terphenyl -d14	33-141	115

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 8/19/96
Report Generated

Page 1 of 1 End of Report

Navy Public Works Center
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DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 63519
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- **63519**
Sample Name / Location	Equipment Blank BF 1120
Collector's Name	PJB
Date & Time Collected	08/13/96 @ 0945
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	08/15/96; JM
Date of Analysis	08/15/96
Sample Matrix	Distilled Water
Dilution	X 1

Compound Name	1- 63519	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	1	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
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	102
Toluene-d8	86-119	101
Bromoflourobenzene	85-116	102

COMMENTS :

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

D-134

Approved by : Jerry Dees, Laboratory Director

Date: 8/21/96
Report Generated

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
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DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 63519
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63519			
Sample Name / Location	Equipment Blank BF 1120			
Collector's Name	PJB			
Date & Time Collected	08/13/96 @ 0945			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	08/16/96 bj			
Date of Analysis	08/16/96			
Sample Matrix	Distilled Water			
Dilution	X 1			
Compound Name	1- 63519	units	Det. Limit	Flags
Ethylene Dibromide (EDB)	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	100

COMMENTS :

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

Approved by : J W Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/11/96
Report Generated
Page 1 of 1 End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Analytical Report
Petroleum Range Organics by FLPRO

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: 452-4728
Contact: Greg Campbell

Lab Report Number: 63519
Sample Date: 08/13/96
Received Date: 08/14/96
Sample Site: BF 1120
Job Order No.: 1305002

LAB Sample ID#	1- 63519		
Sample Name / Location	Equipment Blank BF 1120		
Collector's Name	PJB		
Date & Time Collected	08/13/96 @ 0945		
Sample Type (composite or grab)	Grab		
Analyst	B. Jacquart		
Date of extraction / Initials	08/15/96 JJ		
Date of Analysis	09/03/96		
Sample Matrix	Distilled Water		
Dilution		x	1
Parameter	1- 63519	units	Det. Limit
Petroleum Range Organics by FLPRO	BDL	mg/L	0.25

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	76
Nonatriacontane (C-39)	42-193 *	59

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = Milligram per liter. mg/Kg = Milligram per kilogram.

Approved by : J W Moore, Chemist for Jerry Dees, Laboratory Director

Date: 9/10/96

D-136

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: 9610001 A
Sample Date: 24 Sep 96
Received Date: 24 Sep 96
Sample Site: Bronson Field, Site 1120
Job Order #: 130 5001

Sample ID#	Lab	1- 64035	2- 64036	3- 64037	4- 64038	Analyst(s):
Sample Name	Requester	MW-16, Site 1120	MW-12, Site 1120	MW-10, Site 1120	MW-9, Site 1120	ICP - Brian Nelson
Collector Name		P. Keane	P. Keane	P. Keane	P. Keane	
Date/Time Collected (Military)	Comp start					
	Comp stop					Date(s) of analysis:
	Grab	24 Sep 96 @ 0954	24 Sep 96 @ 1055	24 Sep 96 @ 1138	24 Sep 96 @ 1240	30 Sep 96
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab	
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	

PARAMETER Metals:	METHOD #	ID# 1- 64035	units	Det. Limit	ID# 2- 64036	units	Det. Limit	ID# 3- 64037	units	Det. Limit	ID# 4- 64038	units	Det. Limit	Preservative(s)
Lead(Pb)	EPA 239.2	X BDL	mg/l	0.003	X BDL	mg/l	0.003	X BDL	mg/l	0.003	X BDL	mg/l	0.003	HNO_3 to pH <2

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 01-Oct-96 11:30

End of Report

PWC 5090/14

D-157

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: 9610001 B
Sample Date: 24 Sep 96
Received Date: 24 Sep 96
Sample Site: Bronson Field, Site 1120
Job Order #: 130 5001

Sample ID#	Lab	1- 64039	2- 64040	3- 64041	4- 64042	Analyst(s):
Sample Name	Requester	MW-15, Site 1120	MW-14, Site 1120	MW-18, Site 1120	Duplicate, Site 1120	ICP - Brian Nelson
Collector Name		P. Keane	P. Keane	P. Keane	P. Keane	
Date/Time Collected (Military)	Comp start					
	Comp stop					Date(s) of analysis:
	Grab	24 Sep 96 @ 1323	24 Sep 96 @ 1408	24 Sep 96 @ 1505	24 Sep 96 @ N/S	30 Sep 96
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab	
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	

PARAMETER Metals:	METHOD #	ID# 1- 64039	units	Det. Limit	ID# 2- 64040	units	Det. Limit	ID# 3- 64041	units	Det. Limit	ID# 4- 64042	units	Det. Limit	Preservative(s)
Lead(Pb)	EPA 239.2	X 0.004	mg/l	0.003	X BDL	mg/l	0.003	X 0.007	mg/l	0.003	X 0.006	mg/l	0.003	HNO_3 to pH <2

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 01-Oct-96 11:32

End of Report

PWC 5090/14

D-138

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: 9610001 C
Sample Date: 24 Sep 96
Received Date: 24 Sep 96
Sample Site: Bronson Field, Site 1120
Job Order #: 130 5001

Sample ID#	Lab	1- 64043	2- 64044	3-	4-	Analyst(s):
Sample Name	Requester	Eq. Blank, Site 1120	MW-17, Site 1120			ICP - Brian Nelson
Collector Name		P. Keane	P. Keane			
Date/Time Collected (Military)	Comp start					
	Comp stop					Date(s) of analysis:
	Grab	24 Sep 96 @ 1500	24 Sep 96 @ 1535			30 Sep 96
Sample Type	Comp/Grab	Grab	Grab			
Sample Matrix		Deionized Water	Groundwater			

PARAMETER Metals:	METHOD #	ID# 1- 64043	units	Det. Limit	ID# 2- 64044	units	Det. Limit	ID# 3-	units	Det. Limit	ID# 4-	units	Det. Limit	Preservative(s)
Lead(Pb)	EPA 239.2	X BDL	mg/l	0.003	X 0.008	mg/l	0.003		mg/l	0.003		mg/l	0.003	HNO_3 to pH <2

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 01-Oct-96 14:18

End of Report

PWC 5090/14

D-139

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: 9610002 A
Sample Date: 25 Sep 96
Received Date: 25 Sep 96
Sample Site: Bronson Field, Site 1120
Job Order #: 130 5001

Sample ID#	Lab	1- 64045	2- 64046	3- 64047	4- 64048	Analyst(s):
Sample Name	Requester	MW-13, Site 1120	MW-7, Site 1120	MW-8, Site 1120	Duplicate, Site 1120	ICP - Brian Nelson
Collector Name		P. Keane	P. Keane	P. Keane	P. Keane	
Date/Time Collected (Military)	Comp start					
	Comp stop					Date(s) of analysis:
	Grab	25 Sep 96 @ 0932	25 Sep 96 @ 1010	25 Sep 96 @ 1117	25 Sep 96 @ N/S	30 Sep 96
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab	
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	

PARAMETER Metals:	METHOD #	ID# 1- 64045	units	Det. Limit	ID# 2- 64046	units	Det. Limit	ID# 3- 64047	units	Det. Limit	ID# 4- 64048	units	Det. Limit	Preservative(s)
Lead(Pb)	EPA 239.2	X BDL	mg/l	0.003	X 0.010	mg/l	0.003	X 0.005	mg/l	0.003	X BDL	mg/l	0.003	HNO_3 to pH <2

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 01-Oct-96 11:36

End of Report

PWC 5090/14

D-140

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: 9610002 B
Sample Date: 25 Sep 96
Received Date: 25 Sep 96
Sample Site: Bronson Field, Site 1120
Job Order #: 130 5001

Sample ID#	Lab	1- 64049	2- 64050	3- 64051	4- 64052	Analyst(s):
Sample Name	Requester	MW-11, Site 1120	MW-21, Site 1120	MW-20, Site 1120	MW-19, Site 1120	ICP - Brian Nelson
Collector Name		P. Keane	P. Keane	P. Keane	P. Keane	
Date/Time	Comp start					
Collected	Comp stop					Date(s) of analysis:
(Military)	Grab	25 Sep 96 @ 1203	25 Sep 96 @ 1304	25 Sep 96 @ 1340	25 Sep 96 @ 1435	30 Sep 96
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab	
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	

PARAMETER Metals:	METHOD #	ID# 1- 64049	units	Det. Limit	ID# 2- 64050	units	Det. Limit	ID# 3- 64051	units	Det. Limit	ID# 4- 64052	units	Det. Limit	Preservative(s)
Lead(Pb)	EPA 239.2	x BDL	mg/l	0.003	x 0.007	mg/l	0.003	x BDL	mg/l	0.003	x 0.003	mg/l	0.003	HNO_3 to pH <2

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 01-Oct-96 11:37

End of Report

PWC 5090/14

D-141

HAZARDOUS WASTE CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

HAZARDOUS WASTE CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Ph#: (904) 452-4728/3642
DSN: 922-4728/3642
FAX: (904) 452-2799/2387

Requester: NPWC ENVIRONMENTAL
Address: B 3887
NAS Pensacola Fl 32508
Phone #: 452-2170
Contact: GREG CAMPBELL
Job Order #: 1305001

Report Required? (Yes) No DEP? Yes (No)
Lab ID Number:
Sample Date: 9/24/96
Received Date: 9/24/96
Sample Site: BROWN FIELD SITE 1120
Lab Due Date:

Sample ID #	Lab	#1-6-4035	#2-6-4036	#3-6-4037	#4-6-4038	Notes:
Sample Name	----------	MW 16	MW 12	MW 10	MW 9	QUIESCENT SAMPLING Pb only
or Location	----------	SITE 1120	SITE 1120	SITE 1120	SITE 1120	
Sampled by	----------	P Kearns	P Kearns	P Kearns	P Kearns	
Collection Date	Date	9/24/96	9/24/96	9/24/96	9/24/96	
Date/Time	Time	0954	1055	1138	1240	
Sample Matrix	----------	GW	GW	GW	GW	

GROUP PARAMETERS by Method Name	METHOD #	X	1-1 Bottle ID #'s	X	1-1 Bottle ID #'s	X	1-1 Bottle ID #'s	X	1-1 Bottle ID #'s	Billing Units	Containers Required (L/S)	Preservative(s) Used (Liquids)
HW Charact. (complete)	EPA SW 846									60	See below	See below
Ignitability (Flashpoint)	SW 846 1010									2	250ml/4 oz.	4° C
Reactivity (Cyanide & Sulfide)	EPA SW-846									4	1L/4 oz.	4° C
Corrosivity (pH)	SW 846 9040/9045									1	250ml/4 oz.	4° C
Toxicity (TCLP) complete	EPA SW-846									55	See below	See below
Toxicity (TCLP) complete	EPA SW-846									55	See below	See below
TCLP Non Volatile Extraction	SW 846 1311									5	40 mlx3/4 oz.	4° C
TCLP Volatile ZHE Extraction	SW 846 1311									5	1Lx4/32 oz.	HCl to pH<2/4° C
TCLP BNA Extractables	SW 846 8270									18	1Lx3/4 oz.	4° C
TCLP Acid Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
TCLP B/N Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
TCLP Pesticides	SW 846 8080									10	1Lx3/4 oz.	4° C
TCLP Herbicides	SW 846 8150									10	1Lx3/4 oz.	4° C
TCLP Volatiles	SW 846 8260									9	40 ml x 3/4 oz.	HCl to pH<2/4° C
TCLP Metals (8)	EPA SW-846									7	500 ml/4 oz.	HNO_3 to pH<2
Complete Priority Pollutants	EPA SW-846									42	See below	See below
PP Acid Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
PP B/N Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
PP Pesticide/PCB's	SW 846 8080									10	1Lx3/4 oz.	4° C
PP Volatiles	SW 846 8260									9	40 ml x 3/4 oz.	HCl to pH<2/4° C
PP Metals (13)	EPA SW-846									9	500 ml/4 oz.	HNO_3 to pH<2
PP Cyanide/Phenol	EPA SW-846									4	1L Plastic/1L Glass	NaOH/H_2SO_4
Toxicity (TCLP) less Pest/Herb	EPA SW-846									40	See below	See below
F001 - F005 Solvents	EPA SW-846									28	1Lx2&40mlx3/16 oz.	4° C
Total Volatiles	SW 846 8260									9	40 mlx3/4 oz.	HCl to pH<2/4° C
Total BNA Extractables	SW 846 8270									18	1Lx2/16 oz.	4° C
Total RCRA Metals (8)	EPA SW-846	X	Pb only	X	Pb only	X	Pb only	X	Pb only	7	500 ml/4 oz.	HNO_3 to pH<2
PCB's in Oil	SW 846 8080									3	40 ml/4 oz.	None
PCB's in Water/Soil/Wipes	SW 846 8080									4	1L/4 oz.	None
Other:												

Comments: D-142

Relinquished by: P Kearns
Received by: P Kearns

2 of 5

HAZARDOUS WASTE CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Ph#: (904) 452-4728/3642
DSN: 922-4728/3642
FAX: (904) 452-2799/2387

Requester: NPWC ENVIRONMENTAL
Address: B-3887
NAS PENSACOLA, FL 32508
Phone #: 452-2170
Contact: GREGG CAMPBELL
Job Order #: 1305001

Report Required? (Yes) No DEP? Yes No
Lab ID Number:
Sample Date: 9/24/96
Received Date: 9/24/96
Sample Site: BRONSON FIELD SITE 1120
Lab Due Date:

Sample ID #	Lab	#1-6-4039	#2-6-4040	#3-6-4041	#4-6-4042
Sample Name	----------	MW#15	MW#14	MW#18	DUPLICATE
or Location	----------	SITE 1120	Site 1120	Site 1120	SITE 1120
Sampled by	----------	[illegible]	[illegible]	[illegible]	[illegible]
Collection Date	Date	9/24/96	9/24/96	9/24/96	9/24/96
Date/Time	Time	1323	1408	1505	
Sample Matrix	----------	GW	GW	GW	GW

Notes: QUIESCENT SAMPLING

Pb only

GROUP PARAMETERS by Method Name	METHOD #	X	1-1 Bottle ID #'s	X	1-1 Bottle ID #'s	X	1-1 Bottle ID #'s	X	1-1 Bottle ID #'s	Billing Units	Containers Required (L/S)	Preservative(s) Used (Liquids)
HW Charact. (complete)	EPA SW 846									80	See below	See below
Ignitability (Flashpoint)	SW 846 1010									2	250ml/4 oz.	4° C
Reactivity (Cyanide & Sulfide)	EPA SW-846									4	1L/4 oz.	4° C
Corrosivity (pH)	SW 846 9040/9045									1	250ml/4 oz.	4° C
Toxicity (TCLP) complete	EPA SW-846									55	See below	See below
Toxicity (TCLP) complete	EPA SW-846									55	See below	See below
TCLP Non Volatile Extraction	SW 846 1311									5	40 mlx3/4 oz.	4° C
TCLP Volatile ZHE Extraction	SW 846 1311									5	1Lx4/32 oz.	HCl to pH<2/4° C
TCLP BNA Extractables	SW 846 8270									18	1Lx3/4 oz.	4° C
TCLP Acid Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
TCLP B/N Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
TCLP Pesticides	SW 846 8080									10	1Lx3/4 oz.	4° C
TCLP Herbicides	SW 846 8150									10	1Lx3/4 oz.	4° C
TCLP Volatiles	SW 846 8260									9	40 ml x 3/4 oz.	HCl to pH<2/4° C
TCLP Metals (8)	EPA SW-846									7	500 ml/4 oz.	HNO_3 to pH<2
Complete Priority Pollutants	EPA SW-846									42	See below	See below
PP Acid Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
PP B/N Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
PP Pesticide/PCB's	SW 846 8080									10	1Lx3/4 oz.	4° C
PP Volatiles	SW 846 8260									9	40 ml x 3/4 oz.	HCl to pH<2/4° C
PP Metals (13)	EPA SW-846									9	500 ml/4 oz.	HNO_3 to pH<2
PP Cyanide/Phenol	EPA SW-846									4	1L Plastic/1L Glass	$NaOH/H_2SO_4$
Toxicity (TCLP) less Pest/Herb	EPA SW-846									40	See below	See below
F001 - F005 Solvents	EPA SW-846									28	1Lx2& 40mlx3/16 oz.	4° C
Total Volatiles	SW 846 8260									9	40 mlx3/4 oz.	HCl to pH<2/4° C
Total BNA Extractables	SW 846 8270									18	1Lx2/16 oz.	4° C
Total RCRA Metals (8)	EPA SW-846	X	Pb only	X	Pb only	X	Pb only	X	Pb only	7	500 ml/4 oz.	HNO_3 to pH<2
PCB's in Oil	SW 846 8080									3	40 ml/4 oz.	None
PCB's in Water/Soil/Wipes	SW 846 8080									4	1L/4 oz.	None
Other:												

Comments:

Relinquished by: [illegible]
Date/Time: 9/24/96 1600

Received by: [illegible]
Date/Time: 9/24/96 1645

Time to lab

3 of 5

HAZARDOUS WASTE CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Ph#: (904) 452-4728/3642
DSN: 922-4728/3642
FAX: (904) 452-2799/2387

Requester: PLUS ENVIRONMENTAL
Address: B-3887
NAS PENSACOLA FL
Phone #: 452-2170
Contact: GREGG CAMPBELL
Job Order #: 1305001

Report Required? (Yes) No DEP? Yes (No)
Lab ID Number:
Sample Date: 9/24/96
Received Date: 9/24/96
Sample Site: BROWSER FIELD SITE 11
Lab Due Date:

Sample ID #	Lab	#1- 6-4043	#2- 6-4044	#3-	#4-
Sample Name	----------	EQ BLANK	MW17		
or Location	----------	Site 1120	Site 1120		
Sampled by	----------	[signature]	[signature]		
Collection	Date	9/24/96	9/24/96		
Date/Time	Time	1500	1535		
Sample Matrix	----------	DI	GW		

Notes: FLUORESCENT SAMPLING
Pb only

GROUP PARAMETERS by Method Name	METHOD #	X	1-1 Bottle ID #'s	X	1-1 Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required (L/S)	Preservative(s) Used (Liquids)
HW Charact. (complete)	EPA SW 846									60	See below	See below
Ignitability (Flashpoint)	SW 846 1010									2	250ml/4 oz.	4° C
Reactivity (Cyanide & Sulfide)	EPA SW-846									4	1L/4 oz.	4° C
Corrosivity (pH)	SW 846 9040/9045									1	250ml/4 oz.	4° C
Toxicity (TCLP) complete	EPA SW-846									55	See below	See below
Toxicity (TCLP) complete	EPA SW-846									55	See below	See below
TCLP Non Volatile Extraction	SW 846 1311									5	40 mlx3/4 oz.	4° C
TCLP Volatile ZHE Extraction	SW 846 1311									5	1Lx4/32 oz.	HCl to pH<2/4° C
TCLP BNA Extractables	SW 846 8270									18	1Lx3/4 oz.	4° C
TCLP Acid Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
TCLP B/N Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
TCLP Pesticides	SW 846 8080									10	1Lx3/4 oz.	4° C
TCLP Herbicides	SW 846 8150									10	1Lx3/4 oz.	4° C
TCLP Volatiles	SW 846 8260									9	40 ml x 3/4 oz.	HCl to pH<2/4°
TCLP Metals (8)	EPA SW-846									7	500 ml/4 oz.	HNO, to pH<2
Complete Priority Pollutants	EPA SW-846									42	See below	See below
PP Acid Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
PP B/N Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
PP Pesticide/PCB's	SW 846 8080									10	1Lx3/4 oz.	4° C
PP Volatiles	SW 846 8260									9	40 ml x 3/4 oz.	HCl to pH<2/4° C
PP Metals (13)	EPA SW-846									9	500 ml/4 oz.	HNO, to pH<2
PP Cyanide/Phenol	EPA SW-846									4	1L Plastic/1L Glass	NaOH/H,SO,
Toxicity (TCLP) less Pest/Herb	EPA SW-846									40	See below	See below
F001 - F005 Solvents	EPA SW-846									28	1Lx2&40mlx3/16 oz.	4° C
Total Volatiles	SW 846 8260									9	40 mlx3/4 oz.	HCl to pH<2/4
Total BNA Extractables	SW 846 8270									18	1Lx2/16 oz.	4° C
Total RCRA Metals (8)	EPA SW-846	X	Pb only	X	Pb only					7	500 ml/4 oz.	HNO, to pH<
PCB's in Oil	SW 846 8080									3	40 ml/4 oz.	None
PCB's in Water/Soil/Wipes	SW 846 8080									4	1L/4 oz.	None
Other:												

Comments

Relinquished by: [signature]
Date/Time: 9/24/96 1600

Received by: [signature]
Date/Time: 9/24/96 1645

Time

12/12/Norms custody/hazwrd.wk1 rev 5/21/96

HAZARDOUS WASTE CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Ph#: (904) 452-4728/3642
DSN: 922-4728/3642
FAX: (904) 452-2799/2387

Requester: NPWC ENVIRONMENTAL
Address: B-3887
NAS PENSACOLA, FL 32508
Phone #: 452-2170
Contact: GREGG CAMPBELL
Job Order #: 1305001

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 9/25/96
Received Date: 9/25/96
Sample Site: BRONSON FIELD SITE 1120
Lab Due Date:

Sample ID #	Lab	#1-6-4045	#2-6-4046	#3-6-4047	#4-6-4048	Notes:
Sample Name	----------	MW 13	MW 7	MW 8	Duplicate	QUIESCENT SAMPLING Pb only
or Location	----------	SITE 1120	SITE 1120	SITE 1120	SITE 1120	
Sampled by	----------	P Kane	P Kane	P Kane	P Kane	
Collection	Date	9/25/96	9/25/96	9/25/96	9/25/96	
Date/Time	Time	0932	1010	1117		
Sample Matrix	----------	GW	GW	GW	GW	

GROUP PARAMETERS by Method Name	METHOD #	X	1-1 Bottle ID #'s	X	1-1 Bottle ID #'s	X	1-1 Bottle ID #'s	X	1-1 Bottle ID #'s	Billing Units	Containers Required (L/S)	Preservative(s) Used (Liquids)
HW Charact. (complete)	EPA SW 846									60	See below	See below
Ignitability (Flashpoint)	SW 846 1010									2	250ml/4 oz.	4° C
Reactivity (Cyanide & Sulfide)	EPA SW-846									4	1L/4 oz.	4° C
Corrosivity (pH)	SW 846 9040/9045									1	250ml/4 oz.	4° C
Toxicity (TCLP) complete	EPA SW-846									55	See below	See below
Toxicity (TCLP) complete	EPA SW-846									55	See below	See below
TCLP Non Volatile Extraction	SW 846 1311									5	40 mlx3/4 oz.	4° C
TCLP Volatile ZHE Extraction	SW 846 1311									5	1Lx4/32 oz.	HCl to pH<2/4° C
TCLP BNA Extractables	SW 846 8270									18	1Lx3/4 oz.	4° C
TCLP Acid Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
TCLP B/N Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
TCLP Pesticides	SW 846 8080									10	1Lx3/4 oz.	4° C
TCLP Herbicides	SW 846 8150									10	1Lx3/4 oz.	4° C
TCLP Volatiles	SW 846 8260									9	40 ml x 3/4 oz.	HCl to pH<2/4° C
TCLP Metals (8)	EPA SW-846									7	500 ml/4 oz.	HNO_3 to pH<2
Complete Priority Pollutants	EPA SW-846									42	See below	See below
PP Acid Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
PP B/N Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
PP Pesticide/PCB's	SW 846 8080									10	1Lx3/4 oz.	4° C
PP Volatiles	SW 846 8260									9	40 ml x 3/4 oz.	HCl to pH<2/4° C
PP Metals (13)	EPA SW-846									9	500 ml/4 oz.	HNO_3 to pH<2
PP Cyanide/Phenol	EPA SW-846									4	1L Plastic/1L Glass	NaOH/H_2SO_4
Toxicity (TCLP) less Pest/Herb	EPA SW-846									40	See below	See below
F001 - F005 Solvents	EPA SW-846									28	1Lx2&40mlx3/16 oz.	4° C
Total Volatiles	SW 846 8260									9	40 mlx3/4 oz.	HCl to pH<2/4° C
Total BNA Extractables	SW 846 8270									18	1Lx2/16 oz.	4° C
Total RCRA Metals (8)	EPA SW-846	X	Pb only	X	Pb only	X	Pb only	X	Pb only	7	500 ml/4 oz.	HNO_3 to pH<2
PCB's in Oil	SW 846 8080									3	40 ml/4 oz.	None
PCB's in Water/Soil/Wipes	SW 846 8080									4	1L/4 oz.	None
Other:												

Comments:

Relinquished by: P Kane
Date/Time: 9/25/96 1445

Received by: [illegible]
Date/Time: 9/25/96 1545

HAZARDOUS WASTE CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

/C Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Ph#: (904) 452-4726/3642
DSN: 922-4726/3642
FAX: (904) 452-2799/2387

Requester: N PWC ENVIRONMENTAL
Address: B-3887
NAS PENSACOLA, FL 32508
Phone #: 452-2170
Contact: GREG CAMPBELL
Job Order #: 1305001

Report Required? (Yes) No DEP? Yes No
Lab ID Number:
Sample Date: 9/25/96
Received Date: 9/25/96
Sample Site: BROSEN FIELD SITE 1120
Lab Due Date:

Sample ID #	Lab	#1-6-4049	#2-6-4050	#3-6-4051	#4-6-4052
Sample Name	----------	MW 11	MW21	MW20	MW19
or Location	----------	SITE 1120	Site 1120	Site 1120	Site 1120
Sampled by	----------	R Keane	R Keane	R Keane	R Keane
Collection	Date	9/25/96	9/25/96	9/25/96	9/25/96
Date/Time	Time	1203	1304	1340	1435
Sample Matrix	----------	GW	GW	GW	GW

Notes: QUIESCENT SAMPLING Pb only

GROUP PARAMETERS by Method Name	METHOD #	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required (L/S)	Preservative(s) Used (Liquids)
HW Charact. (complete)	EPA SW 846									60	See below	See below
Ignitability (Flashpoint)	SW 846 1010									2	250ml/4 oz.	4° C
Reactivity (Cyanide & Sulfide)	EPA SW-846									4	1L/4 oz.	4° C
Corrosivity (pH)	SW 846 9040/9045									1	250ml/4 oz.	4° C
Toxicity (TCLP) complete	EPA SW-846									55	See below	See below
Toxicity (TCLP) complete	EPA SW-846									55	See below	See below
TCLP Non Volatile Extraction	SW 846 1311									5	40 mlx3/4 oz.	4° C
P Volatile ZHE Extraction	SW 846 1311									5	1Lx4/32 oz.	HCl to pH<2/4° C
P BNA Extractables	SW 846 8270									18	1Lx3/4 oz.	4° C
TCLP Acid Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
TCLP B/N Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
TCLP Pesticides	SW 846 8080									10	1Lx3/4 oz.	4° C
TCLP Herbicides	SW 846 8150									10	1Lx3/4 oz.	4° C
TCLP Volatiles	SW 846 8260									9	40 ml x 3/4 oz.	HCl to pH<2/4° C
TCLP Metals (8)	EPA SW-846									7	500 ml/4 oz.	HNO_3 to pH<2
Complete Priority Pollutants	EPA SW-846									42	See below	See below
PP Acid Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
PP B/N Extractables	SW 846 8270									10	1Lx3/4 oz.	4° C
PP Pesticide/PCB's	SW 846 8080									10	1Lx3/4 oz.	4° C
PP Volatiles	SW 846 8260									9	40 ml x 3/4 oz.	HCl to pH<2/4° C
PP Metals (13)	EPA SW-846									9	500 ml/4 oz.	HNO_3 to pH<2
PP Cyanide/Phenol	EPA SW-846									4	1L Plastic/1L Glass	NaOH/H_2SO_4
Toxicity (TCLP) less Pest/Herb	EPA SW-846									40	See below	See below
F001 - F005 Solvents	EPA SW-846									28	1Lx2&40mlx3/16 oz.	4° C
Total Volatiles	SW 846 8260									9	40 mlx3/4 oz.	HCl to pH<2/4° C
Total BNA Extractables	SW 846 8270									18	1Lx2/16 oz.	4° C
Total RCRA Metals (8)	EPA SW-846	X	Pb only	X	Pb only	X	Pb only	X	Pb only	7	500 ml/4 oz.	HNO_3 to pH<2
PCB's in Oil	SW 846 8080									3	40 ml/4 oz.	None
PCB's in Water/Soil/Wipes	SW 846 8080									4	1L/4 oz.	None
Other:												

Comments:

Relinquished by: R Keane
Date/Time: 9/25/96 1445

Received by: R R Blum
Date/Time: 9/25/96 1545

12x2/Nonstandard/chain of custody/chainsrd.wk1 rev 5/21/96

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 #: (904) 452-3180
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 64085
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 5007

LAB Sample ID#	1- 64085
Sample Name / Location	Site 1120 MW-22
Collector's Name	SC
Date & Time Collected	09/26/96 @ 1200
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	09/27/96 JM
Date of Analysis	09/27/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 64085	units	Det. Limit	Flags
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	1	
Chloroform	2	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
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	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	
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	100
Bromoflourobenzene	85-116	102

COMMENTS :

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

D-147

Approved by : Jerry Dose, Laboratory Director

Date: 10/10/96
Report Generated

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 64085
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 500?

LAB Sample ID#	1- **64085**
Sample Name / Location	Site 1120 MW-22
Collector's Name	SC
Date & Time Collected	09/26/96 @ 1200
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	10/02/96 JJ
Date of Analysis	10/04/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 64085	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	65
2-Flouroblphenyl	43-116	71
Terphenyl -d14	33-141	75

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96
Report Generated

D- 148

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 64085
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 500?

LAB Sample ID#	1- 64085			
Sample Name / Location	Site 1120 MW-22			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ 1200			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	10/01/96 JM			
Date of Analysis	10/01/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 64085	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	88

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96
Report Generated

D-149

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report
Petroleum Range Organics by FLPRO

Lab Report Number: 64085
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 500?

LAB Sample ID#	1- 64085			
Sample Name / Location	Site 1120 MW-22			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ 1200			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	10/04/96 JM			
Date of Analysis	10/04/96			
Sample Matrix	GW			
Dilution		x	1	
Parameter	1- 64085	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 *	92
Nonatriacontane (C-39)	42-193 *	62

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 64086
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 500?

LAB Sample ID#	1- **64086**
Sample Name / Location	Site 1120 MW-23
Collector's Name	SC
Date & Time Collected	09/26/96 @ 1230
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	09/27/96 JM
Date of Analysis	09/27/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 64086	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	
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	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	
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	120
Toluene-d8	86-119	98
Bromoflourobenzene	85-116	103

COMMENTS :

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

D-151

Approved by : Jerry Davis, Laboratory Director

Date: 10/10/96

Report Generated

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 64086
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 5007

LAB Sample ID#	1- 64086			
Sample Name / Location	Site 1120 MW-23			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ 1230			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	10/02/96 JJ			
Date of Analysis	10/04/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 64086	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	66
2-Flourobiphenyl	43-116	72
Terphenyl -d14	33-141	73

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96
Report Generated

D-152

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 64066
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 5007

LAB Sample ID#	1- 64086			
Sample Name / Location	Site 1120 MW-23			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ 1230			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	10/01/96 JM			
Date of Analysis	10/01/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 64086	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	67

COMMENTS :

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

Approved by : Jerry Deen, Laboratory Director

Date: 10/10/96
Report Generated

D-153

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Analytical Report
Petroleum Range Organics by FLPRO

Client:	NPWC Environmental
Address:	Bldg. 3887, Code 910 NAS Pensacola,FL 32508
Phone #:	(904) 452-3180
Contact:	Greg Campbell

Lab Report Number:	64086
Sample Date:	09/26/96
Received Date:	09/26/96
Sample Site:	Bronson Field, FL
Job Order No.:	130 5007

LAB Sample ID#	1- 64086			
Sample Name / Location	Site 1120 MW-23			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ 1230			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	10/04/96 JM			
Date of Analysis	10/04/96			
Sample Matrix	GW			
Dilution		x	1	
Parameter	1- 64086	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 *	94
Nonatriacontane (C-39)	42-193 *	62

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96

D-154

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 64087
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 5007

LAB Sample ID#	1- 64087
Sample Name / Location	Site 1120 MW-24
Collector's Name	SC
Date & Time Collected	09/26/96 @ 1300
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	09/27/96 JM
Date of Analysis	09/27/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 64087	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	
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	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	
Trichloroflouromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	108
Toluene-d8	86-119	100
Bromoflourobenzene	85-116	103

COMMENTS :

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

D-155

Approved by : Jerry Deas, Laboratory Director

Date: 10/10/96
Report Generated

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Environmental Laboratory

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DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 64087
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 5007

LAB Sample ID#	1- **64087**
Sample Name / Location	Site 1120 MW-24
Collector's Name	SC
Date & Time Collected	09/26/96 @ 1300
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	10/02/96 JJ
Date of Analysis	10/04/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 64087	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 *	39	ug/L	2	
2-Methylnaphthalene	48	ug/L	3	
Naphthalene	BDL	ug/L	2	
Phenanthrene	BDL	ug/L	2	
Pyrene	BDL	ug/L	2	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	68
2-Flourobiphenyl	43-116	73
Terphenyl -d14	33-141	73

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96
Report Generated

D-156

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DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 64087
Sample Date: 09/26/96
Received Date: 09/26/98
Sample Site: Bronson Field, FL
Job Order No.: 130 500?

LAB Sample ID#	1- 64087			
Sample Name / Location	Site 1120 MW-24			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ 1300			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	10/01/96 JM			
Date of Analysis	10/01/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 64087	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	61

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96
Report Generated

D-157

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Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report
Petroleum Range Organics by FLPRO

Lab Report Number: 64087
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 5007

LAB Sample ID#	1- 64087			
Sample Name / Location	Site 1120 MW-24			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ 1300			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	10/04/96 JM			
Date of Analysis	10/04/96			
Sample Matrix	GW			
Dilution		x	1	
Parameter	**1- 64087**	**units**	**Det. Limit**	**Flags**
Petroleum Range Organics by FLPRO	0.52	mg/L	0.25	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	87
Nonatriacontane (C-39)	42-193 *	57

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96

D-158

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DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 64088
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 5007

LAB Sample ID#	1- 64088			
Sample Name / Location	Site 1120 MW-25			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ 1330			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	09/27/96 JM			
Date of Analysis	09/27/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 64088	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	
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	7	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	
Trichloroflouromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	40	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	117
Toluene-d8	86-119	101
Bromoflourobenzene	85-116	102

COMMENTS :

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

D-159

Approved by : Jerry Deas, Laboratory Director

Date: 10/10/96
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Environmental Laboratory

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DSN 922-4728/3642

Client: NPWC Environmental
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NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 64088
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 5007

LAB Sample ID#	1- **64088**
Sample Name / Location	Site 1120 MW-25
Collector's Name	SC
Date & Time Collected	09/26/96 @ 1330
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	10/02/96 JJ
Date of Analysis	10/04/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 64088	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	3	ug/L	2	
Indeno(1,2,3-cd)pyrene	BDL	ug/L	2	
1-Methylnaphthalene *	89	ug/L	2	
2-Methylnaphthalene	120	ug/L	3	
Naphthalene	62	ug/L	2	
Phenanthrene	BDL	ug/L	2	
Pyrene	BDL	ug/L	2	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	66
2-Flourobiphenyl	43-116	74
Terphenyl -d14	33-141	75

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96
Report Generated

D-160

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Environmental Laboratory

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DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 64088
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 500?

LAB Sample ID#	1- 64088			
Sample Name / Location	Site 1120 MW-25			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ 1330			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	10/01/96 JM			
Date of Analysis	10/01/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 64088	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	78

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96
Report Generated

D-161

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Analytical Report
Petroleum Range Organics by FLPRO

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Lab Report Number: 64088
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 500?

LAB Sample ID#	1- 64088			
Sample Name / Location	Site 1120 MW-25			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ 1330			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	10/04/96 JM			
Date of Analysis	10/04/96			
Sample Matrix	GW			
Dilution	x 1			
Parameter	1- 64088	units	Det. Limit	Flags
Petroleum Range Organics by FLPRO	0.85	mg/L	0.25	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	89
Nonatriacontane (C-39)	42-193 *	58

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96

D-162

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 64089
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 500?

LAB Sample ID#	1- **64089**
Sample Name / Location	Site 1120 MW-26
Collector's Name	SC
Date & Time Collected	09/26/96 @ 1400
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	09/27/96 JM
Date of Analysis	09/27/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 64089	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	
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	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	
Trichloroflouromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	1	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	117
Toluene-d8	86-119	99
Bromoflourobenzene	85-116	101

COMMENTS :

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

D-163

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96
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Navy Public Works Center
Environmental Laboratory

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DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 64089
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 5007

LAB Sample ID#	1- 64089			
Sample Name / Location	Site 1120 MW-26			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ 1400			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	10/02/96 JJ			
Date of Analysis	10/04/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 64089	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 *	31	ug/L	2	
2-Methylnaphthalene	32	ug/L	3	
Naphthalene	10	ug/L	2	
Phenanthrene	BDL	ug/L	2	
Pyrene	BDL	ug/L	2	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	65
2-Flourobiphenyl	43-116	72
Terphenyl -d14	33-141	75

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96
Report Generated

D-164

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Environmental Laboratory

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DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 64089
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 5007

LAB Sample ID#	1- 64089			
Sample Name / Location	Site 1120 MW-26			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ 1400			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	10/01/96 JM			
Date of Analysis	10/01/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 64089	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	85

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96
Report Generated

D-165

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Analytical Report
Petroleum Range Organics by FLPRO

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Lab Report Number: 64089
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 5007

LAB Sample ID#	1- 64089			
Sample Name / Location	Site 1120 MW-26			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ 1400			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	10/04/96 JM			
Date of Analysis	10/04/96			
Sample Matrix	GW			
Dilution		x	1	
Parameter	1- 64089	units	Det. Limit	Flags
Petroleum Range Organics by FLPRO	0.36	mg/L	0.25	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	81
Nonatriacontane (C-39)	42-193 *	66

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96

D-166

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 64090
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 500?

LAB Sample ID#	1- **64090**
Sample Name / Location	Site 1120 Eq. Blank
Collector's Name	SC
Date & Time Collected	09/26/96 @ 1130
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	09/27/96 JM
Date of Analysis	09/27/96
Sample Matrix	DI
Dilution	X 1

Compound Name	1- 64090	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	
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	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	
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	112
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.

D-167

Approved by : Jerry Deese, Laboratory Director

Date: 10/10/96
Report Generated

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 64090
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 5007

LAB Sample ID#	1- 64090
Sample Name / Location	Site 1120 Eq. Blank
Collector's Name	SC
Date & Time Collected	09/26/96 @ 1130
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	10/02/96 JJ
Date of Analysis	10/04/96
Sample Matrix	DI
Dilution	X 1

Compound Name	1- 64090	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	69
Terphenyl -d14	33-141	87

COMMENTS :

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

Approved by : Jerry Deest Laboratory Director

Date: 10/10/96
Report Generated

D-168

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 64090
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 500?

LAB Sample ID#	1- 64090			
Sample Name / Location	Site 1120 Eq. Blank			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ 1130			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	10/01/96 JM			
Date of Analysis	10/01/96			
Sample Matrix	DI			
Dilution	X 1			
Compound Name	1- 64090	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	100

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96
Report Generated

D-169

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Analytical Report
Petroleum Range Organics by FLPRO

Client:	NPWC Environmental
Address:	Bldg. 3887, Code 910 NAS Pensacola,FL 32508
Phone #:	(904) 452-3180
Contact:	Greg Campbell

Lab Report Number:	64090
Sample Date:	09/26/96
Received Date:	09/26/96
Sample Site:	Bronson Field, FL
Job Order No.:	130 5007

LAB Sample ID#	1- 64090			
Sample Name / Location	Site 1120 Eq. Blank			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ 1130			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	10/04/96 JM			
Date of Analysis	10/04/96			
Sample Matrix	DI			
Dilution	x 1			
Parameter	1- 64090	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 *	79
Nonatriacontane (C-39)	42-193 *	71

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96

D-170

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 64091
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 5007

LAB Sample ID#	1- 64091			
Sample Name / Location	Site 1120 Duplicate			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ N/S			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	09/30/96 JM			
Date of Analysis	09/30/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 64091	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	
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	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	
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	99

COMMENTS :

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

D-171

Approved by : Jerry Deets, Laboratory Director

Date: 10/10/96
Report Generated

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report

610 PAH's by Method 8270

Lab Report Number: 64091
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 500?

LAB Sample ID#	1- 64091			
Sample Name / Location	Site 1120 Duplicate			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ N/S			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	10/02/96 JJ			
Date of Analysis	10/04/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 64091	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	71
Terphenyl -d14	33-141	74

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96
Report Generated

D-172

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 64091
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 500?

LAB Sample ID#	1- 64091			
Sample Name / Location	Site 1120 Duplicate			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ N/S			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	10/01/96 JM			
Date of Analysis	10/01/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 64091	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	80

COMMENTS :

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

Approved by : Jerry Deas, Laboratory Director

Date: 10/10/96
Report Generated

D-173

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Analytical Report
Petroleum Range Organics by FLPRO

Client:	NPWC Environmental
Address:	Bldg. 3887, Code 910 NAS Pensacola,FL 32508
Phone #:	(904) 452-3180
Contact:	Greg Campbell

Lab Report Number:	64091
Sample Date:	09/26/96
Received Date:	09/26/96
Sample Site:	Bronson Field, FL
Job Order No.:	130 5007

LAB Sample ID#	1- 64091			
Sample Name / Location	Site 1120 Duplicate			
Collector's Name	SC			
Date & Time Collected	09/26/96 @ N/S			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	10/04/96 JM			
Date of Analysis	10/04/96			
Sample Matrix	GW			
Dilution		x	1	
Parameter	1- 64091	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 *	78
Nonatriacontane (C-39)	42-193 *	61

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 10/10/96

D-174

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Client: NPWC Environmental
Address: Bldg. 3887, Code 910
NAS Pensacola,FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 64092
Sample Date: 09/26/96
Received Date: 09/26/96
Sample Site: Bronson Field, FL
Job Order No.: 130 5007

LAB Sample ID#	1- **64092**
Sample Name / Location	Site 1120 Trip Blank
Collector's Name	SC
Date & Time Collected	09/26/96 @ AM
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	10/01/96 JM
Date of Analysis	10/01/96
Sample Matrix	DI
Dilution	X 1

Compound Name	1- 64092	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	
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	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	
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	106
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.

D-175

Approved by : Jerry Deas, Laboratory Director

Date: 10/10/96
Report Generated

1.2

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg 3297, Code 920
NAS Pensacola, FL 32508-0508

FAX-(904) 452-4720
Telephone-(904) 452-4720

Requestor: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 130500 [illegible]

Report Required? Yes No DEP? Yes No

Lab ID Number:
Sample Date: 9.26.96
Received Date: 9.26.96
Sample Site: BF 1120
Lab Due Date:

Sample ID #	Lab	#1- 6-4085	#2- 6-4086	#3- 6-4087	#4- 6-4088	Notes
Sample Name	.....	MW-22	MW-23	MW-24	MW-25	K.A.G. (Less Pb)
Sample Location	.....					
Sampled by	.....	SC	SC	SC	SC	
Sample Site	Depth					
Sample Time	Frequency					
Sample Date	End					
Sample Time	.....	1200	1230	1300	1330	
Sample Matrix	.....	GW	GW	GW	GW	

PARAMETER by Method / Group	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
Halo. & Aro./GC	EPA 601/602	X	4 VOA	X	4 VOA	X	4 VOA	X	4 VOA	6	40 ml VOA Vial x 2	HCl/4° C
Polynuclear Aromatics/HPLC	EPA 610									7	1L Amber x 2	4° C
Purgeables/GCMS	EPA 624									8	40 ml VOA Vial x 2	HCl/4° C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4° C
Gas Chromatography	EPA SW 8000									5	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Halo. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCl/4° C/None
Non-Halo. Vol. Org./GC	EPA SW 8015(MOD)									4	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCl/4° C/None
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									6	40ml VOAx2/4 oz.	HCl/4° C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4° C/None
VOC/GCMS	EPA SW 8240A									8	40ml VOAx2/4 oz.	HCl/4° C/None
VOC/GCMS - Cap	EPA SW 8260									8	40ml VOAx2/4 oz.	HCl/4° C/None
Semivol. Org./GCMS - Cap	EPA SW 8270A									16	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310	X	2 PAH	X	2 PAH	X	2 PAH	X	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	FL ~~EPA 418.1~~ PRO	X	2 TPH	X	2 TPH	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: [signature] / WES, Inc.
Date/Time: 9.26.96 / 1515

Received by: [signature]
Date/Time: 9/26/96 1515

PWC 9510/8

D-176

2.7

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, FL 32508-6500

Ph# - (904)452-4728
Autovon - 922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305 00

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 9-26-96
Received Date: 9-26-96
Sample Site: BF 1126
Lab Due Date:

Sample ID #	Lab	#1-6-4089	#2-6-4090	#3-6-4091	#4-6-4092	Notes
Sample Name or Location	----------	MW-26	EQ. BLANK	Duplicate	Trip Blank	K.A.G. (Less Pb)
Sampled by	----------	SC	SC	SC	SC	
Composite Date/Time Collected	Begin					
	Frequency					
	End					
Grab Time	----------	1400	1130	—	AM	
Sample Matrix	----------	GW	DI	GW	DI	

PARAMETER by Method Name	METHOD #	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Ethylene Dibromide (EDB)	EPA 504	X	2 EDB	X	2 EDB	X	2 EDB			3	120ml A VOA/4 oz.	None/4° C
Purg. Halocarbons/GC	EPA 601									4	40 ml VOA Vial x 2	HCV/4° C
Purg. Aromatics/GC	EPA 602									3	40 ml VOA Vial x 2	HCV/4° C
Purg. Halo. & Aro./GC	EPA 601/602	X	4 VOA	X	4 VOA	X	4 VOA	X	3 VOA	6	40 ml VOA Vial x 2	HCV/4° C
Polynuclear Aromatics/HPLC	EPA 610									7	1L Amber x 2	4° C
Purgeables/GCMS	EPA 624									8	40 ml VOA Vial x 2	HCV/4° C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4° C
Gas Chromatography	EPA SW 8000									5	40mlx2/1Lx2/4 oz.	HCV/4° C/None
Halo. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCV/4° C/None
Non-Halo. Vol. Org./GC	EPA SW 8015(MOD)									4	40mlx2/1Lx2/4 oz.	HCV/4° C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCV/4° C/None
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									8	40ml VOAx2/4 oz.	HCV/4° C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4° C/None
VOC/GCMS	EPA SW 8240A									8	40ml VOAx2/4 oz.	HCV/4° C/None
VOC/GCMS-Cap.	EPA SW 8260									8	40ml VOAx2/4 oz.	HCV/4° C/None
Semivol. Org./GCMS-Cap.	EPA SW 8270A									18	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310	X	2 PAH	X	2 PAH	X	2 PAH				1Lx3/4 oz.	4° C/None

PARAMETER by Group Name	METHOD SOURCE	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Gasoline Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Kerosene Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	FL ~~EPA 418.1~~ PRO	X	2 TPH	X	2 TPH	X	2 TPH				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/4° C
Other:												

Comments:

Relinquished by: [illegible] / UES, Inc.
Date/Time: 9-26-96 / 1515

Received by: [illegible]
Date/Time: 9/26/96 1515

PWC 96109

D-177

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: 64396
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64396			
Sample Name / Location	BF-1120 MW - 27			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0820			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	10/29/96 JM			
Date of Analysis	10/29/96			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 64396	units	Det. Limit	Flags
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	1	
Chloroform	2	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodifluoromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	1	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	1	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichlorofluoromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	101
Toluene-d8	86-119	102
Bromofluorobenzene	85-116	102

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated

D-178

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: 64396
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64396			
Sample Name / Location	BF-1120 MW - 27			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0820			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	10/28/96 JJ			
Date of Analysis	10/30/96			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 64396	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	72
2-Fluorobiphenyl	43-116	76
Terphenyl -d14	33-141	150*

COMMENTS : * = One surrogate allowed out per method.

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

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated

D-179

End of Report

Navy Public Works Center
Environmental Laboratory

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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 64396
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64396			
Sample Name / Location	BF-1120 MW - 27			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0820			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	11/06/96 MC			
Date of Analysis / Initials	11/07/96 MC			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 64396	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	87

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated

D-180

End of Report

Navy Public Works Center
Environmental Laboratory

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Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report
Petroleum Range Organics by FLPRO

Lab Report Number: 64396
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64396			
Sample Name / Location	BF-1120 MW - 27			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0820			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	10/28/96 JJ			
Date of analysis / Initials	11/04/96 JM			
Sample Matrix	Groundwater			
Dilution	x 1			
Parameter	1- 64396	units	Det. Limit	Flags
Petroleum Range Organics by FLPRO	BDL	mg/L	0.25	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	97
Nonatriacontane (C-39)	42-193 *	62

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. **mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.**

Approved by : Jerry Dees, Laboratory Director **Date:** 11/13/96

D-181

 End of Report

Navy Public Works Center
Environmental Laboratory

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Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 64397
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64397			
Sample Name / Location	BF-1120 MW - 28			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0840			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	10/26/96 JM			
Date of Analysis	10/26/96			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 64397	units	Det. Limit	Flags
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	1	
Chloroform	BDL	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodifluoromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	1	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	1	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichlorofluoromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

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

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director
D-182

Date: 11/13/96
Report Generated

End of Report

Navy Public Works Center
Environmental Laboratory

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Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 64397
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- **64397**
Sample Name / Location	BF-1120 MW - 28
Collector's Name	PJB
Date & Time Collected	10/24/96 @ 0840
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	10/28/96 JJ
Date of Analysis	10/30/96
Sample Matrix	Groundwater
Dilution	X 1

Compound Name	1- 64397	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	72
2-Fluorobiphenyl	43-116	76
Terphenyl -d14	33-141	142 *

COMMENTS : * = One surrogate allowed out per method.

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

Approved by : Jerry Deer, Laboratory Director

Date: 11/13/96
Report Generated

D-183

End of Report

Navy Public Works Center
Environmental Laboratory

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Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 64397
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64397			
Sample Name / Location	BF-1120 MW - 28			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0840			
Sample Type (composite or grab)	Grab			
Analyst	J Moore			
Date of Extraction / Initials	11/06/96 MC			
Date of Analysis / Initials	11/07/96 MC			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 64397	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	95

COMMENTS :

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

Approved by : Jerry Debs, Laboratory Director

Date: 11/13/96
Report Generated

D-184

End of Report

Navy Public Works Center
Environmental Laboratory

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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report
Petroleum Range Organics by FLPRO

Lab Report Number: 64397
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64397			
Sample Name / Location	BF-1120 MW - 28			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0840			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	10/28/96 JJ			
Date of analysis / Initials	11/04/96 JM			
Sample Matrix	Groundwater			
Dilution		x	1	
Parameter	1- 64397	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 *	92
Nonatriacontane (C-39)	42-193 *	66

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96

D-185

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: 64398
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- **64398**
Sample Name / Location	BF-1120 MW - 29
Collector's Name	PJB
Date & Time Collected	10/24/96 @ 0900
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	10/26/96 JM
Date of Analysis	10/26/96
Sample Matrix	Groundwater
Dilution	X 1

Compound Name	1- 64398	units	Det. Limit	Flags
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	1	
Chloroform	BDL	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodifluoromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	1	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	1	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichlorofluoromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	1	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	104
Toluene-d8	86-119	100
Bromofluorobenzene	85-116	100

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director
D-186

Date: 11/13/96
Report Generated

End of Report

Navy Public Works Center
Environmental Laboratory

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Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 64398
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- **64398**
Sample Name / Location	BF-1120 MW - 29
Collector's Name	PJB
Date & Time Collected	10/24/96 @ 0900
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	10/26/96 JM
Date of Analysis	10/26/96
Sample Matrix	Groundwater
Dilution	X 1

Compound Name	1- 64398	units	Det. Limit	Flags
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	1	
Chloroform	BDL	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodifluoromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	1	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	1	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichlorofluoromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	1	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	104
Toluene-d8	86-119	100
Bromofluorobenzene	85-116	100

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director
D-186

Date: 11/13/96
Report Generated

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 64398
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- **64398**
Sample Name / Location	BF-1120 MW - 29
Collector's Name	PJB
Date & Time Collected	10/24/96 @ 0900
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	10/28/96 JJ
Date of Analysis	10/30/96
Sample Matrix	Groundwater
Dilution	X 1

Compound Name	1- 64398	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 *	8	ug/L	2	
2-Methylnaphthalene	4	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	70
2-Fluorobiphenyl	43-116	73
Terphenyl -d14	33-141	132

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated

D-187

End of Report

Navy Public Works Center
Environmental Laboratory

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Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 64398
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64398			
Sample Name / Location	BF-1120 MW - 29			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0900			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	11/06/96 MC			
Date of Analysis / Initials	11/07/96 MC			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 64398	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	105

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated

D-188

End of Report

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Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report
Petroleum Range Organics by FLPRO

Lab Report Number: 64398
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64398			
Sample Name / Location	BF-1120 MW - 29			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0900			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	10/28/96 JJ			
Date of analysis / Initials	11/04/96 JM			
Sample Matrix	Groundwater			
Dilution	x 1			
Parameter	1- 64398	units	Det. Limit	Flags
Petroleum Range Organics by FLPRO	BDL	mg/L	0.25	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	97
Nonatriacontane (C-39)	42-193 *	65

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. **mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.**

Approved by : Jerry Dees, Laboratory Director **Date:** 11/13/96

D-189

 End of Report

Navy Public Works Center
Environmental Laboratory

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Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

601/602 Volatiles by Method 8260

Lab Report Number: 64399
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64399			
Sample Name / Location	BF-1120 MW - 30			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0920			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	10/26/96 JM			
Date of Analysis	10/26/96			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 64399	units	Det. Limit	Flags
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	1	
Chloroform	BDL	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodifluoromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	1	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	1	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichlorofluoromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	103
Toluene-d8	86-119	103
Bromofluorobenzene	85-116	103

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated

D-190

End of Report

Navy Public Works Center
Environmental Laboratory

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NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 64399
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- **64399**
Sample Name / Location	BF-1120 MW - 30
Collector's Name	PJB
Date & Time Collected	10/24/96 @ 0920
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	10/28/96 JJ
Date of Analysis	10/30/96
Sample Matrix	Groundwater
Dilution	X 1

Compound Name	1- 64399	units	Det. Limit	Flags
Acenaphthene	BDL	ug/L	2	
Acenaphthylene	BDL	ug/L	2	
Anthracene	BDL	ug/L	2	
Benzo(a)anthracene	BDL	ug/L	2	
Benzo(a)pyrene	BDL	ug/L	2	
Benzo(b)fluoranthene	BDL	ug/L	2	
Benzo(g,h,i)perylene	BDL	ug/L	2	
Benzo(k)fluoranthene	BDL	ug/L	3	
Chrysene	BDL	ug/L	2	
Dibenz(a,h)anthracene	BDL	ug/L	2	
Fluoranthene	BDL	ug/L	2	
Fluorene	BDL	ug/L	2	
Indeno(1,2,3-cd)pyrene	BDL	ug/L	2	
1-Methylnaphthalene *	BDL	ug/L	2	
2-Methylnaphthalene	BDL	ug/L	3	
Naphthalene	BDL	ug/L	2	
Phenanthrene	BDL	ug/L	2	
Pyrene	BDL	ug/L	2	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	67
2-Fluorobiphenyl	43-116	72
Terphenyl -d14	33-141	137

COMMENTS :

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

Approved by : Jerry Dese, Laboratory Director

Date: 11/13/96
Report Generated

D-191

End of Report

Navy Public Works Center
Environmental Laboratory

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Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 64399
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64399			
Sample Name / Location	BF-1120 MW - 30			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0920			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	11/06/96 MC			
Date of Analysis / Initials	11/07/96 MC			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 64399	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	92

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated

D-192

End of Report

Navy Public Works Center
Environmental Laboratory

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Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report
Petroleum Range Organics by FLPRO

Lab Report Number: 64399
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64399			
Sample Name / Location	BF-1120 MW - 30			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0920			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	10/28/96 JJ			
Date of analysis / Initials	11/04/96 JM			
Sample Matrix	Groundwater			
Dilution		x	1	
Parameter	1- 64399	units	Det. Limit	Flags
Petroleum Range Organics by FLPRO	0.26	mg/L	0.25	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	102
Nonatriacontane (C-39)	42-193 *	71

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 Deer, Laboratory Director

Date: 11/13/96

D-193

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: 64400
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64400			
Sample Name / Location	BF-1120 MW- 31			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0940			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	10/26/96 JM			
Date of Analysis	10/26/96			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 64400	units	Det. Limit	Flags
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	1	
Chloroform	BDL	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodifluoromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	1	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	1	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichlorofluoromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	105
Toluene-d8	86-119	101
Bromofluorobenzene	85-116	101

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

D-194

Date: 11/13/96
Report Generated

End of Report

Navy Public Works Center
Environmental Laboratory

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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: 64400
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64400
Sample Name / Location	BF-1120 MW- 31
Collector's Name	PJB
Date & Time Collected	10/24/96 @ 0940
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	10/28/96 JJ
Date of Analysis	10/30/96
Sample Matrix	Groundwater
Dilution	X 1

Compound Name	1- 64400	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	72
2-Fluorobiphenyl	43-116	74
Terphenyl -d14	33-141	130

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated

D-195

End of Report

Navy Public Works Center
Environmental Laboratory

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Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 64400
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- **64400**			
Sample Name / Location	BF-1120 MW- 31			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0940			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	11/06/96 MC			
Date of Analysis / Initials	11/07/96 MC			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	**1- 64400**	**units**	**Det. Limit**	**Flags**
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	**Percent Recovery**
Tetra-Chloro-m-Xylene	**54-140**	100

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated

D-196

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report
Petroleum Range Organics by FLPRO

Lab Report Number: 64400
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64400			
Sample Name / Location	BF-1120 MW- 31			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0940			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	10/28/96 JJ			
Date of analysis / Initials	11/04/96 JM			
Sample Matrix	Groundwater			
Dilution	x 1			
Parameter	1- 64400	units	Det. Limit	Flags
Petroleum Range Organics by FLPRO	0.43	mg/L	0.25	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	94
Nonatriacontane (C-39)	42-193 *	63

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 Deer, Laboratory Director **Date:** 11/13/96

D-197

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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: 64401
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64401			
Sample Name / Location	BF-1120 Duplicate			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ Not Submitted			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	10/29/96 JM			
Date of Analysis	10/29/96			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 64401	units	Det. Limit	Flags
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	1	
Chloroform	BDL	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodifluoromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	1	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	1	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichlorofluoromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	100
Toluene-d8	86-119	101
Bromofluorobenzene	85-116	101

COMMENTS :

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

D-198

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 64401
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- **64401**
Sample Name / Location	BF-1120 Duplicate
Collector's Name	PJB
Date & Time Collected	10/24/96 @ Not Submitted
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	10/28/96 JJ
Date of Analysis	10/30/96
Sample Matrix	Groundwater
Dilution	X 1

Compound Name	1- 64401	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	70
2-Fluorobiphenyl	43-116	72
Terphenyl -d14	33-141	127

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated

D-199

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 64401
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64401			
Sample Name / Location	BF-1120 Duplicate			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ Not Submitted			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	11/06/96 MC			
Date of Analysis / Initials	11/07/96 MC			
Sample Matrix	Groundwater			
Dilution	X 1			
Compound Name	1- 64401	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	111

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated

D-200

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report
Petroleum Range Organics by FLPRO

Lab Report Number: 64401
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64401			
Sample Name / Location	BF-1120 Duplicate			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ Not Submitted			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	10/28/96 JJ			
Date of analysis / Initials	11/05/96 JM			
Sample Matrix	Groundwater			
Dilution	x 1			
Parameter	1- 64401	units	Det. Limit	Flags
Petroleum Range Organics by FLPRO	0.30	mg/L	0.25	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	97
Nonatriacontane (C-39)	42-193 *	66

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. **mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.**

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96

D-201

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: 64402
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64402
Sample Name / Location	BF-1120 Equipment Blank
Collector's Name	PJB
Date & Time Collected	10/24/96 @ 0800
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	10/25/96 JM
Date of Analysis	10/25/96
Sample Matrix	Deionized Water
Dilution	X 1

Compound Name	1- 64402	units	Det. Limit	Flags
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	1	
Chloroform	BDL	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodifluoromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	1	
Methyl-tert-butyl ether (MTBE) *	1	ug/l	1	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichlorofluoromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	106
Toluene-d8	86-119	103
Bromofluorobenzene	85-116	103

COMMENTS :

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

P-202

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 64402
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64402			
Sample Name / Location	BF-1120 Equipment Blank			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0800			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	10/28/96 JJ			
Date of Analysis	10/30/96			
Sample Matrix	Deionized Water			
Dilution	X 1			
Compound Name	1- 64402	units	Det. Limit	Flags
Acenaphthene	BDL	ug/L	2	
Acenaphthylene	BDL	ug/L	2	
Anthracene	BDL	ug/L	2	
Benzo(a)anthracene	BDL	ug/L	2	
Benzo(a)pyrene	BDL	ug/L	2	
Benzo(b)fluoranthene	BDL	ug/L	2	
Benzo(g,h,i)perylene	BDL	ug/L	2	
Benzo(k)fluoranthene	BDL	ug/L	3	
Chrysene	BDL	ug/L	2	
Dibenz(a,h)anthracene	BDL	ug/L	2	
Fluoranthene	BDL	ug/L	2	
Fluorene	BDL	ug/L	2	
Indeno(1,2,3-cd)pyrene	BDL	ug/L	2	
1-Methylnaphthalene *	BDL	ug/L	2	
2-Methylnaphthalene	BDL	ug/L	3	
Naphthalene	BDL	ug/L	2	
Phenanthrene	BDL	ug/L	2	
Pyrene	BDL	ug/L	2	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	61
2-Fluorobiphenyl	43-116	63
Terphenyl -d14	33-141	109

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated

D-203

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 64402
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64402			
Sample Name / Location	BF-1120 Equipment Blank			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0800			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	11/06/96 MC			
Date of Analysis / Initials	11/07/96 MC			
Sample Matrix	Deionized Water			
Dilution	X 1			
Compound Name	1- 64402	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	93

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated

D-204

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report
Petroleum Range Organics by FLPRO

Lab Report Number: 64402
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- 64402			
Sample Name / Location	BF-1120 Equipment Blank			
Collector's Name	PJB			
Date & Time Collected	10/24/96 @ 0800			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	10/28/96 JJ			
Date of analysis / Initials	11/05/96 JM			
Sample Matrix	Deionized Water			
Dilution	x 1			
Parameter	1- 64402	units	Det. Limit	Flags
Petroleum Range Organics by FLPRO	BDL	mg/L	0.25	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	100
Nonatriacontane (C-39)	42-193 *	71

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. **mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.**

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96

D-205

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: 64403
Sample Date: 10/24/96
Received Date: 10/24/96
Sample Site: Bronson Field Site 1120
Job Order No.: 130 5001

LAB Sample ID#	1- **64403**
Sample Name / Location	BF-1120 Trip Blank
Collector's Name	PJB
Date & Time Collected	10/24/96 @ AM
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	10/25/96 JM
Date of Analysis	10/25/96
Sample Matrix	Deionized Water
Dilution	X 1

Compound Name	1- 64403	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	106
Toluene-d8	86-119	101
Bromofluorobenzene	85-116	103

COMMENTS :

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

D-206

Approved by : Jerry Dees, Laboratory Director

Date: 11/13/96
Report Generated

End of Report

1.2

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500

Ph#-(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305001

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 10-24-96
Received Date: 10-24-96
Sample Site: BF 1120
Lab Due Date:

Sample ID #	Lab	#1 6-4396	#2 6-4397	#3 6-4398	#4 6-4399	Notes:
Sample Name or Location	----------	MW-27	MW-28	MW-29	MW-30	K.A.G. (Less Pb)
Sampled by	----------	PJB	PJB	PJB	PJB	
Composite Date/Time Collected	Begin					
	Frequency					
	End					
Grab Time	----------	0820	0840	0900	0920	
Sample Matrix	----------	GW	GW	GW	GW	

PARAMETER by Method Name	METHOD #	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Ethylene Dibromide (EDB)	EPA 504	X	2 EDB	X	2 EDB	X	2 EDB	X	2 EDB	3	120ml A VOA/4 oz.	None/4°C
Purg. Halocarbons/GC	EPA 601									4	40 ml VOA Vial x 2	HCl/4°C
Purg. Aromatics/GC	EPA 602									3	40 ml VOA Vial x 2	HCl/4°C
Purg. Halo. & Aro./GC	EPA 601/602	X	4 VOA	X	4 VOA	X	4 VOA	X	4 VOA	6	40 ml VOA Vial x 2	HCl/4°C
Polynuclear Aromatics/HPLC	EPA 610									7	1L Amber x 2	4°C
Purgeables/GCMS	EPA 624									8	40 ml VOA Vial x 2	HCl/4°C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4°C
Gas Chromatography	EPA SW 8000									5	40mlx2/1Lx2/4 oz.	HCl/4°C/None
Halo. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCl/4°C/None
Non-Halo. Vol. Org./GC	EPA SW 8015(MOD)									4	40mlx2/1Lx2/4 oz.	HCl/4°C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCl/4°C/None
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									6	40ml VOAx2/4 oz.	HCl/4°C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4°C/None
VOC/GCMS	EPA SW 8240A									8	40ml VOAx2/4 oz.	HCl/4°C/None
VOC/GCMS-Cap.	EPA SW 8260									8	40ml VOAx2/4 oz.	HCl/4°C/None
Semivol. Org./GCMS-Cap.	EPA SW 8270A		PJB							18	1Lx3/4 oz.	4°C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310	X	~~2~~ 3PAH	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		PJB								Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	FL ~~EPA 418.1~~ PRO	X	~~2~~ 3TPH	X	2 TPH	X	2 TPH	X	2 TPH		Consult Lab	Consult Lab
RCRA Metals (8)	EPA Various										Consult Lab	Consult Lab
TCLP Metals (8) w/extraction	EPA SW-846										Consult Lab	Consult Lab
Lead (Pb)	EPA 239.2										250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: [signature] / LES, Inc
Date/Time: 10-24-96 / 1240

Received by: [signature]
Date/Time: 10/24/96 1240

D-207

PWC 9510/6

2.2

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500

Ph#-(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305001

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 10.24.96
Received Date: 10.24.96
Sample Site: BF 1120
Lab Due Date:

Sample ID #	Lab	#1-G-4400V	#2-G-4401V	#3-G-4402V	#4-G-4403V
Sample Name or Location	----------	MW-31	Duplicate	EQ. Blank	Trip Blank
Sampled by	----------	PJB	PJB	PJB	PJB
Composite Date/Time Collected	Begin / Frequency / End				
Grab Time	----------	0940	—	0800	AM
Sample Matrix	----------	GW	GW	DI	DF

Notes: K.A.G. (Class pb)

PARAMETER by Method Name	METHOD #	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Ethylene Dibromide (EDB)	EPA 504	X	2 EDB	X	2 EDB	X	2 EDB			3	120ml A VOA/4 oz.	None/4° C
Purg. Halocarbons/GC	EPA 601									4	40 ml VOA Vial x 2	HCl/4° C
Purg. Aromatics/GC	EPA 602									3	40 ml VOA Vial x 2	HCl/4° C
Purg. Halo. & Aro./GC	EPA 601/602	X	4 VOA	X	4 VOA	X	4 VOA	X	3 VOA	6	40 ml VOA Vial x 2	HCl/4° C
Polynuclear Aromatics/HPLC	EPA 610									7	1L Amber x 2	4° C
Purgeables/GCMS	EPA 624									6	40 ml VOA Vial x 2	HCl/4° C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4° C
Gas Chromatography	EPA SW 8000									5	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Halo. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCl/4° C/None
Non-Halo. Vol. Org./GC	EPA SW 8015(MOD)									4	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCl/4° C/None
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									6	40ml VOAx2/4 oz.	HCl/4° C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4° C/None
VOC/GCMS	EPA SW 8240A									6	40ml VOAx2/4 oz.	HCl/4° C/None
VOC/GCMS-Cap.	EPA SW 8260									6	40ml VOAx2/4 oz.	HCl/4° C/None
Semivol. Org./GCMS-Cap.	EPA SW 8270A									16	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310	X	2 PAH	X	2 PAH	X	2 PAH				1Lx3/4 oz.	4° C/None

PARAMETER by Group Name	METHOD SOURCE	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Gasoline Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Kerosene Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	FL ~~EPA 418.1 Pro~~	X	2 PAH	X	2 PAH	X	2 PAH				Consult Lab	Consult Lab
RCRA Metals (8)	EPA Various										Consult Lab	Consult Lab
TCLP Metals (8) w/extraction	EPA SW-846										Consult Lab	Consult Lab
Lead (Pb)	EPA 239.2										250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: [signature] / WES, Inc.
Date/Time: 10.24.96 / 1240

Received by: [signature]
Date/Time: 10/24/96 1240

D-208

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, Code 910
NAS Pensacola,FL 32508
Phone #: 452-3180
Contact: Greg Campbell

Analytical Report
601/602 Volatiles by Method 8260

Lab Report Number: 64999
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 64999
Sample Name / Location	[redacted] Eq. Blank
Collector's Name	PJB
Date & Time Collected	12/12/96 @ 1000
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- 64999	units	Det. Limit	Flags
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	1	
Chloroform	BDL	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodifluoromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	1	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	1	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichlorofluoromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	101
Toluene-d8	86-119	101
Bromofluorobenzene	85-116	99

COMMENTS :

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

D-209

Approved by : Jerry Deos, 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: 64999
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 64999			
Sample Name / Location	BF-1120 Eq. Blank			
Collector's Name	PJB			
Date & Time Collected	12/12/96 @ 1000			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	12/13/96 JJ			
Date of Analysis	12/20/96			
Sample Matrix	DI			
Dilution	X 1			
Compound Name	1- 64999	units	Det. Limit	Flags
Acenaphthene	BDL	ug/L	2	
Acenaphthylene	BDL	ug/L	2	
Anthracene	BDL	ug/L	2	
Benzo(a)anthracene	BDL	ug/L	2	
Benzo(a)pyrene	BDL	ug/L	2	
Benzo(b)fluoranthene	BDL	ug/L	2	
Benzo(g,h,i)perylene	BDL	ug/L	2	
Benzo(k)fluoranthene	BDL	ug/L	3	
Chrysene	BDL	ug/L	2	
Dibenz(a,h)anthracene	BDL	ug/L	2	
Fluoranthene	BDL	ug/L	2	
Fluorene	BDL	ug/L	2	
Indeno(1,2,3-cd)pyrene	BDL	ug/L	2	
1-Methylnaphthalene *	BDL	ug/L	2	
2-Methylnaphthalene	BDL	ug/L	3	
Naphthalene	BDL	ug/L	2	
Phenanthrene	BDL	ug/L	2	
Pyrene	BDL	ug/L	2	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	62
2-Fluorobiphenyl	43-116	64
Terphenyl -d14	33-141	54

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 1/2/97
Report Generated

D-210

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 64999
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 64999			
Sample Name / Location	BF-1120 Eq. Blank			
Collector's Name	PJB			
Date & Time Collected	12/12/96 @ 1000			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	12/17/96 JM			
Date of Analysis	12/17/96			
Sample Matrix	DI			
Dilution	X 1			
Compound Name	1- 64999	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	113

COMMENTS :

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

Approved by : Jerry Lees, Laboratory Director

Date: 1/2/97
Report Generated

D-211

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report
Petroleum Range Organics by FLPRO

Lab Report Number: 64999
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 64999			
Sample Name / Location	BF-1120 Eq. Blank			
Collector's Name	PJB			
Date & Time Collected	12/12/96 @ 1000			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	12/30/96 JM			
Date of Analysis	12/30/96			
Sample Matrix	DI			
Dilution	x 1			
Parameter	1- 64999	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 *	92
Nonatriacontane (C-39)	42-193 *	99

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Does, Laboratory Director

Date: 1/2/97

D-212

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: 65000
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65000			
Sample Name / Location	BF-1120 MW-32			
Collector's Name	PJB			
Date & Time Collected	12/12/96 @ 1030			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	12/16/96 JM			
Date of Analysis	12/16/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 65000	units	Det. Limit	Flags
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	1	
Chloroform	1	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodifluoromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	1	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	1	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichlorofluoromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	102
Toluene-d8	86-119	101
Bromofluorobenzene	85-116	100

COMMENTS :

D-213

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

Approved by : Jerry Dees, Laboratory Director

Date: 1/2/97
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: 65000
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65000			
Sample Name / Location	BF-1120 MW-32			
Collector's Name	PJB			
Date & Time Collected	12/12/96 @ 1030			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	12/13/96 JJ			
Date of Analysis	12/20/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 65000	units	Det. Limit	Flags
Acenaphthene	BDL	ug/L	2	
Acenaphthylene	BDL	ug/L	2	
Anthracene	BDL	ug/L	2	
Benzo(a)anthracene	BDL	ug/L	2	
Benzo(a)pyrene	BDL	ug/L	2	
Benzo(b)fluoranthene	BDL	ug/L	2	
Benzo(g,h,i)perylene	BDL	ug/L	2	
Benzo(k)fluoranthene	BDL	ug/L	3	
Chrysene	BDL	ug/L	2	
Dibenz(a,h)anthracene	BDL	ug/L	2	
Fluoranthene	BDL	ug/L	2	
Fluorene	BDL	ug/L	2	
Indeno(1,2,3-cd)pyrene	BDL	ug/L	2	
1-Methylnaphthalene *	BDL	ug/L	2	
2-Methylnaphthalene	BDL	ug/L	3	
Naphthalene	BDL	ug/L	2	
Phenanthrene	BDL	ug/L	2	
Pyrene	BDL	ug/L	2	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	67
2-Fluorobiphenyl	43-116	69
Terphenyl -d14	33-141	50

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 1/2/97
Report Generated

D-214

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 65000
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65000			
Sample Name / Location	BF-1120 MW-32			
Collector's Name	PJB			
Date & Time Collected	12/12/96 @ 1030			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	12/17/96 JM			
Date of Analysis	12/17/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 65000	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	116

COMMENTS :

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

Approved by : Jerry Rees, Laboratory Director

Date: 1/2/97
Report Generated

D-215

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: 65000
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65000			
Sample Name / Location	BF-1120 MW-32			
Collector's Name	PJB			
Date & Time Collected	12/12/96 @ 1030			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	12/17/96 JM			
Date of Analysis	12/17/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 65000	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	116

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 1/2/97
Report Generated

D-215

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: 65000
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65000			
Sample Name / Location	BF-1120 MW-32			
Collector's Name	PJB			
Date & Time Collected	12/12/96 @ 1030			
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- 65000	units	Det. Limit	Flags
Petroleum Range Organics by FLPRO	BDL	mg/L	0.25	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
ortho-Terphenyl	82-142 *	95
Nonatriacontane (C-39)	42-193 *	98

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/2/97

D-216

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: 65001
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65001
Sample Name / Location	BF-1120 MW-33
Collector's Name	PJB
Date & Time Collected	12/12/96 @ 1100
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	12/16/96 JM
Date of Analysis	12/16/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 65001	units	Det. Limit	Flags
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	1	
Chloroform	BDL	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodifluoromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	1	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	1	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichlorofluoromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	101
Toluene-d8	86-119	103
Bromofluorobenzene	85-116	102

COMMENTS :

D-217

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

Approved by : Jerry Dees, Laboratory Director

Date: 1/2/97
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: 65001
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65001			
Sample Name / Location	BF-1120 MW-33			
Collector's Name	PJB			
Date & Time Collected	12/12/96 @ 1100			
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	GW			
Dilution	X 1			
Compound Name	1- 65001	units	Det. Limit	Flags
Acenaphthene	BDL	ug/L	2	
Acenaphthylene	BDL	ug/L	2	
Anthracene	BDL	ug/L	2	
Benzo(a)anthracene	BDL	ug/L	2	
Benzo(a)pyrene	BDL	ug/L	2	
Benzo(b)fluoranthene	BDL	ug/L	2	
Benzo(g,h,i)perylene	BDL	ug/L	2	
Benzo(k)fluoranthene	BDL	ug/L	3	
Chrysene	BDL	ug/L	2	
Dibenz(a,h)anthracene	BDL	ug/L	2	
Fluoranthene	BDL	ug/L	2	
Fluorene	BDL	ug/L	2	
Indeno(1,2,3-cd)pyrene	BDL	ug/L	2	
1-Methylnaphthalene *	BDL	ug/L	2	
2-Methylnaphthalene	BDL	ug/L	3	
Naphthalene	BDL	ug/L	2	
Phenanthrene	BDL	ug/L	2	
Pyrene	BDL	ug/L	2	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	66
2-Fluorobiphenyl	43-116	69
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 Deen, Laboratory Director

Date: 1/2/97
Report Generated

D-218

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 65001
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65001			
Sample Name / Location	BF-1120 MW-33			
Collector's Name	PJB			
Date & Time Collected	12/12/96 @ 1100			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	12/17/96 JM			
Date of Analysis	12/17/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 65001	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 Boes, Laboratory Director

Date: 1/2/97
Report Generated

D-219

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report
Petroleum Range Organics by FLPRO

Lab Report Number: 65001
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65001			
Sample Name / Location	BF-1120 MW-33			
Collector's Name	PJB			
Date & Time Collected	12/12/96 @ 1100			
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- 65001	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 *	132
Nonatriacontane (C-39)	42-193 *	130

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 1/2/97

D-220

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: 65002
Sample Date: 12/12/96
Received Date: 12/12/96
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5002

LAB Sample ID#	1- 65002
Sample Name / Location	BF-1120 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- 65002	units	Det. Limit	Flags
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	1	
Chloroform	BDL	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodifluoromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	1	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	1	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichlorofluoromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	101
Toluene-d8	86-119	101
Bromofluorobenzene	85-116	99

COMMENTS :

D-221

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

Approved by : Jerry Dees, Laboratory Director

Date: 1/2/97
Report Generated

End of Report

1 : 1

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500

Ph#-(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305002

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: 12.12.96
Received Date: 12.12.96
Sample Site: BF 1120
Lab Due Date:

Sample ID #	Lab	#1-6-4999	#2-6-5000	#3-6-5001	#4-6-5002	Notes:
Sample Name or Location	----------	EQ. Blank	MW-32	MW-33	Trip Blank	K.A.G (Less Pb)
Sampled by	----------	PJB	PJB	PJB	PJB	
Composite Date/Time Collected	Begin					
	Frequency					
	End					
Grab Time	----------	1000	1030	1100	AM	
Sample Matrix	----------	DI	GW	GW	DI	

PARAMETER by Method Name	METHOD #	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Ethylene Dibromide (EDB)	EPA 504	X	2 EDB	X	2 EDB	X	2 EDB			3	120ml A VOA/4 oz.	None/4°C
Purg. Halocarbons/GC	EPA 601									4	40 ml VOA Vial x 2	HCl/4°C
Purg. Aromatics/GC	EPA 602									3	40 ml VOA Vial x 2	HCl/4°C
Purg. Halo. & Aro./GC	EPA 601/602	X	4 VOA	X	4 VOA	X	4 VOA	X	3 VOA	6	40 ml VOA Vial x 2	HCl/4°C
Polynuclear Aromatics/HPLC	EPA 610									7	1L Amber x 2	4°C
ables/GCMS	EPA 624									8	40 ml VOA Vial x 2	HCl/4°C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4°C
Gas Chromatography	EPA SW 8000									5	40mlx2/1Lx2/4 oz.	HCl/4°C/None
Halo. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCl/4°C/None
Non-Halo. Vol. Org./GC	EPA SW 8015(MOD)									4	40mlx2/1Lx2/4 oz.	HCl/4°C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCl/4°C/None
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									6	40ml VOAx2/4 oz.	HCl/4°C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4°C/None
VOC/GCMS	EPA SW 8240A									8	40ml VOAx2/4 oz.	HCl/4°C/None
VOC/GCMS-Cap.	EPA SW 8260									8	40ml VOAx2/4 oz.	HCl/4°C/None
Semivol. Org./GCMS-Cap.	EPA SW 8270A									16	1Lx3/4 oz.	4°C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310	X	2 PAH	X	2 PAH	X	3 PAH				1Lx3/4 oz.	4°C/None

PARAMETER by Group Name	METHOD SOURCE	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Gasoline Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Kerosene Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	FL ~~EPA 418.1~~ PRO	X	2 TPH	X	2 TPH	X	3 TPH				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: 12.12.96 / 1425

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

PWC 9510/6

D-222

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

601/602 Volatiles by Method 8260

Lab Report Number: 70494
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

LAB Sample ID#	1- **70494**
Sample Name / Location	BF-1120 Eq. Blank
Collector's Name	PJB
Date & Time Collected	01/31/97 @ 0600
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	02/05/97 JM
Date of Analysis	02/05/97
Sample Matrix	DI
Dilution	X 1

Compound Name	1- 70494	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	121
Toluene-d8	86-119	102
Bromofluorobenzene	85-116	106

COMMENTS :

D-223

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

Approved by : Jerry Dees, Laboratory Director

Date: 2/21/97
Report Generated

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: 70494
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

LAB Sample ID#	1- **70494**			
Sample Name / Location	BF-1120 Eq. Blank			
Collector's Name	PJB			
Date & Time Collected	01/31/97 @ 0600			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	02/10/97 JJ			
Date of Analysis	02/12/97			
Sample Matrix	DI			
Dilution	X 1			
Compound Name	**1- 70494**	**units**	**Det. Limit**	**Flags**
Acenaphthene	BDL	ug/L	2	
Acenaphthylene	BDL	ug/L	2	
Anthracene	BDL	ug/L	2	
Benzo(a)anthracene	BDL	ug/L	2	
Benzo(a)pyrene	BDL	ug/L	2	
Benzo(b)fluoranthene	BDL	ug/L	2	
Benzo(g,h,i)perylene	BDL	ug/L	2	
Benzo(k)fluoranthene	BDL	ug/L	3	
Chrysene	BDL	ug/L	2	
Dibenz(a,h)anthracene	BDL	ug/L	2	
Fluoranthene	BDL	ug/L	2	
Fluorene	BDL	ug/L	2	
Indeno(1,2,3-cd)pyrene	BDL	ug/L	2	
1-Methylnaphthalene *	BDL	ug/L	2	
2-Methylnaphthalene	BDL	ug/L	3	
Naphthalene	BDL	ug/L	2	
Phenanthrene	BDL	ug/L	2	
Pyrene	BDL	ug/L	2	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	68
2-Fluorobiphenyl	43-116	93
Terphenyl -d14	33-141	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: 2/21/97
Report Generated

D-224

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 70494
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

LAB Sample ID#	1- 70494			
Sample Name / Location	BF-1120 Eq. Blank			
Collector's Name	PJB			
Date & Time Collected	01/31/97 @ 0600			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	02/12/97 MC			
Date of Analysis	02/12/97			
Sample Matrix	DI			
Dilution	X 1			
Compound Name	1- 70494	units	Det. Limit	Flags
Ethylene Dibromide	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	90

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 2/24/97
Report Generated

D-225

End of Report

Navy Public Works Center
Environmental Laboratory

Analytical Report
Petroleum Range Organics by FLPRO

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Lab Report Number: 70494
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

LAB Sample ID#	1- 70494			
Sample Name / Location	BF-1120 Eq. Blank			
Collector's Name	PJB			
Date & Time Collected	01/31/97 @ 0600			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	02/11/97 JJ			
Date of Analysis	02/16/97			
Sample Matrix	DI			
Dilution	x 1			
Parameter	1- 70494	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 *	62
Nonatriacontane (C-39)	42-193 *	85

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = milligram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 2/21/97

D-226

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: 70495
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

LAB Sample ID#	1- **70495**
Sample Name / Location	BF-1120 DMW-34
Collector's Name	PJB
Date & Time Collected	01/31/97 @ 0615
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	02/05/97 JM
Date of Analysis	02/05/97
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 70495	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	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	
Trichlorofluoromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	1	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
1,2-Dichloroethane-d4	75-133	125
Toluene-d8	86-119	102
Bromofluorobenzene	85-116	105

COMMENTS :

D-227

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

Approved by : Jerry Dees, Laboratory Director

Date: 2/21/97
Report Generated

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: 70495
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

LAB Sample ID#	1- **70495**			
Sample Name / Location	BF-1120 DMW-34			
Collector's Name	PJB			
Date & Time Collected	01/31/97 @ 0615			
Sample Type (composite or grab)	Grab			
Analyst	M. Chambers			
Date of Extraction / Initials	02/10/97 JJ			
Date of Analysis	02/12/97			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	**1- 70495**	**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 *	19	ug/L	2	
2-Methylnaphthalene	23	ug/L	3	
Naphthalene	6	ug/L	2	
Phenanthrene	BDL	ug/L	2	
Pyrene	BDL	ug/L	2	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Nitrobenzene- d5	35-114	67
2-Fluorobiphenyl	43-116	93
Terphenyl -d14	33-141	89

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 2/21/97
Report Generated

D-228

End of Report

Navy Public Works Center

Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report

Ethylene Dibromide by Method 504

Lab Report Number: 70495
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

LAB Sample ID#	1- 70495			
Sample Name / Location	BF-1120 DMW-34			
Collector's Name	PJB			
Date & Time Collected	01/31/97 @ 0615			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	02/12/97 JM			
Date of Analysis	02/12/97			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	1- 70495	units	Det. Limit	Flags
Ethylene Dibromide	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: 2/24/97
Report Generated

D-229

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

Analytical Report
Petroleum Range Organics by FLPRO

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

Lab Report Number: 70495
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

LAB Sample ID#	1- 70495			
Sample Name / Location	BF-1120 DMW-34			
Collector's Name	PJB			
Date & Time Collected	01/31/97 @ 0615			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	02/11/97 JJ			
Date of Analysis	02/16/97			
Sample Matrix	GW			
Dilution		x	1	
Parameter	**1- 70495**	**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 *	72
Nonatriacontane (C-39)	42-193 *	99

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 2/21/97

D-230

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
DSN 922-4728/3642

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

Analytical Report
Petroleum Range Organics by FLPRO

Lab Report Number: 70495
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

LAB Sample ID#	1- 70495			
Sample Name / Location	BF-1120 DMW-34			
Collector's Name	PJB			
Date & Time Collected	01/31/97 @ 0615			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of extraction / Initials	02/11/97 JJ			
Date of Analysis	02/16/97			
Sample Matrix	GW			
Dilution			x 1	
Parameter	1- 70495	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 *	72
Nonatriacontane (C-39)	42-193 *	99

COMMENTS : * = Suggested surrogate recovery limits listed in the method. In-house laboratory limits are in the process of being determined.

BDL = Below Detection Limit. mg/L = millgram per Liter. mg/Kg = milligram per Kilogram.

Approved by : Jerry Dees, Laboratory Director

Date: 2/21/97

D-230

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: 70496
Sample Date: 01/31/97
Received Date: 01/31/97
Sample Site: NAS Pensacola, FL
Job Order No.: 130 5001

LAB Sample ID#	1- **70496**
Sample Name / Location	BF-1120 Trip Blank
Collector's Name	PJB
Date & Time Collected	01/31/97 @ AM
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	02/04/97 JM
Date of Analysis	02/04/97
Sample Matrix	DI
Dilution	X 1

Compound Name	1- 70496	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	117
Toluene-d8	86-119	101
Bromofluorobenzene	85-116	106

COMMENTS :

D-231

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

Approved by : Jerry Dees, Laboratory Director

Date: 2/21/97
Report Generated

End of Report

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg.3297, Code 920
NAS Pensacola, Fl. 32508-6500

Ph#-(904)452-4728
Autovon-922-4728

Requester: NPWC Environmental Dept.
Address: Bldg. 3691, Code 910
NAS Pensacola, FL 32508
Phone #: (904) 452-3180
Contact: Greg Campbell
Job Order #: 1305/001

Report Required? Yes (No) DEP? Yes (No)
Lab ID Number:
Sample Date: 01.31.97
Received Date: 01.31.97
Sample Site: BF 1120
Lab Due Date:

Sample ID #	Lab	#1- D-0494	#2- D-0495	#3- D-0496	#4-
Sample Name or Location	----------	EQ. Blank	DHW-34	Trip Blank	
Sampled by	----------	PJB	PJB	PJB	
Composite Date/Time Collected	Begin				
	Frequency				
	End				
Grab Time	----------	0600	0615	AM	
Sample Matrix	----------	DI	GW	DI	

Notes: K.A.G. (Less Pb) 1 of 1

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. Halo. & Aro./GC	EPA 601/602	X	4 VOA	X	4 VOA	X	2 VOA			6	40 ml VOA Vial x 2	HCV4° C
Polynuclear Aromatics/HPLC	EPA 610									7	1L Amber x 2	4° C
Purgeables/GCMS	EPA 624									6	40 ml VOA Vial x 2	HCV4° C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4° C
Gas Chromatography	EPA SW 8000									5	40mlx2/1Lx2/4 oz.	HCV4° C/None
Halo. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCV4° C/None
Non-Halo. Vol. Org./GC	EPA SW 8015(MOD)									4	40mlx2/1Lx2/4 oz.	HCV4° C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCV4° C/None
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									6	40ml VOAx2/4 oz.	HCV4° C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4° C/None
VOC/GCMS	EPA SW 8240A									8	40ml VOAx2/4 oz.	HCV4° C/None
VOC/GCMS-Cap.	EPA SW 8260									8	40ml VOAx2/4 oz.	HCV4° C/None
Semivol. Org./GCMS-Cap.	EPA SW 8270A									16	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310	X	2 PAH	X	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	FL ~~EPA 418.1~~ RVO	X	2 TRPH	X	3 TRPH						Consult Lab	Consult Lab
RCRA Metals (8)	EPA Various										Consult Lab	Consult Lab
TCLP Metals (8) w/extraction	EPA SW-846										Consult Lab	Consult Lab
Lead (Pb)	EPA 239.2										250mlV4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: [signature] / WES, Inc.
Date/Time: 1.31.97 / 0750

Received by: [signature]
Date/Time: 1/31/97 0750

D-232

PWC 9510/8

Navy Public Works Center
Environmental Laboratory

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

Laboratory Report

Lead in Water by Method 239.2

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

Lab ID Number: S708056
Sample Date: 11 Aug 97
Received Date: 11 Aug 97
Sample Site: Bronson Field Site 1120
Job Order #: 130 5001

Sample ID#	Lab	1- 73546	2- 73547	3- 73548	4- 73549	Analyst(s):
Sample Name	Requester	Site 1120 MW #1	Site 1120 MW #22	Site 1120 MW #23	Site 1120 MW #24	Brian Nelson
Collector Name		P. Keane	P. Keane	P. Keane	P. Keane	
Date/Time	Comp start					
Collected	Comp stop					Date(s) of analysis:
(Military)	Grab	11 Aug 97 @ 1115	11 Aug 97 @ 1215	11 Aug 97 @ 1225	11 Aug 97 @ 1405	13 Aug 97
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab	
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	

PARAMETER Metals:	METHOD #	ID# 1- 73546	units	Det. Limit	ID# 2- 73547	units	Det. Limit	ID# 3- 73548	units	Det. Limit	ID# 4- 73549	units	Det. Limit	Preservative(s)
Lead(Pb)	EPA 239.2	X BDL	mg/l	0.003	X BDL	mg/l	0.003	X BDL	mg/l	0.003	X BDL	mg/l	0.003	HNO_3 to pH <2

D-233

Sample ID#	Lab	5- 73550	6- 73551	7- 73552	8- 73553	Analyst(s):
Sample Name	Requester	Site 1120 Duplicate	Site 1120 Equipment Blank	Site 1120 MW #25	Site 1120 MW #26	Brian Nelson
Collector Name		P. Keane	P. Keane	P. Keane	P. Keane	
Date/Time	Comp start					
Collected	Comp stop					Date(s) of analysis:
(Military)	Grab	11 Aug 97 @ NS	11 Aug 97 @ 1410	11 Aug 97 @ 1445	11 Aug 97 @ 1530	13 Aug 97
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab	
Sample Matrix		Groundwater	Deionized Water	Groundwater	Groundwater	

PARAMETER Metals:	METHOD #	ID# 5- 73550	units	Det. Limit	ID# 6- 73551	units	Det. Limit	ID# 7- 73552	units	Det. Limit	ID# 8- 73553	units	Det. Limit	Preservative(s)
Lead(Pb)	EPA 239.2	X BDL	mg/l	0.003	X BDL	mg/l	0.003	X BDL	mg/l	0.003	X BDL	mg/l	0.003	HNO_3 to pH <2

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 14-Aug-97 09:01

PWC 5090/14

End of Report

1 of 2

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Yes No

Requester: PWC ENGINEERING CODE 400
Address: NAS PENSACOLA, FL BLDG 458
Phone #: 452-4315
Contact: GREG CAMPBELL
Job Order #: 1305001

Lab ID Number:
Sample Date: 8/11/97
Received Date: 8/11/97
Sample Site: SITE 1120 BRONSON FIELD
Lab Due Date:

Sample ID #	Lab	#1-7-3546	#2-7-3547	#3-7-3548	#4-7-3549	Notes:
Sample Name	----------	BRONSON SITE 1120	BRONSON SITE 1120	BRONSON SITE 1120	BRONSON SITE 1120	
or Location	----------	MW#1	MW # 22	MW 23	MW 24	
Sampled by	----------	[signature]	[signature]	[signature]	[signature]	QUIESCENT SAMPLES
Composite	Begin					
Date/Time	Frequency					
Collected	End					
Grab Time	----------	1115	1215	1225	1405	
Sample Matrix	----------	GW	GW	GW	GW	

PARAMETER by Method Name	METHOD #	X	1-3 Bottle ID #'s	X	1-1 Bottle ID #'s	X	1-1 Bottle ID #'s	X	1-1 Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Ethylene Dibromide (EDB)	EPA 504	X	2 BOTT							3	120ml A VOA/4 oz.	None/4° C
Purg. Halocarbons/GC	EPA 601									4	40 ml VOA Vial x 2	HCl/4° C
Purg. Aromatics/GC	EPA 602									3	40 ml VOA Vial x 2	HCl/4° C
Purg. Halo. & Aro./GC	EPA 601/602									6	40 ml VOA Vial x 2	HCl/4° C
Polynuclear Aromatics/HPLC	EPA 610									7	1L Amber x 2	4° C
Purgeables/GCMS	EPA 624									8	40 ml VOA Vial x 2	HCl/4° C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4° C
Gas Chromatography	EPA SW 8000									5	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Halo. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCl/4° C/None
Non–Halo. Vol. Org./GC	EPA SW 8015(MOD)									4	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCl/4° C/None
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									6	40ml VOAx2/4 oz.	HCl/4° C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4° C/None
VOC/GCMS	EPA SW 8240A									8	40ml VOAx2/4 oz.	HCl/4° C/None
VOC/GCMS–Cap.	EPA SW 8260									8	40ml VOAx2/4 oz.	HCl/4° C/None
Semivol. Org./GCMS–Cap.	EPA SW 8270A									16	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310									9	1Lx3/4 oz.	4° C/None
PARAMETER by Group Name	**METHOD SOURCE**	**X**	**Bottle ID #'s**	**X**	**Bottle ID #'s**	**X**	**Bottle ID #'s**	**X**	**Bottle ID #'s**	**Billing Units**	**Containers Required**	**Preservative(s) Used**
Gasoline Analytical Group	EPA SW–846									47	Consult Lab	Consult Lab
Kerosene Analytical Group	EPA SW–846									39	Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW–846									24	Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	EPA 418.1									2	Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	FL–PRO									7	Consult Lab	Consult Lab
RCRA Metals (5)	EPA Various									6	Consult Lab	Consult Lab
TCLP Metals (5) w/extraction	EPA SW–846									10	Consult Lab	Consult Lab
Lead (Pb) only	EPA 239.2	X	1 BOTT	X	1 BOTT	X	1 BOTT	X	1 BOTT	1	250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: [signature]
Date/Time: 8/11/97 1540

Received by: [signature]
Date/Time: 8/11/97 1610

c:\123r24\forms\custody\ustR0.wk1 rev 0 8/28/96

Dynatel Bowman

Turn to lab

D-234

2 of 2

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Yes No

Requester: PWC ENGINEERING CODE 400
Address: NAS PENSACOLA, FL BLDG 458
Phone #: 452-4315
Contact: GREG CARRELL
Job Order #: 1305001

Lab ID Number:
Sample Date: 8/11/97
Received Date: 8/11/97
Sample Site: SITE 1120 BROWSON FIELD
Lab Due Date:

Sample ID #	Lab	#1-7-3550	#2-7-3551	#3-7-3552	#4-7-3553	Notes:
Sample Name	----------	BROWSON	BROWSON	BROWSON	BROWSON	
or Location	----------	SITE 1120 DUPLICATE	SITE 1120 EQ BLANK	SITE 1120 MW 25	SITE 1120 MW 26	
Sampled by	----------	PKeane	PKeane	PKeane	PKeane	
Composite	Begin					QUIESCENT SAMPLES
Date/Time	Frequency					
Collected	End					
Grab Time	----------	—	1410	1445	1530	
Sample Matrix	----------	GW	DI	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
			F		F		F		F			
Ethylene Dibromide (EDB)	EPA 504									3	120ml A VOA/4 oz.	None/4° C
Purg. Halocarbons/GC	EPA 601									4	40 ml VOA Vial x 2	HCl/4° C
Purg. Aromatics/GC	EPA 602									3	40 ml VOA Vial x 2	HCl/4° C
Purg. Halo. & Aro./GC	EPA 601/602									6	40 ml VOA Vial x 2	HCl/4° C
Polynuclear Aromatics/HPLC	EPA 610									7	1L Amber x 2	4° C
Purgeables/GCMS	EPA 624									8	40 ml VOA Vial x 2	HCl/4° C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4° C
Gas Chromatography	EPA SW 8000									5	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Halo. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCl/4° C/None
Non–Halo. Vol. Org./GC	EPA SW 8015(MOD)									4	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCl/4° C/None
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									6	40ml VOAx2/4 oz.	HCl/4° C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4° C/None
VOC/GCMS	EPA SW 8240A									8	40ml VOAx2/4 oz.	HCl/4° C/None
VOC/GCMS–Cap.	EPA SW 8260									8	40ml VOAx2/4 oz.	HCl/4° C/None
Semivol. Org. /GCMS–Cap.	EPA SW 8270A									16	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310									9	1Lx3/4 oz.	4° C/None

PARAMETER by Group Name	METHOD SOURCE	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Gasoline Analytical Group	EPA SW–846									47	Consult Lab	Consult Lab
Kerosene Analytical Group	EPA SW–846									39	Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW–846									24	Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	EPA 418.1									2	Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	FL–PRO									7	Consult Lab	Consult Lab
RCRA Metals (8)	EPA Various									6	Consult Lab	Consult Lab
TCLP Metals (8) w/extraction	EPA SW–846									10	Consult Lab	Consult Lab
Lead (Pb) only	EPA 239.2	X	1 BOTT	X	1 BOTT	X	1 BOTT	X	1 BOTT	1	250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: PKeane
Date/Time: 8/11/97 1540 Departed Browson

Received by: PKeane
Date/Time: 8/11/97 1610

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D-235

Time to lab

Navy Public Works Center

Environmental Laboratory

Analytical Report

Ethylene Dibromide by Method 508

Bldg. 3887, Code 440
NAS Pensacola, FL 32508
Phone (904) 452-3180/3642
DSN 922-3180/3642

Client: NPWC Engineering Code 440
Address: NAS Pensacola, Fl 32508
Blgd.458
Phone #: (850) 452-4315
Contact: Greg Campbell

Lab Report Number: 73546
Sample Date: 08/11/97
Received Date: 08/11/97
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	**73546**
Sample Name / Location	Bronson Site 1120 MW#1
Collector's Name	P. Keane
Date & Time Collected	08/11/97 @ 1115
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	08/13/97 JJ
Date of Analysis	08/14/97
Sample Matrix	GW
Dilution	X 1

Compound Name	73546	units	Det. Limit	Flags
Ethylene Dibromide (EDB)	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERY

	Acceptance Limits	Percent Recovery
a-chloro-m-xylene	54 - 140	102

Explanation of Flags :

Comments :

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

Approved by : Jerry Dees, Laboratory Director

Date: 8/28/97
Report Generated
End of Report

D-236

Navy ublic Works Center
Environmental Laboratory

Correct leport

Laboratory Rep(

Lead in Water by Method 239.2

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

Requester: NPWC Planning & Engineering
Address: Bldg. 458, Code 431
NAS Pensacola, FL 32508
Phone #: 452-4315
Contact: Greg Campbell

Lab ID Number: 9708059
Sample Date: 12 Aug 97
Received Date: 12 Aug 97
Sample Site: Bronson Field Site 1120
Job Order #: 130 5001

Sample ID#	Lab	1- 73564	2- 73565	3- 73566	4- 73567	Analyst(s):
Sample Name	Requester	Site 1120 MW #31	Site 1120 MW #30	Site 1120 MW #32	Site 1120 MW #33	Brian Nelson
Collector Name		P. Keane	P. Keane	P. Keane	P. Keane	
Date/Time Collected (Military)	Comp start					
	Comp stop					Date(s) of analysis:
	Grab	12 Aug 97 @ 1135	12 Aug 97 @ 1150	12 Aug 97 @ 1235	12 Aug 97 @ 1250	20 Aug 97
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab	
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	

PARAMETER Metals:	METHOD #	ID# 1- 73564	units	Det. Limit	ID# 2- 73565	units	Det. Limit	ID# 3- 73566	units	Det. Limit	ID# 4- 73567	units	Det. Limit	Preservative(s)
Lead(Pb)	EPA 239.2	x BDL	mg/l	0.003	x BDL	mg/l	0.003	x BDL	mg/l	0.003	x BDL	mg/l	0.003	None

Sample ID#	Lab	5- 73568	6- 73569	7-	8-	Analyst(s):
Sample Name	Requester	Site 1120 MW #28	Site 1120 MW #29			Brian Nelson
Collector Name		P. Keane	P. Keane			
Date/Time Collected (Military)	Comp start					
	Comp stop					Date(s) of analysis:
	Grab	12 Aug 97 @ 1340	12 Aug 97 @ 1430			20 Aug 97
Sample Type	Comp/Grab	Grab	Grab			
Sample Matrix		Groundwater	Groundwater			

PARAMETER Metals:	METHOD #	ID# 5- 73568	units	Det. Limit	ID# 6- 73569	units	Det. Limit	ID# 7-	units	Det. Limit	ID# 8-	units	Det. Limit	Preservative(s)
Lead(Pb)	EPA 239.2	x BDL	mg/l	0.003	x 0.004	mg/l	0.003		mg/l	0.003		mg/l	0.003	None

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 16-Sep-97 14:55

End of Report

PWC 5090/14

D-237

1 of 2

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Yes No

Requester: PWC ENGINEERING CODE 400
Address: NAS PENSACOLA, FL BLDG 458
Phone #: 452-4315
Contact: GREG CAMBELL
Job Order #: 1305001

Lab ID Number:
Sample Date: 8/12/97
Received Date: 8/12/97
Sample Site: SITE 1120 BRONSON FIELD
Lab Due Date:

Sample ID #	Lab	#1-7-3564	#2-7-3565	#3-7-3566	#4-7-3567	Notes:
Sample Name or Location	----------	BRONSON SITE 1120 MW 31	BRONSON SITE 1120 MW 30	BRONSON SITE 1120 MW 32	BRONSON SITE 1120 MW 33	QUIESCENT SAMPLES
Sampled by	----------	PReane	PReane	PReane	PReane	
Composite Date/Time Collected	Begin					
	Frequency					
	End					
Grab Time	----------	1135	1150	1235	1250	
Sample Matrix	----------	GW	GW	GW	GW	

PARAMETER by Method Name	METHOD #	X	1-1 Bottle ID #'s	X	1-1 Bottle ID #'s	X	1-1 Bottle ID #'s	X	1-1 Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Ethylene Dibromide (EDB)	EPA 504									3	120ml A VOA/4 oz.	None/4° C
Purg. Halocarbons/GC	EPA 601									4	40 ml VOA Vial x 2	HCl/4° C
Purg. Aromatics/GC	EPA 602									3	40 ml VOA Vial x 2	HCl/4° C
Purg. Halo. & Aro./GC	EPA 601/602									6	40 ml VOA Vial x 2	HCl/4° C
Polynuclear Aromatics/HPLC	EPA 610									7	1L Amber x 2	4° C
Purgeables/GCMS	EPA 624									8	40 ml VOA Vial x 2	HCl/4° C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4° C
Gas Chromatography	EPA SW 8000									5	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Halo. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCl/4° C/None
Non–Halo. Vol. Org./GC	EPA SW 8015(MOD)									4	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCl/4° C/None
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									6	40ml VOAx2/4 oz.	HCl/4° C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4° C/None
VOC/GCMS	EPA SW 8240A									8	40ml VOAx2/4 oz.	HCl/4° C/None
VOC/GCMS–Cap.	EPA SW 8260									8	40ml VOAx2/4 oz.	HCl/4° C/None
Semivol. Org. /GCMS–Cap.	EPA SW 8270A									16	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310									9	1Lx3/4 oz.	4° C/None

PARAMETER by Group Name	METHOD SOURCE	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Gasoline Analytical Group	EPA SW–846									47	Consult Lab	Consult Lab
Kerosene Analytical Group	EPA SW–846									39	Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW–846									24	Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	EPA 418.1									2	Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	FL–PRO									7	Consult Lab	Consult Lab
RCRA Metals (8)	EPA Various									6	Consult Lab	Consult Lab
TCLP Metals (8) w/extraction	EPA SW–846									10	Consult Lab	Consult Lab
Lead (Pb) only	EPA 239.2	X	1 BOTT	X	1 BOTT	X	1 BOTT	X	1 BOTT	1	250ml/4 oz.	HNO3/None
Other:												

Comments:

Relinquished by: PReane
Date/Time: 8/12/97 7440

Received by: PReane
Date/Time: 8/12/97 1520

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Departed Bronson

To lab

2 of 2

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Yes No

Requester: PWC ENGINEERING CODE 400
Address: NAS PENSACOLA, FL BLDG 458
Phone #: 452-4315
Contact: GREG CAMBELL
Job Order #: 1305001

Lab ID Number:
Sample Date: 8/12/97
Received Date: 8/12/97
Sample Site: SITE 1120 BRONSON FIELD
Lab Due Date:

Sample ID #	Lab	#1- 7-3568	#2- 7-3569	#3-	#4-	Notes:
Sample Name	----------	BRONSON	BRONSON			
or Location	----------	SITE 1120 MW 28	SITE 1120 MW 29			
Sampled by	----------	R Keane	R Keane			QUIESCENT SAMPLES
Composite	Begin					
Date/Time	Frequency					
Collected	End					
Grab Time	----------	1340	1430			
Sample Matrix	----------	GW	GW			

PARAMETER by Method Name	METHOD #	X	Bottle ID #'s 1-7	X	Bottle ID #'s 1-7	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Ethylene Dibromide (EDB)	EPA 504									3	120ml A VOA/4 oz.	None/4° C
Purg. Halocarbons/GC	EPA 601									4	40 ml VOA Vial x 2	HCl/4° C
Purg. Aromatics/GC	EPA 602									3	40 ml VOA Vial x 2	HCl/4° C
Purg. Halo. & Aro./GC	EPA 601/602									6	40 ml VOA Vial x 2	HCl/4° C
Polynuclear Aromatics/HPLC	EPA 610									7	1L Amber x 2	4° C
Purgeables/GCMS	EPA 624									8	40 ml VOA Vial x 2	HCl/4° C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4° C
Gas Chromatography	EPA SW 8000									5	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Halo. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCl/4° C/None
Non–Halo. Vol. Org./GC	EPA SW 8015(MOD)									4	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCl/4° C/None
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									6	40ml VOAx2/4 oz.	HCl/4° C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4° C/None
VOC/GCMS	EPA SW 8240A									8	40ml VOAx2/4 oz.	HCl/4° C/None
VOC/GCMS–Cap.	EPA SW 8260									8	40ml VOAx2/4 oz.	HCl/4° C/None
Semivol. Org. /GCMS–Cap.	EPA SW 8270A									16	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310									9	1Lx3/4 oz.	4° C/None

PARAMETER by Group Name	METHOD SOURCE	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Gasoline Analytical Group	EPA SW–846									47	Consult Lab	Consult Lab
Kerosene Analytical Group	EPA SW–846									39	Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW–846									24	Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	EPA 418.1									2	Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	FL–PRO									7	Consult Lab	Consult Lab
RCRA Metals (8)	EPA Various									6	Consult Lab	Consult Lab
TCLP Metals (8) w/extraction	EPA SW–846									10	Consult Lab	Consult Lab
Lead (Pb) only	EPA 239.2	X	1 BOTT	X	1 BOTT					1	250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: R Keane
Date/Time: 8/12/97 1440

Received by: R Keane
Date/Time: 8/12/97 1520

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Departed Bronson

To lab

D-239

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 Planning & Engineering
Address: Bldg. 458, Code 431
NAS Pensacola, FL 32508
Phone #: 452-4315
Contact: Greg Campbell

Report Number: 9708060
Sample Date: 13 Aug 97
Received Date: 13 Aug 97
Sample Site: Bronson Field Site 1120
Job Order #: 130 5001

Sample ID#	Lab	1- 73577	2- 73578	3-	4-	Analyst(s):
Sample Name	Requester	Site 1120 DMW #34	Site 1120 MW #27			Brian Nelson
Collector Name		P. Keane	P. Keane			
Date/Time	Comp start					
Collected	Comp stop					Date(s) of analysis:
(Military)	Grab	13 Aug 97 @ 1140	13 Aug 97 @ 1210			20 Aug 97
Sample Type	Comp/Grab	Grab	Grab			
Sample Matrix		Groundwater	Groundwater			

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.	
Metals:	METHOD #	1- 73577	units	Limit	2- 73578	units	Limit	3-	units	Limit	4-	units	Limit	Preservative(s)
Lead(Pb)	EPA 239.2	X 0.005	mg/l	0.003	X BDL	mg/l	0.003		mg/l	0.003		mg/l	0.003	HNO_3 to pH<2

D-240

Comments: mg/l=milligrams per liter.

Approved by: [signature]
Jerry Dees, Laboratory Director

Date/Time: 27-Aug-97 13:57

PWC 5090/14

End of Report

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Yes No

Requester: PWC ENGINEERING CODE 400
Address: NAS PENSACOLA, FL BLDG 458
Phone #: 452-4315
Contact: GREG CAMBELL
Job Order #: 1305001

Lab ID Number:
Sample Date: 8/13/97
Received Date: 8/13/97
Sample Site: SITE 1120 BRONSON FIELD
Lab Due Date:

Sample ID #	Lab	#1- 7-3577	#2- 7-3578	#3-	#4-	Notes:
Sample Name	----------	BRONSON SITE 1120	BRONSON SITE 1120			QUIESCENT SAMPLES
or Location	----------	DMW 34	MW 27			
Sampled by	----------	[signature]	[signature]			
Composite	Begin					
Date/Time	Frequency					
Collected	End					
Grab Time	----------	1140	1210			
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/GCMS	EPA 624									8	40 ml VOA Vial x 2	HCl/4° C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4° C
Gas Chromatography	EPA SW 8000									5	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Halo. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCl/4° C/None
Non–Halo. Vol. Org./GC	EPA SW 8015(MOD)									4	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCl/4° C/None
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									6	40ml VOAx2/4 oz.	HCl/4° C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4° C/None
VOC/GCMS	EPA SW 8240A									8	40ml VOAx2/4 oz.	HCl/4° C/None
VOC/GCMS–Cap.	EPA SW 8260									8	40ml VOAx2/4 oz.	HCl/4° C/None
Semivol. Org. /GCMS–Cap.	EPA SW 8270A									16	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310									9	1Lx3/4 oz.	4° C/None

PARAMETER by Group Name	METHOD SOURCE	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Gasoline Analytical Group	EPA SW–846									47	Consult Lab	Consult Lab
Kerosene Analytical Group	EPA SW–846									39	Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW–846									24	Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	EPA 418.1									2	Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	FL–PRO									7	Consult Lab	Consult Lab
RCRA Metals (8)	EPA Various									6	Consult Lab	Consult Lab
TCLP Metals (8) w/extraction	EPA SW–846									10	Consult Lab	Consult Lab
Lead (Pb) only	EPA 239.2	X	1-1	X	1-1					1	250ml/4 oz.	HNO3/None
Other:												

Comments:

Relinquished by: [signature]
Date/Time: 8/13/97 1220
Departed Bronson

Received by: [signature]
Date/Time: 8/13/97 1305
To Lab

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