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CONTAMINATION ASSESSMENT REPORT FOR SITE 1107 WITH TRANSMITTAL
OUTLYING LANDING FIELD BRONSON NAS PENSACOLA FL
06/19/1997
NAVY PUBLIC WORKS CENTER

CONTAMINATION ASSESSMENT REPORT

U.S. NAVY OUTLYING LANDING FIELD (OLF) BRONSON
SITE 1107
PENSACOLA, FLORIDA

PREPARED BY:

NAVY PUBLIC WORKS CENTER
BUILDING 3887
PENSACOLA, FLORIDA 32508-6500

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JUNE 1997

PREPARED FOR:

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

IN REPLY REFER TO:

5090
Code 911.4
Ser 1784
19 June 1997

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

Re: CONTAMINATION ASSESSMENT REPORT (CAR) - SITE 1107, U.S. NAVY OUTLYING LANDING FIELD (OLF) BRONSON, PENSACOLA, FLORIDA

Dear Mr. Mitchell:

Enclosed are two copies of the reference report for your action. If you have any questions, please contact Mr. Greg Campbell of my staff at (904) 452-3180 or 452-4315.

Sincerely,

FRANK STUART
Director, Environmental
Engineering Division
By direction of
the Commanding Officer

Enclosure: (2 copies)
(1) Contamination Assessment Report (CAR)
Site 1107, U.S. Navy Outlying Field (OLF)
Bronson, Pensacola, Florida

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

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Site 1107
Pensacola, Florida

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Site 1107
Pensacola, Florida

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1.0 INTRODUCTION

1.1 PURPOSE

The Navy Public Works Center, Naval Air Station, Pensacola, Florida, was retained by Southern Division Navy Facilities Engineering Command (SOUTHNAVFACENGCOM) to conduct a contamination assessment and remediation plan (if warranted) at the U.S. Navy Outlying Landing Field (OLF) Bronson, Site 1107, Pensacola Naval Air Station, Pensacola, Florida.

1.2 SITE LOCATION AND AREA OF INVESTIGATION

Site 1107 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 area is either wetland, forest, or the waters of Perdido Bay. The areas north, south, and east of OLF Bronson are characterized by scattered residential structures, mobile homes, farm buildings, stores, and churches. Perdido Bay is located west of OLF Bronson.

Specifically, Site 1107 is located at latitude 30° 23' 12" N, longitude 87° 25' 01" W. The tanks removed from the site were located on the east side of a concrete slab, the remains of building 1107. To the south, east, and west of the site are dense woods, and to the north is a dirt road running east to west. A large fenced-in scrap yard is located approximately 100 yards to the west, on the north side of the dirt road. Site location maps are included in Figures 1-6 and 1-7 which show locations of buildings, facility boundaries, and tanks.

1.3 SITE HISTORY AND OPERATIONS

Petroleum contamination was discovered at the site on June 15, 1994, during the removal of five (5) underground tanks. Below is a breakdown of the tanks' number, size, and use:

Number	Capacity (gal)	Use
1107-A	1,500	Heating Fuel Oil
1107-B	1,500	Heating Fuel Oil

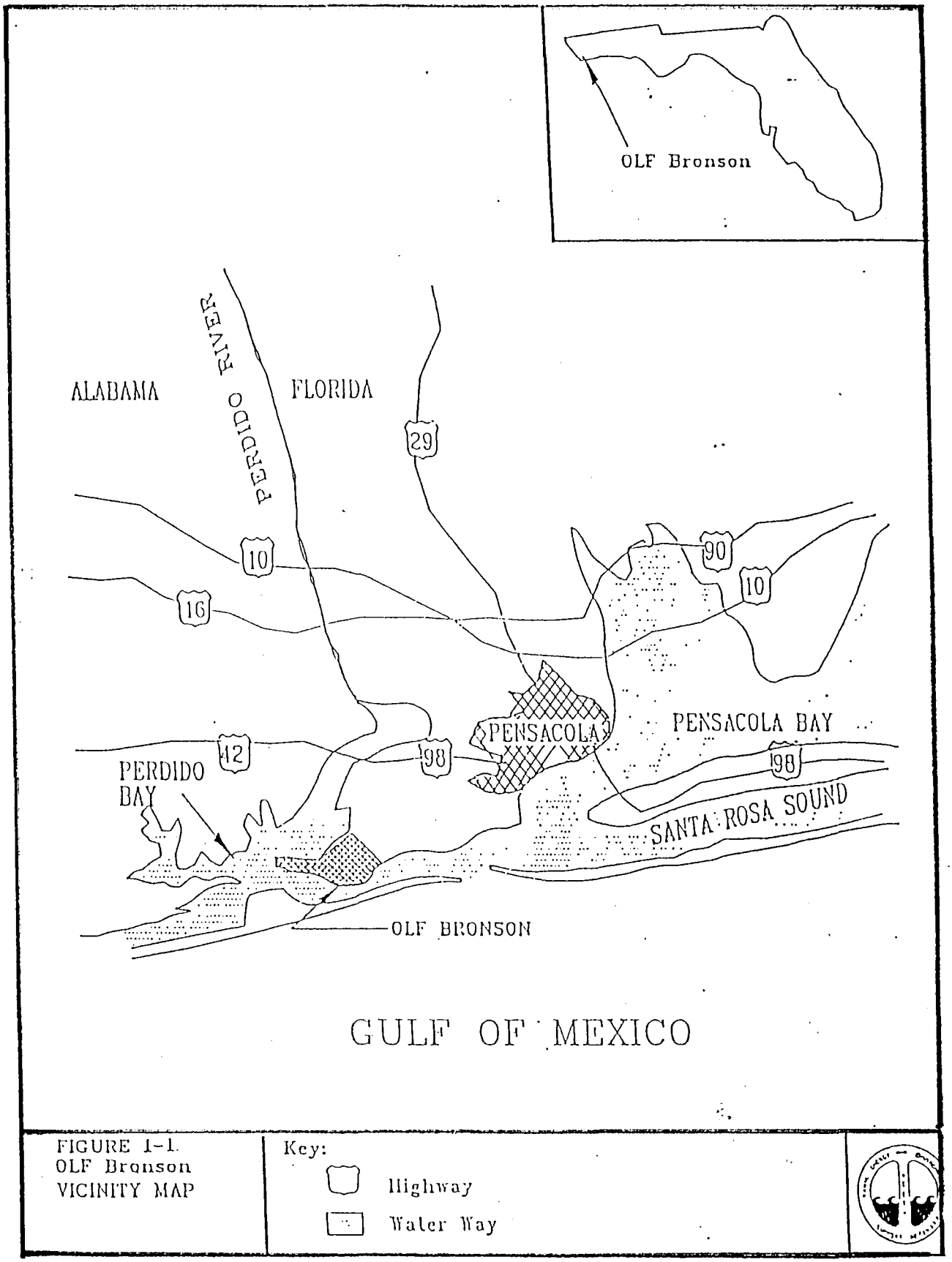


FIGURE 1-1.
OLF Bronson
VICINITY MAP

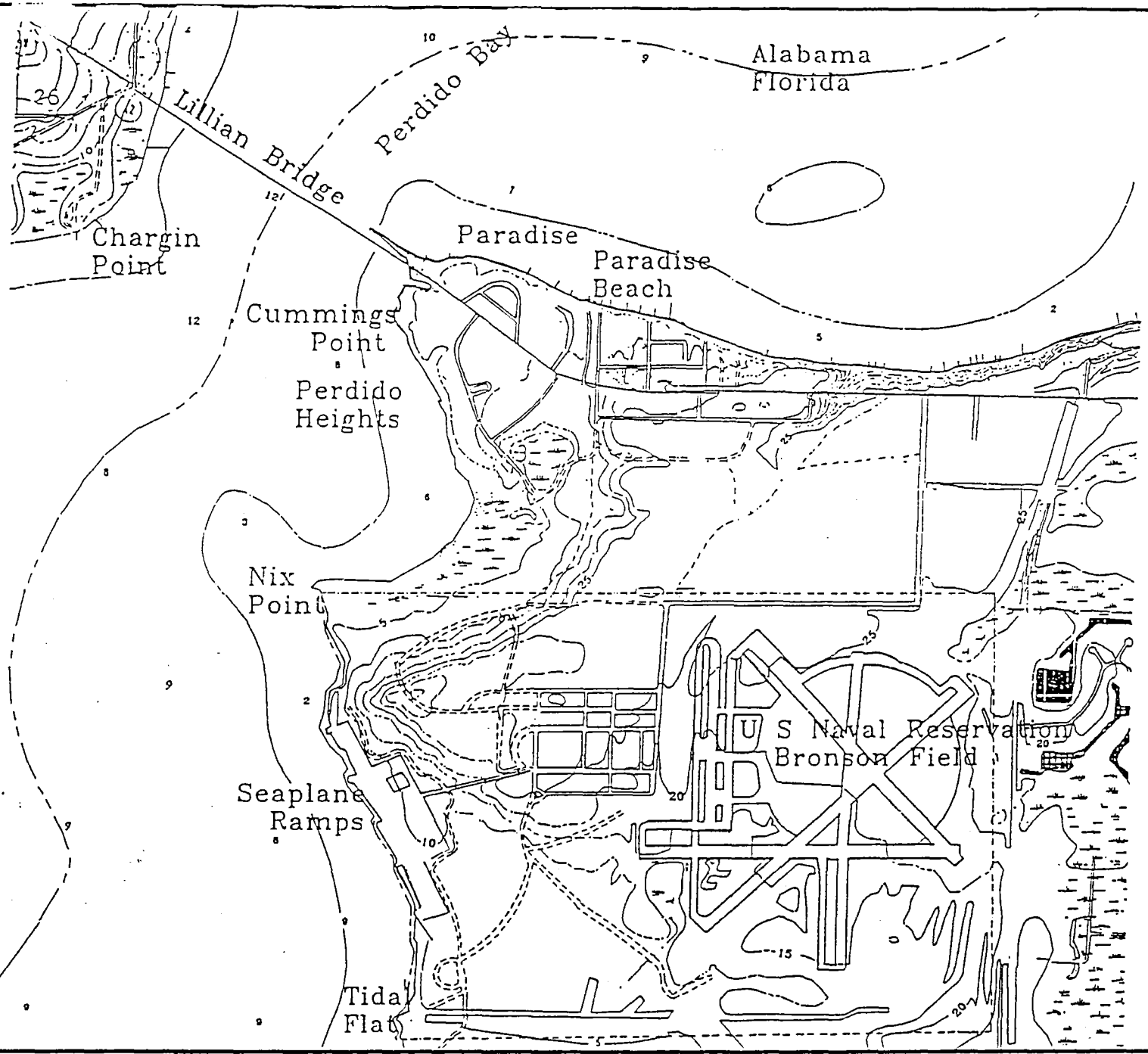


Figure 1-2
OLF Bronson
Topographic Map

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

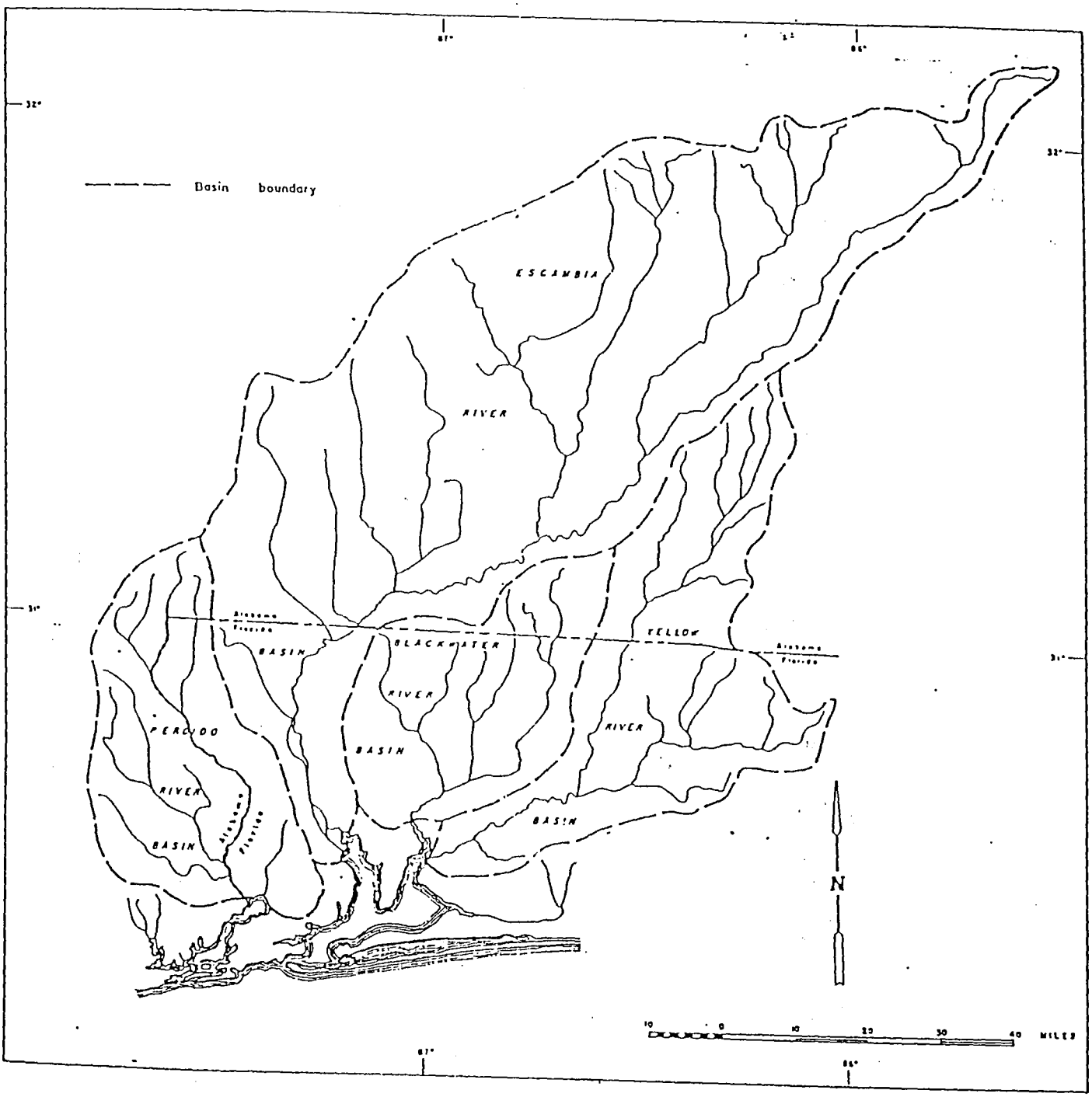


Figure 1-3
OLF BRONSON

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

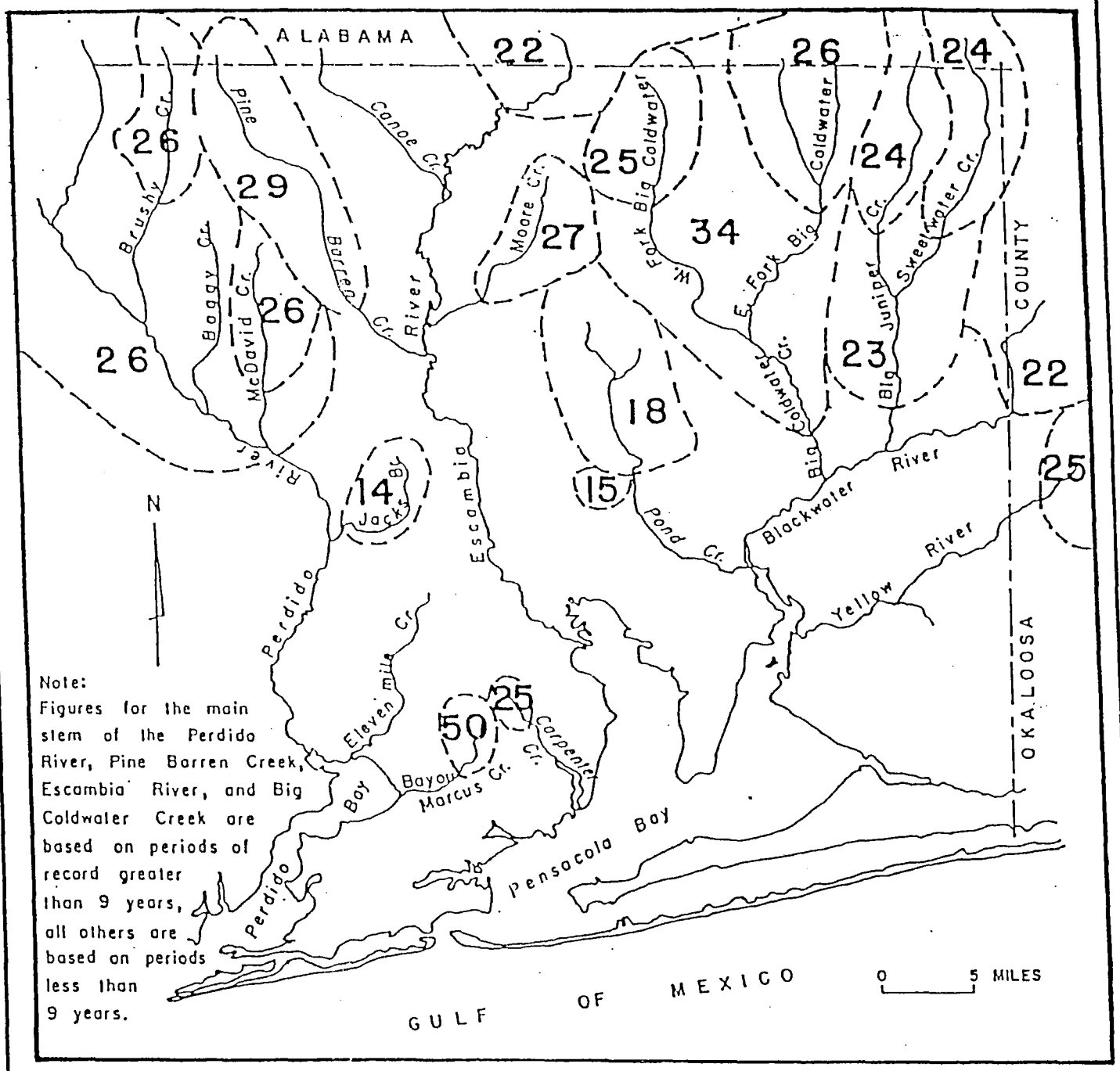


Figure 1-4
OLF BRONSON

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

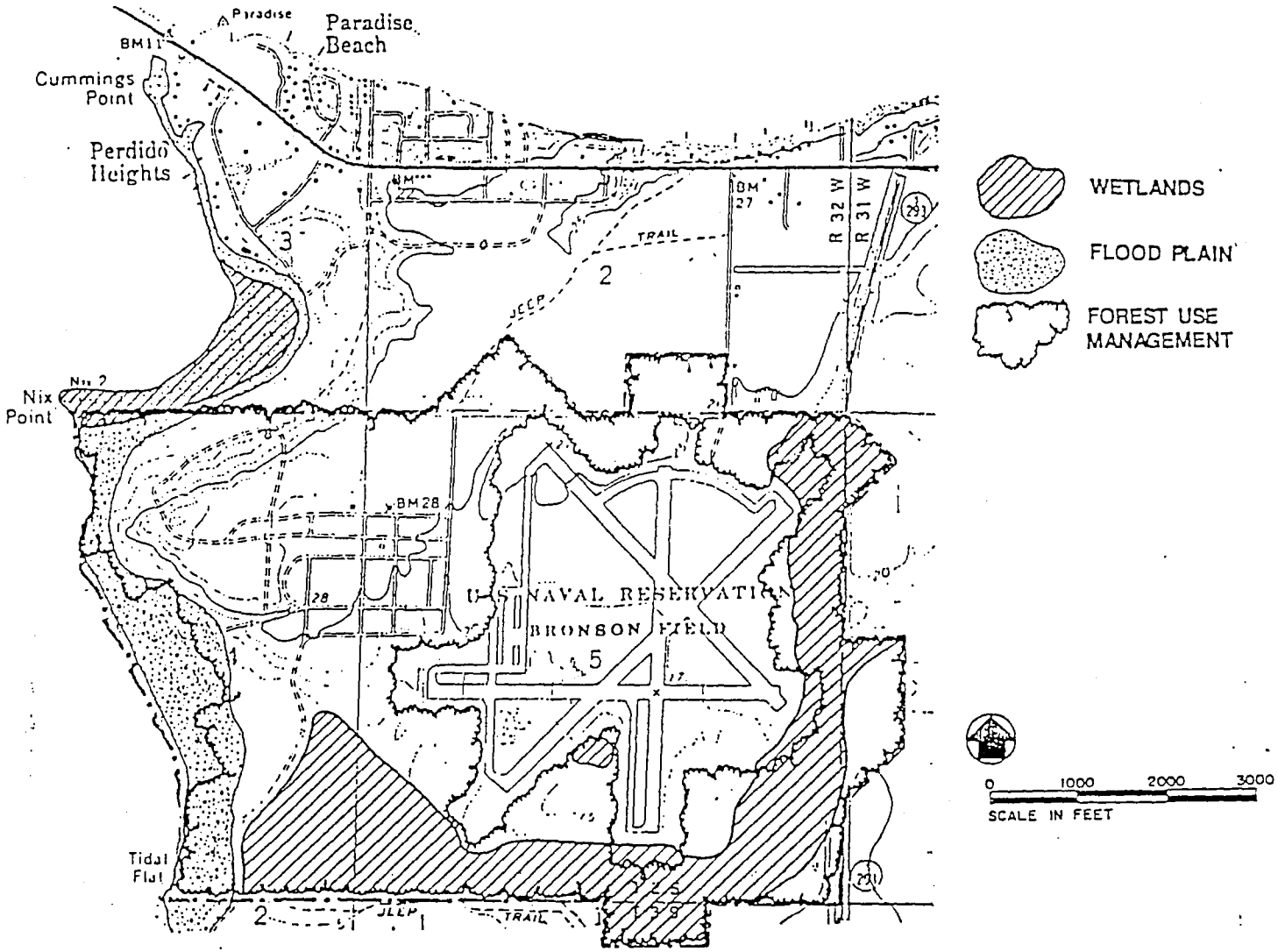


Figure 1-5
OLF Bronson
Flood Plain Area

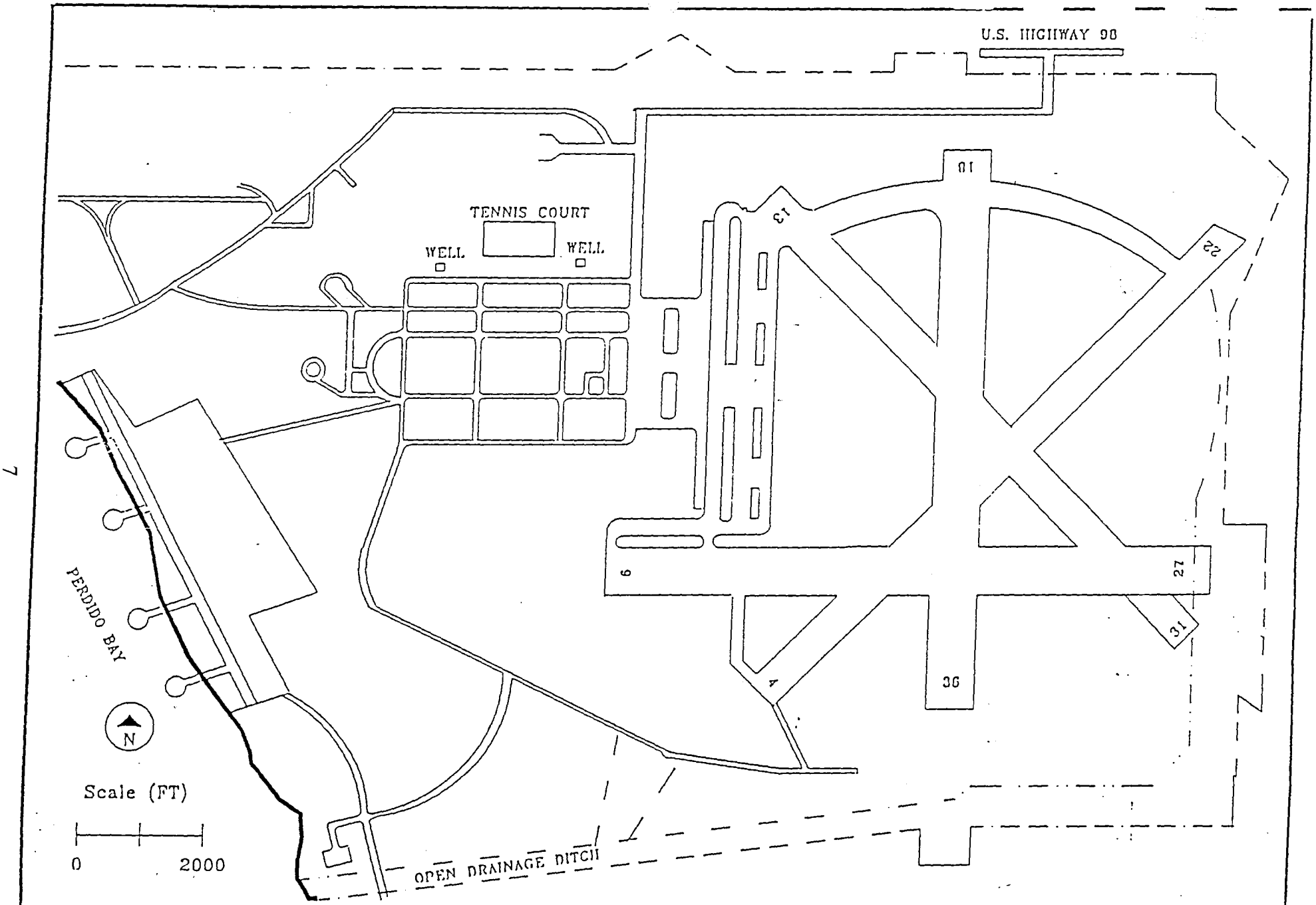


FIGURE 1-6
OLF BRONSON BASE MAP

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

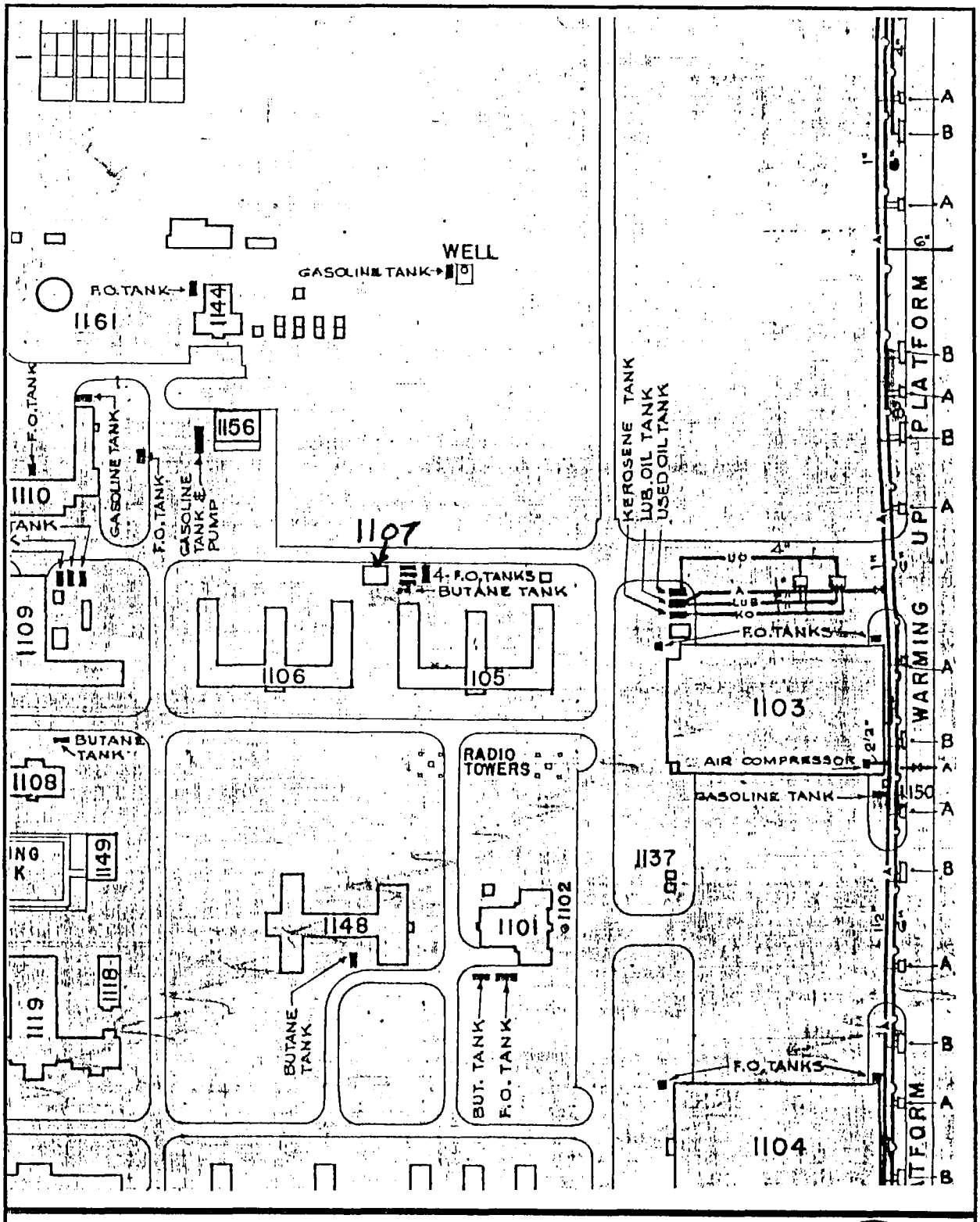


Figure 1-7
OLF Bronson
Site 1107

N

1107-C	1,500	Heating Fuel Oil
1107-D	3,000	Heating Fuel Oil
1107-E	250	Butane

The underground tanks, approximately 50 years old, were used to store heating fuel oil and butane (see above for breakdown). The Closure Assessment Form for Site 1107 documents the presents of free product in the monitoring well or petroleum hydrocarbon levels in the soils greater than 50 parts per million; 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 level.

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 1107 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.

In September 1993, the Navy Public Works Center was retained by the Southern Division Naval Facilities Engineering Command to remove approximately 35 underground storage tanks. A Discharge Reporting Form (DRF) was submitted to FDEP on June 15, 1994.

1.4 INITIAL REMEDIAL ACTION

Navy Public Works Center personnel found contamination at Site 1107 during the removal of the four (4) underground fuel oil storage tanks and one (1) butane tank located at the site. The contaminated soil (approximately 1000 CY) was removed down to the groundwater, stockpiled on-site, and eventually disposed of in a permitted thermal treatment facility. Clean soil was used to fill the excavation. Grady Swan, Inc. installed a recovery well at the site on September 1, 1994. Approximately one gallon of free product was extracted from the recovery well by Grady Swan, Inc.

1.5 RESULTS OF PREVIOUS INVESTIGATIONS

A closure assessment was performed during the removal of four (4) underground fuel oil tanks and one (1) butane tank which consisted of collecting soil and groundwater samples. The samples were analyzed for volatile and semi-volatile organics, extractables, TRPHs, TCLP organics, TCLP pesticides/herbicides, and TCLP metals. Copies of all laboratory reports are included in Appendix D.

On June 15, 1994, five soil samples were collected from the sides and bottom of the

excavation and were analyzed for volatile compounds by EPA Method 8260. A summary of the analytical results is shown in Table 1-1. The laboratory analyses of soil samples from Site 1107 North, East, South, and West indicated no contamination. However, laboratory analyses of soil samples from Site 1107 CTR indicated contamination of n-butylbenzene, sec-butylbenzene, tert-butylbenzene, ethylbenzene, isopropylbenzene, p-isopropyltoluene, naphthalene, n-propylbenzene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, o-xylene, and m,p-xylene, at levels of 7 ppb, 7 ppb, 11 ppb, 23 ppb, 9 ppb, 11 ppb, 47 ppb, 20 ppb, 5 ppb, 403 ppb, 73 ppb, 75 ppb, and 190 ppb, respectively.

On June 24, 1994, soil samples were collected from Site 1107 North and Site 1107 South and analyzed for TCLP organics (EPA Method 8260 and 8270A), TCLP pesticides/herbicides (EPA Method 8080A and 8150A), and TCLP metals (EPA Method 6010A, 7470, and 7761). No contaminants were detected in the soil samples.

On June 27, 1994, soil samples were collected from Site 1107 North Disposal Dirt and Site 1107 South Disposal Dirt and analyzed. A summary of the analytical results is shown in Table 1-2. Laboratory analyses of soil samples for volatiles by Method 8260 indicated Site 1107 North Disposal Dirt and Site 1107 South Disposal Dirt were contaminated with benzene, n-butylbenzene, sec-butylbenzene, ethylbenzene, isopropylbenzene, p-isopropyltoluene, naphthalene, n-propylbenzene, toluene, 1,2,4-trimethybenzene, 1,3,5-trimethylbenzene, o-xylene, and m,p-xylene at levels of 970 ppb/540 ppb, 1600 ppb/4600 ppb, 480 ppb/490 ppb, 1040 ppb/1000 ppb, 560 ppb/540 ppb, 1200 ppb/1200 ppb, 63000 ppb/58000 ppb, 1200 ppb/ 1200 ppb, 250 ppb/100 ppb, 12000 ppb/12000 ppb, 4900 ppb/4800 ppb, 2400 ppb/2400 ppb, and 1200 ppb/1200 ppb, respectfully. Laboratory analyses of soil samples for BNA Extractables by EPA Method 8270A indicated Site 1107 North Disposal Dirt and Site 1107 South Disposal Dirt were contaminated with fluorene, 2-methylcholanthrene, naphthalene, n-nitrosodiphenylamine, phenanthrene, and pyrene at levels of 28000 ppb/29000 ppb, 350000 ppb/330000 ppb, 77000 ppb/66000 ppb, 8000 ppb/8000 ppb, 72000 ppb/63000 ppb, and 38000 ppb/32000 ppb, respectfully.

Laboratory analyses of soil samples for total petroleum hydrocarbons (418.1) at Site 1107 North Disposal Dirt and Site 1107 South Disposal Dirt indicated contamination levels of TRPH (IR) at 60000000 ppb and 67000000 ppb, respectfully. A summary of the analytical results is shown in Table 1-3.

Laboratory analyses of soil samples for TCLP Metals by EPA Method 6010A, 7470, and 7761 indicated contamination levels below detection limits at B1107 North Disposal Dirt and contamination levels of selenium (Se) at 0.2 ppm at B1107 South Disposal Dirt. A summary of the analytical results is shown in Table 1-4.

A groundwater sample was collected from Site 1107 on June 23, 1994 and analyzed for volatile compounds by EPA Method 8260 and extractables by EPA Method 8270A. A summary of the analytical results is provided in Table 1-5. The volatile compounds detected in the groundwater sample were found to be below the FDEP regulatory limit. Laboratory analyses of the groundwater sample for extractables indicated contamination of fluorene, 2-methylnaphthalene, naphthalene, phenanthrene, and pyrene at levels of 83 ppb, 650 ppb,

TABLE 1-1
SUMMARY OF VOLATILE AND SEMI-VOLATILE ORGANIC ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM THE EXCAVATION SIDES AND BOTTOM U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1107

PARAMETER: VOLATILES BY GCMS	B1107 TANK HOLE CENTER	B1107 TANK HOLE NORTH	B1107 TANK HOLE EAST	B1107 TANK HOLE SOUTH	B1107 TANK HOLE WEST
Benzene	BDL	BDL	BDL	BDL	BDL
Bromobenzene	BDL	BDL	BDL	BDL	BDL
Bromochloromethane	BDL	BDL	BDL	BDL	BDL
Bromodichloromethane	BDL	BDL	BDL	BDL	BDL
Bromoform	BDL	BDL	BDL	BDL	BDL
Bromomethane	BDL	BDL	BDL	BDL	BDL
n-Butylbenzene	7	BDL	BDL	BDL	BDL
sec-Butylbenzene	7	BDL	BDL	BDL	BDL
tert-Butylbenzene	11	BDL	BDL	BDL	BDL
Carbon Tetrachloride	BDL	BDL	BDL	BDL	BDL
Chlorobenzene	BDL	BDL	BDL	BDL	BDL
Chloroethane	BDL	BDL	BDL	BDL	BDL
Chloroform	BDL	BDL	BDL	BDL	BDL
Chloromethane	BDL	BDL	BDL	BDL	BDL
2-Chlorotoluene	BDL	BDL	BDL	BDL	BDL
4-Chlorotoluene	BDL	BDL	BDL	BDL	BDL
Dibromochloromethane	BDL	BDL	BDL	BDL	BDL
1,2-Dibromo-3-chloropropane	BDL	BDL	BDL	BDL	BDL
1,2-Dibromoethane	BDL	BDL	BDL	BDL	BDL
Dibromomethane	BDL	BDL	BDL	BDL	BDL
1,2-Dichlorobenzene	BDL	BDL	BDL	BDL	BDL
1,3-Dichlorobenzene	BDL	BDL	BDL	BDL	BDL
1,4-Dichlorobenzene	BDL	BDL	BDL	BDL	BDL
Dichlorodifluoromethane	BDL	BDL	BDL	BDL	BDL
1,1-Dichloroethane	BDL	BDL	BDL	BDL	BDL
1,2-Dichloroethane	BDL	BDL	BDL	BDL	BDL
1,1-Dichloroethene	BDL	BDL	BDL	BDL	BDL
cis-1,2-Dichloroethene	BDL	BDL	BDL	BDL	BDL

NOTES: BDL = Below detection limits.
Soil samples were collected on June 15, 1994.
All results are reported in parts per billion (ppb) unless otherwise noted.

TABLE 1-1 (Cont.)

PARAMETER: VOLATILES BY GCMS	B1107 TANK HOLE CENTER	B1107 TANK HOLE NORTH	B1107 TANK HOLE EAST	B1107 TANK HOLE SOUTH	B1107 TANK HOLE WEST
trans-1,2-Dichloroethene	BDL	BDL	BDL	BDL	BDL
1,2-Dichloropropane	BDL	BDL	BDL	BDL	BDL
1,3-Dichloropropane	BDL	BDL	BDL	BDL	BDL
2,2-Dichloropropane	BDL	BDL	BDL	BDL	BDL
1,1-Dichloropropene	BDL	BDL	BDL	BDL	BDL
Ethylbenzene	23	BDL	BDL	BDL	BDL
Hexachlorobutadiene	BDL	BDL	BDL	BDL	BDL
Isopropylbenzene	9	BDL	BDL	BDL	BDL
p-Isopropyltoluene	11	BDL	BDL	BDL	BDL
Methylene chloride	BDL	BDL	BDL	BDL	BDL
Naphthalene	47	BDL	BDL	BDL	BDL
n-Propylbenzene	20	BDL	BDL	BDL	BDL
Styrene	BDL	BDL	BDL	BDL	BDL
1,1,1,2-Tetrachloroethane	BDL	BDL	BDL	BDL	BDL
1,1,2,2-Tetrachloroethane	BDL	BDL	BDL	BDL	BDL
Tetrachloroethene	BDL	BDL	BDL	BDL	BDL
Toluene	5	BDL	BDL	BDL	BDL
1,2,3-Trichlorobenzene	BDL	BDL	BDL	BDL	BDL
1,2,4-Trichlorobenzene	BDL	BDL	BDL	BDL	BDL
1,1,1-Trichloroethane	BDL	BDL	BDL	BDL	BDL
1,1,2-Trichloroethane	BDL	BDL	BDL	BDL	BDL
Trichloroethene	BDL	BDL	BDL	BDL	BDL
Trichorofluoromethane	BDL	BDL	BDL	BDL	BDL
1,2,3-Trichloropropane	BDL	BDL	BDL	BDL	BDL
1,2,4-Trimethylbenzene	403	BDL	BDL	BDL	BDL
1,3,5-Trimethylbenzene	73	BDL	BDL	BDL	BDL
Vinyl Chloride	BDL	BDL	BDL	BDL	BDL
o-Xylene	75	BDL	BDL	BDL	BDL
m,p-Xylene	190	BDL	BDL	BDL	BDL
Methyl-tert-butylether	BDL	BDL	BDL	BDL	BDL

NOTES: BDL = Below detection limits.
Soil samples were collected on June 15, 1994.
All results are reported in parts per billion (ppb) unless otherwise noted.

TABLE 1-2
SUMMARY OF VOLATILE AND SEMI-VOLATILE ORGANIC ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM DISPOSAL DIRT NORTH AND SOUTH U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1107

PARAMETER: VOLATILES BY GCMS	B1107 DISPOSAL DIRT NORTH	B1107 DISPOSAL DIRT SOUTH
Benzene	970	540
n-Butylbenzene	1600	4600
sec-Butylbenzene	480	490
Ethylbenzene	1040	1000
Isopropylbenzene	560	540
p-Isopropyltoluene	1200	1200
Naphthalene	63000	58000
n-Propylbenzene	1200	1200
Toluene	250	100
1,2,4-Trimethylbenzene	12000	12000
1,3,5-Trimethylbenzene	4900	4800
o-Xylene	2400	2400
m,p-Xylene	1200	1200
Fluorene	28000	29000
2-Methylnaphthalene	350000	330000
Naphthalene	77000	66000
N-nitrosodiphenylamine	8000	8000
Phenanthrene	72000	63000
Pyrene	38000	32000

NOTES: BDL = Below detection limits.
Soil samples were collected on June 27, 1994.
All results are reported in parts per billion (ppb) unless otherwise noted.

TABLE 1-3
SUMMARY OF TOTAL PETROLEUM HYDROCARBONS (418.1)
ANALYTICAL RESULTS FOR SOIL SAMPLES
COLLECTED FROM DISPOSAL DIRT NORTH AND SOUTH
U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1107

PARAMETER: METALS	B1107 DISPOSAL DIRT NORTH	B1107 DISPOSAL DIRT SOUTH
TRPH (IR)	60000000	67000000

NOTES: BDL = Below detection limits.
Soil samples were collected on June 27, 1994.
All results are reported in parts per billion (ppb) unless otherwise noted.

TABLE 1-4
SUMMARY OF TCLP METALS
ANALYTICAL RESULTS FOR SOIL SAMPLES
COLLECTED FROM DISPOSAL DIRT NORTH AND SOUTH
U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1107

PARAMETER: TCLP METALS	B1107 DISPOSAL DIRT NORTH	B1107 DISPOSAL DIRT SOUTH
Arsenic (AS)	<0.5	<0.5
Barium (Ba)	<1.0	<1.0
Cadmium (Cd)	<0.1	<0.1
Chromium (Cr)	<0.5	<0.5
Lead (Pb)	<0.5	<0.5
Mercury (Hg)	<0.0002	<0.0002
Selenium (Se)	<0.1	0.2
Silver (Ag)	<0.0005	<0.0005

NOTES: BDL = Below detection limits.
Soil samples were collected on June 27, 1994.
All results are reported in parts per million (ppm).

TABLE 1-5
SUMMARY OF BNA EXTRACTABLES
ANALYTICAL RESULTS FOR GROUNDWATER SAMPLE
COLLECTED FROM GROUNDWATER AT SITE
OUTLYING LANDING FIELD BRONSON, SITE 1107

PARAMETER: BNA Extr.	B1107 GROUNDWATER
Fluorene	83
2-Methylnaphthalene	650
Naphthalene	97
Phenanthrene	164
Pyrene	123

NOTES: BDL = Below detection limits.
Soil samples were collected on June 23, 1994.
All results are reported in parts per billion (ppb) unless otherwise noted.

97 ppb, 164 ppb and 123 ppb, respectively. The concentrations of those compounds were all found to be above the FDEP regulatory limit of detection limit (individual PAHs) and 100 ppb for total naphthalenes.

W. Grady Swann, Inc. installed and developed one (1) 4" x 25' recovery well at Building 1107, Bronson Field, on September 1, 1994. The well borehole was drilled using a hollow stem auger drill rig. The well was outfitted with 0.01-inch schedule 40 PVC screen flush-joint coupled to a solid PVC riser casing. A well sorted, medium grain, sand filter pack was placed in the borehole annulus around the well screen to at least 2-feet above the screened interval. A 1-2 foot layer of saturated bentonite pellets was placed above the filter pack. The remainder of the borehole annulus was filled with neat, Portland Type-A cement grout. The well head was finished flush-with-grade in an 8-12 inch diameter weight-bearing handway and outfitted with a tamper-resistant PVC cap. The well was developed by overpumping and swab-surging. Well development waters were stored on-site in 55-gallon drums furnished by the Navy. Only those soil cuttings produced during the installation of the Bronson Field well were found to exhibit evidence of contamination, based on PID reading. These soils were placed with other petroleum-contaminated soils removed from the site and piled on a nearby abandoned runway. On September 16, 1994, a passive wick product recovery device was placed in the Bronson Recovery well. Approximately 0.02-feet of petroleum product was measured in the well with an interface probe. A sample well construction diagram for Site 1107 is included in Appendix A.

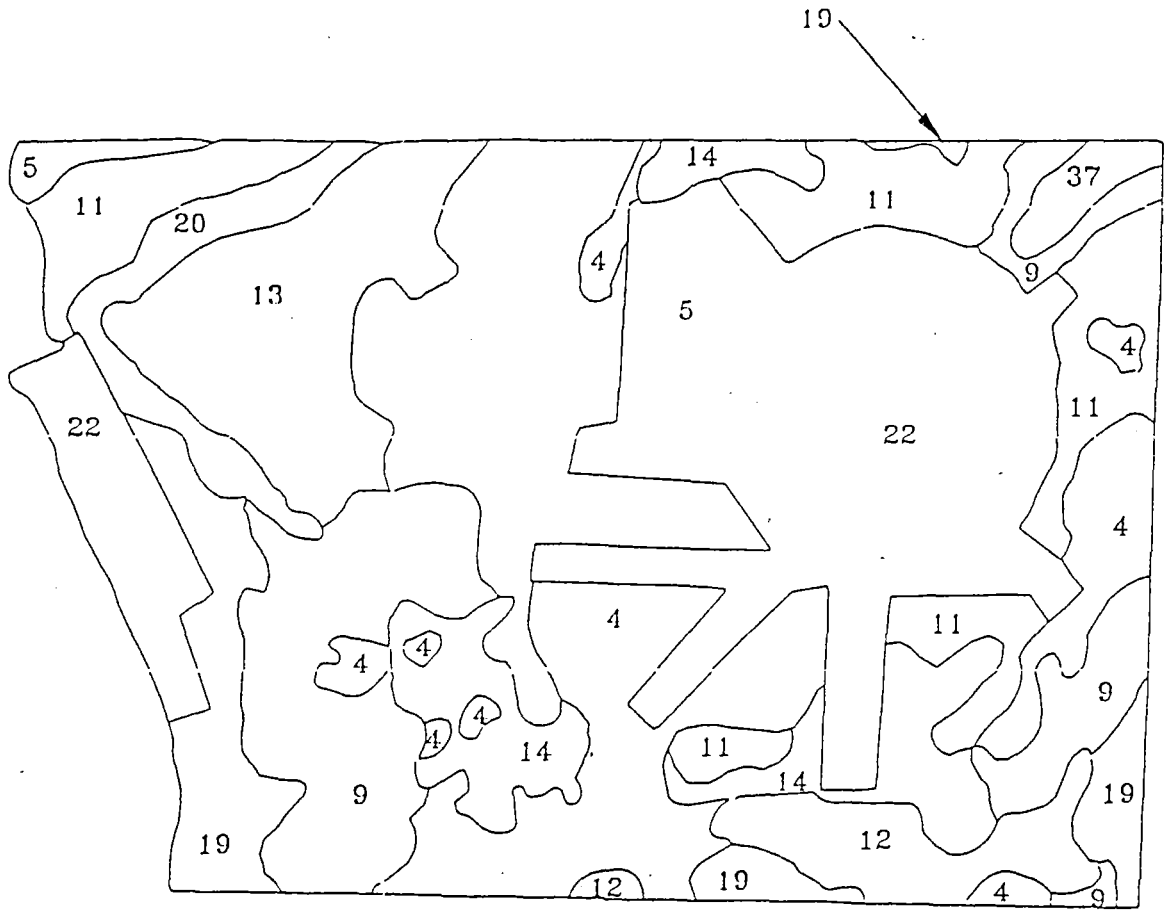
1.6 REGIONAL GEOLOGY AND HYDROGEOLOGY

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

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

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

Figure 1-13 describes the geologic sequence by a representative log of an oil test well near Pensacola. For the region of study, a thick sequence of sand, gravel, and clay extends from



4 Pickney Sand

5 Croatan & Pickney Soils, Depressional

9 Leon Sand

11 Hurrricane Sand

12 Croatab Muck Depressional

13 Lakeland Sand, Level

14 Pottsburg Sand

19 Foxworth Sand

20 Lakeland Sand Gentle Slope

22 Urban Land

37 Pickney Mucky Sand Depressional

N

Scale (FT)

0 2000

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

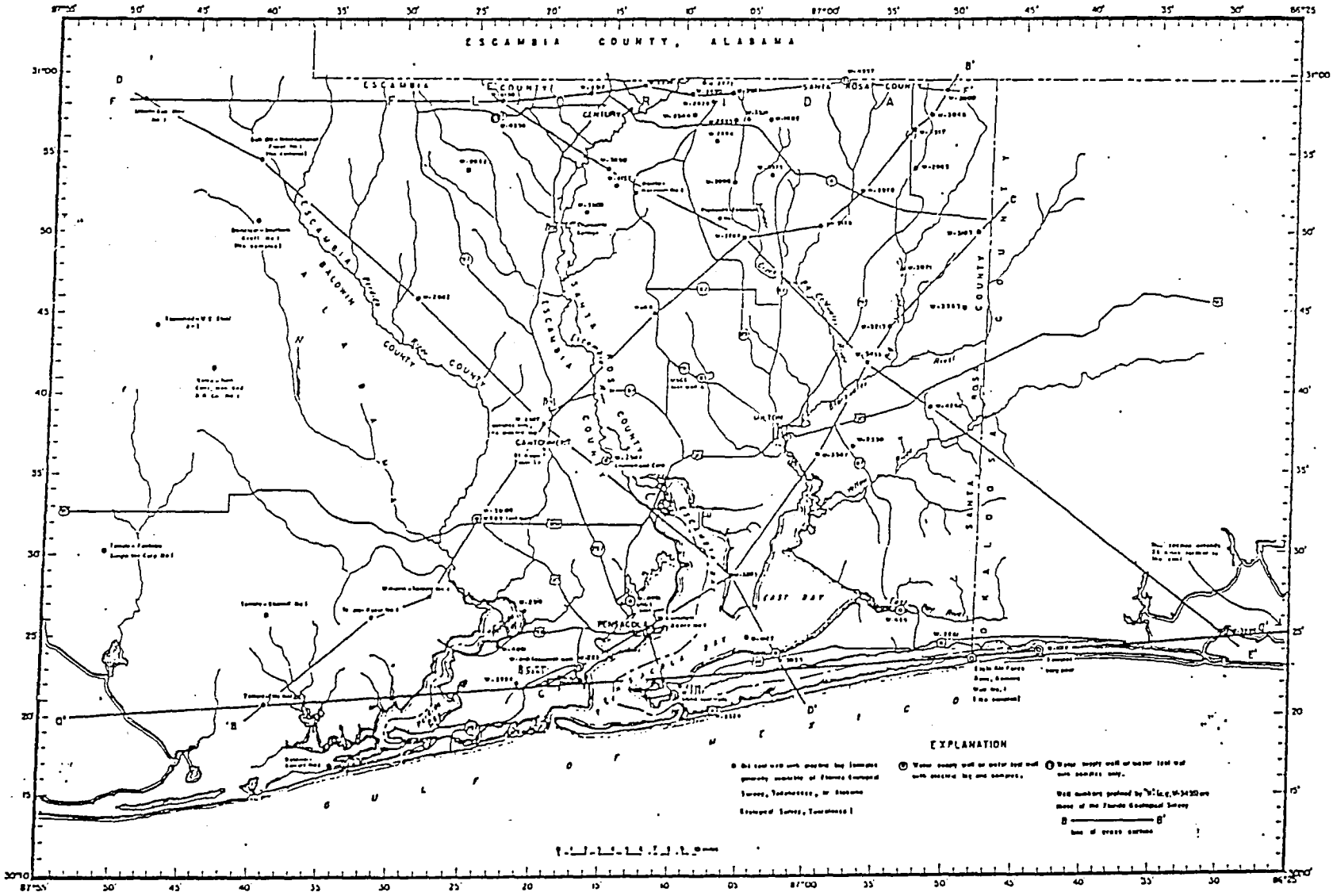


Figure 1-9
OLF Bronson

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

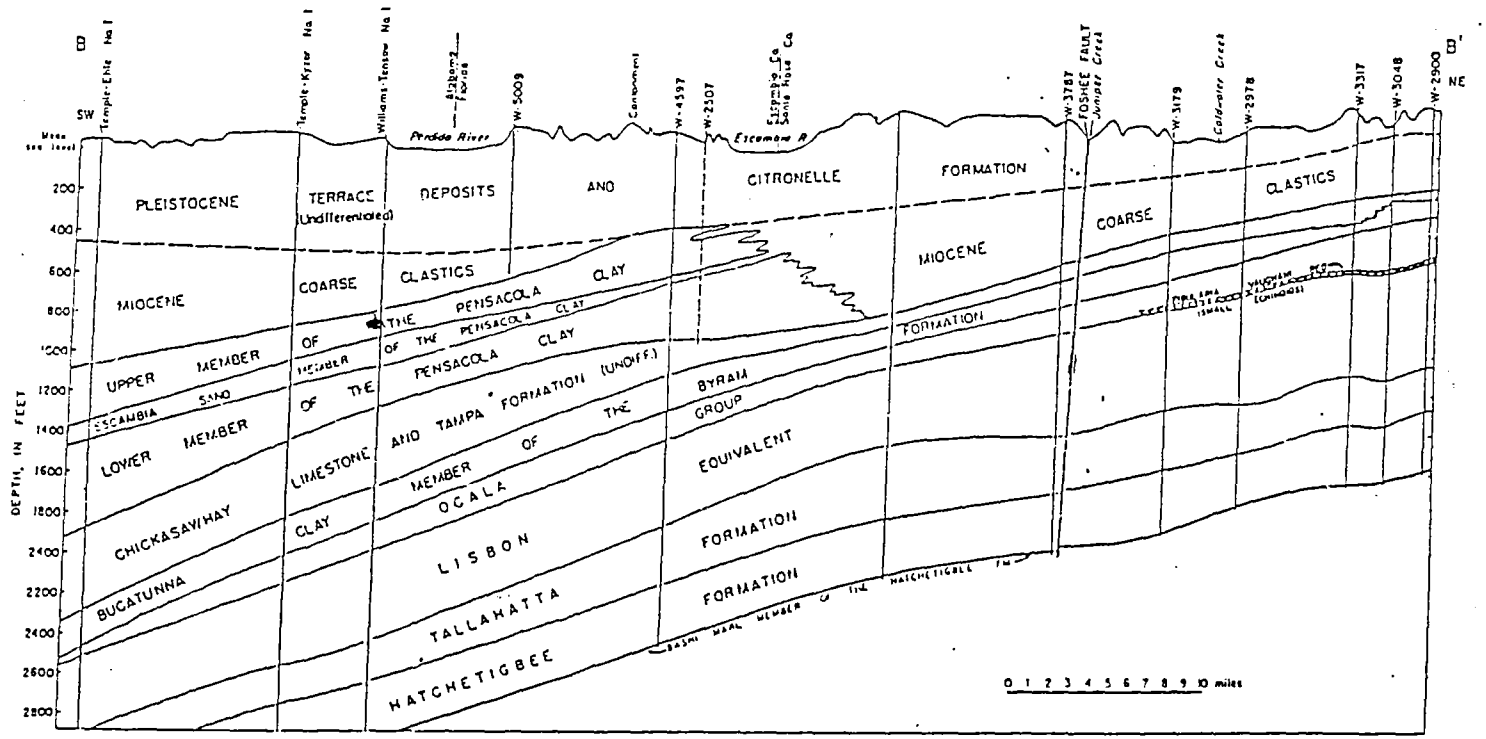


Figure 1-10
OLF Bronson

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

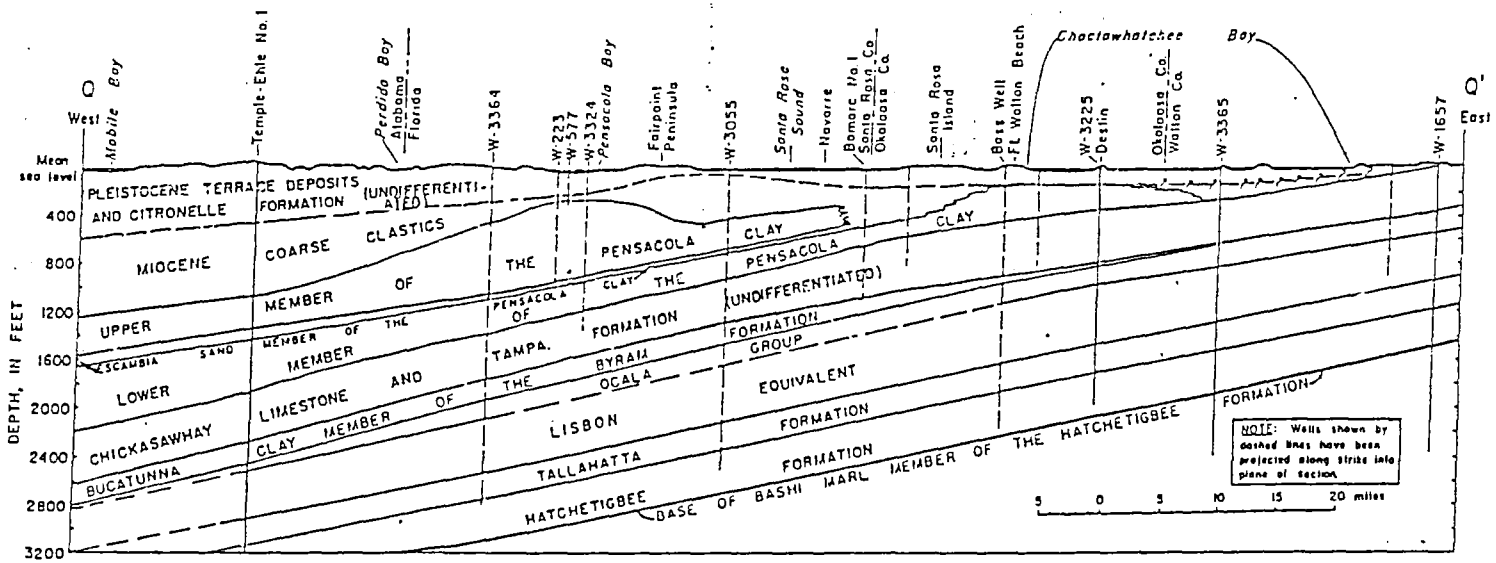


Figure 1-11
OLF Bronson

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

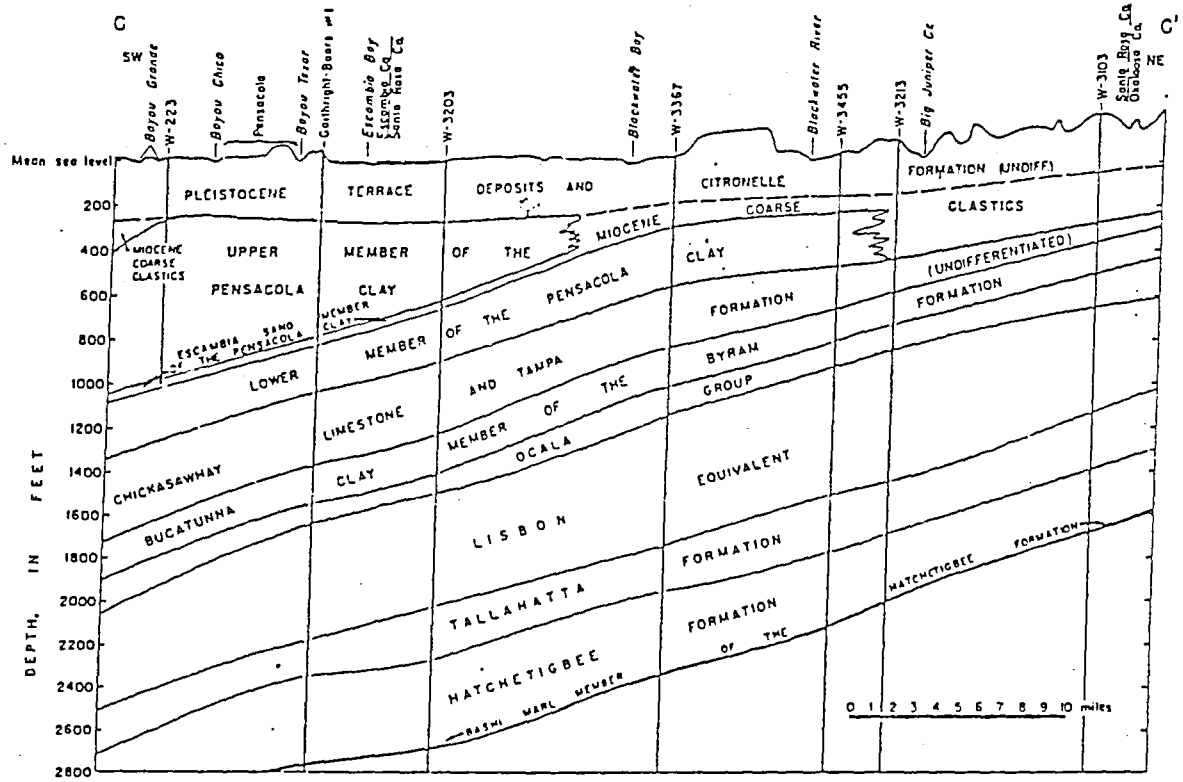


Figure 1-12
OLF Bronson

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

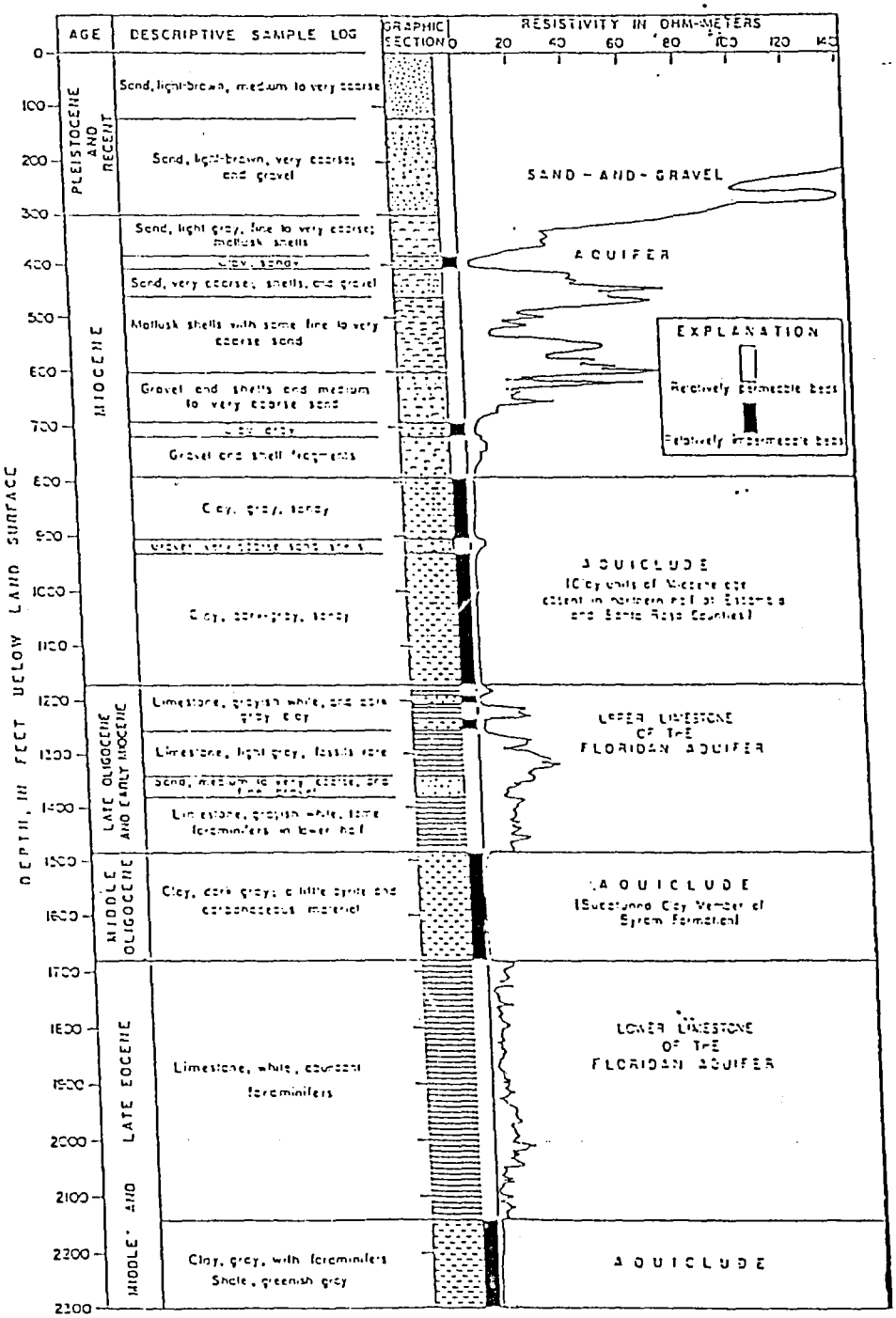


Figure 1-13
OLF Bronson

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

the surface to as much as 1000 feet deep. Nearly all wells in this area tap permeable sediments within this sequence - collectively referred to as the Sand-and-Gravel Aquifer. In the southern part (where OLF Bronson resides), the two aquifers are separated by a thick clay unit of Miocene age, which serves to confine the water that is present in the upper limestone of the Floridan Aquifer (Figure 1-14). An extensive clay bed, the Bucatunna Clay Member of the Byram Formation, underlies the upper limestone of the Floridan Aquifer and forms an aquiclude throughout the area. The lower limestone of the Floridan Aquifer underlies the Bucatunna and rests upon relatively impermeable clay and shale. Within the area, no freshwater aquifers occur below the lower limestone of the Floridan Aquifer. More than 99 percent of groundwater utilized for drinking and industrial purposes in the region is obtained from the Sand-and-Gravel Aquifer. Parts of the Sand-and-Gravel Aquifer have a rather high average porosity and permeability and are thus excellent reservoirs for groundwater. The aquifer primarily consists of relatively insoluble quartz grains, which accounts for the low mineral content and softness of this water. The groundwater conditions are complicated by great lithologic variability due to facies changes during deposition. Groundwater is under artesian pressure where lenses and layers of clay, sandy clay, or hardpan overlie a saturate permeable bed. Groundwater is under non-artesian conditions where such clays or hardpan are absent or where the permeability is not completely saturated. It is common for a well to tap both artesian and non-artesian sources. Groundwater in the Sand-and-Gravel Aquifer is derived almost entirely from rain falling in the area. Recharge is greatest where land is relatively flat. The aquifer is discharged by pumping, evapotranspiration, and seepage into streams, swamps, bays and the Gulf of Mexico.

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

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

Pumping tests on nearby wells screened within the Sand-and-Gravel Aquifer indicate specific capacity values that range from 30 to 80 gallons per minute per foot of drawdown. Aquifer tests 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

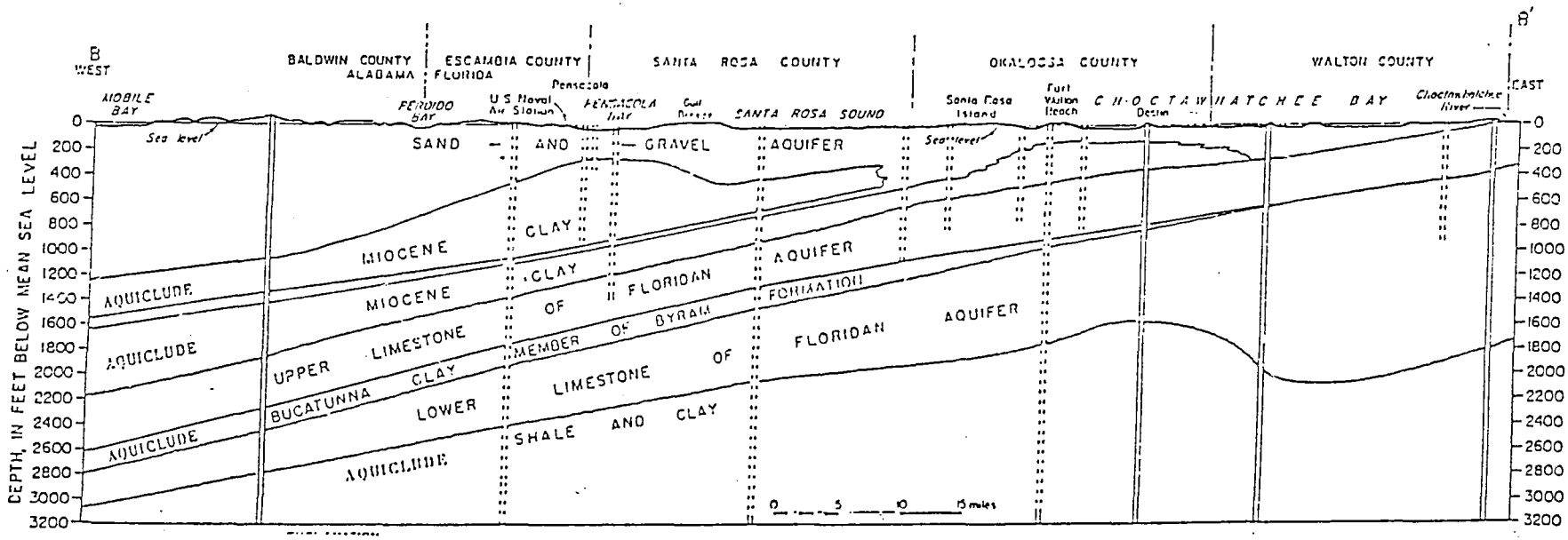


Figure 1-14
OLF Bronson

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

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 ppm to 30 ppm of calcium and magnesium carbonates. The fluoride content of this water is usually less than 0.2 ppm. Iron content of water from this aquifer ranges from 0.06 ppm to 4.9 ppm, although it is generally less than 0.15 ppm. Copious amounts of carbon dioxide render much of the water acidic. In some areas water contains hydrogen sulfide in solution. Carbon dioxide measurements in waters beneath NAS Pensacola have been as high as 100 mg/l. However, elsewhere in the area, Carbon dioxide concentrations are generally less than 30 mg/l. In Bronson Field groundwater reserves, chloride is the major anion and is generally accompanied by a predominant sodium cation.

1.7 WELL SURVEY

Escambia County Utilities Authority (ECUA) operates one potable water well (#2) located at OLF Bronson. The well is permitted by the Northwest Florida Water Management District and is used to supply potable water to the base and to ECUA customers in the Perdido Key community. Construction details of Well #1 and Well #2 are shown in Table 1-6. Former potable water well #1 was taken out of service in June 1995. Site 1107 is approximately 420' southwest of potable water well #2 and 750' southeast of former potable water well #1.

2.0 SITE ASSESSMENT

2.1 SOIL BORING AND MONITORING WELL CONSTRUCTION DETAILS

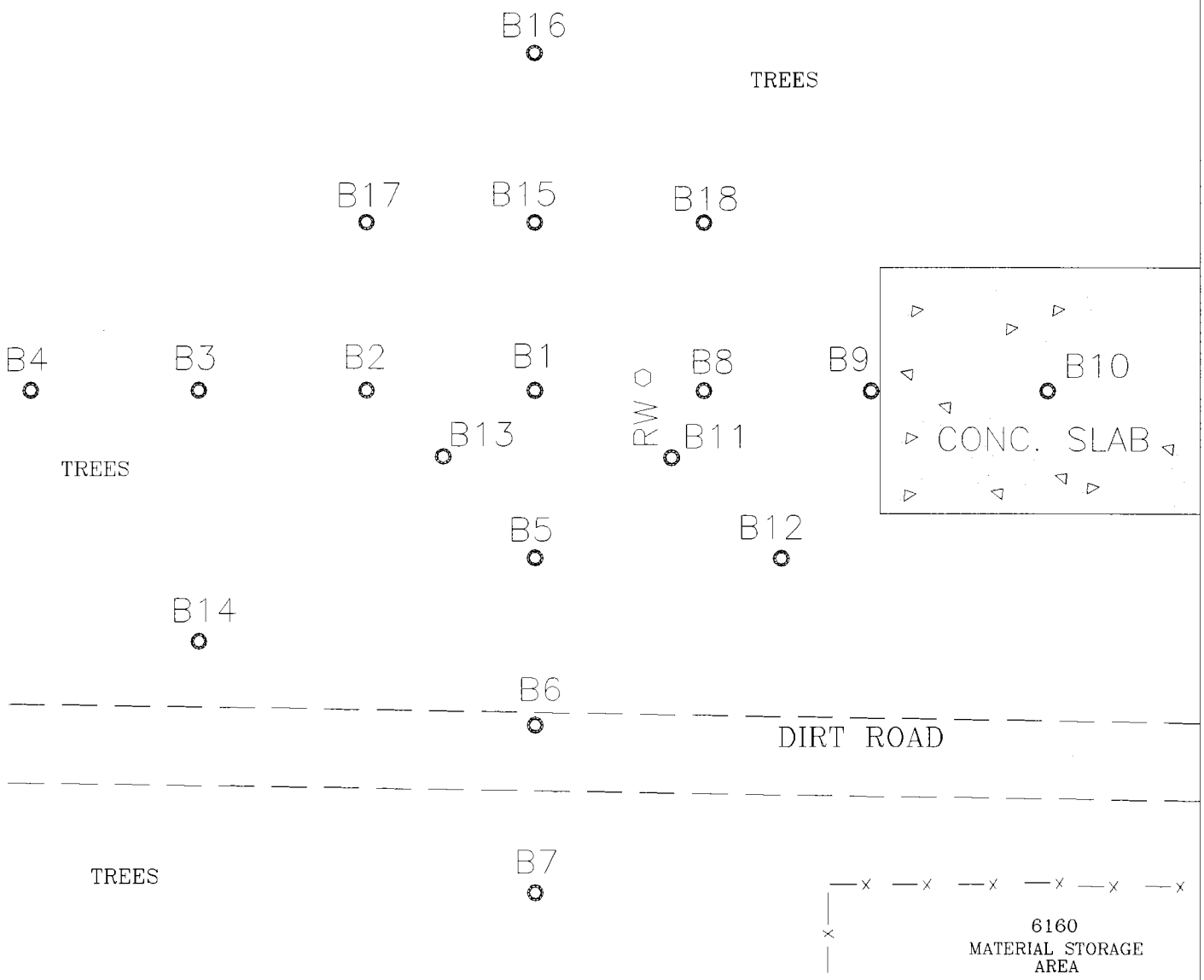
Eighteen soil borings were installed at the site on February 26 and 27, 1996 by W.E.S., Inc. to a depth of approximately 16 feet below land surface (BLS). The soil borings were installed using a hollow stem auger. Soil samples were collected from each borehole at 1, 4, 7, 10, 13 and 16 feet BLS. Soil samples were also collected from each of the boreholes during the installation of shallow monitoring wells MW-1 thru MW-14 and deep monitoring well DMW-15 at 1, 4, 7, 10, 13 and 14/16 feet BLS. Each soil sample collected was analyzed for volatile organic vapors using an organic vapor analyzer (OVA) with a flame ionization detector. The location of the soil borings and monitoring wells is provided in Figures 2-1 and 2-2, respectively.

Seven 24.5 ft. monitoring wells (MW-1, MW-2 and MW-4 thru MW-8) and one 22.5 ft. monitoring well (MW-3) at Site 1107 were installed by W.E.S., Inc. on February 27, 1996. Monitoring wells MW-1, MW-2, and MW-4 thru MW-8 consist of a 2-inch diameter by 10.0 feet of 0.010-inch slotted Schedule 40 PVC pipe, threaded to 14.0 feet of solid PVC riser. The wells were completed in approximately 8-inch diameter boreholes approximately 24.5 feet in depth using the hollow stem auger drilling method. A sand pack consisting of course silica sand (sand pack mesh size 20-30) was extended from the bottom of the well to approximately 0.5 feet above the top of the well screen. A 0.5 foot Wyoming 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' below ground level. A steel manhole cover

TABLE 1-6
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



0' 5' 10' 20' 30'

SCALE FEET

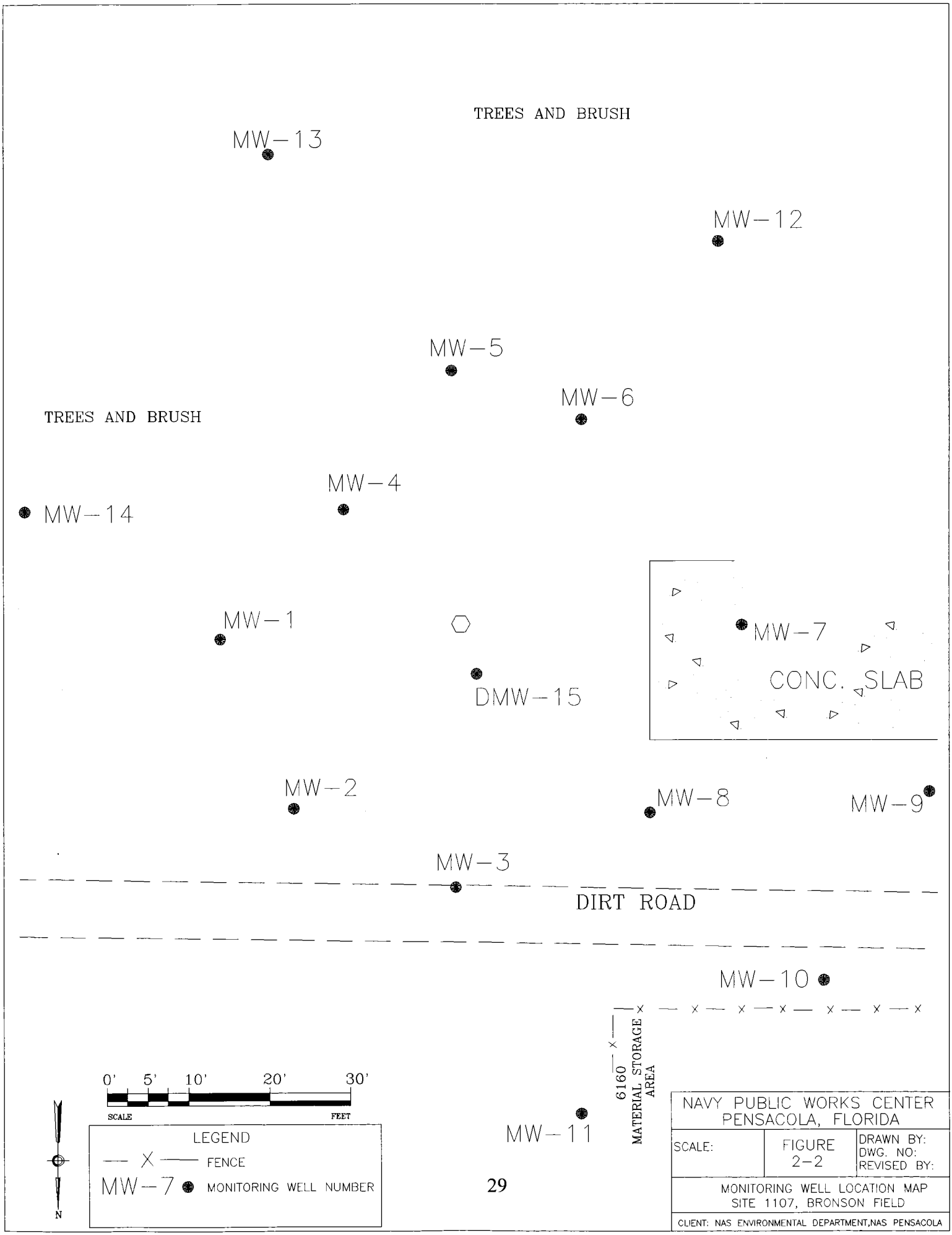
N

LEGEND

— X — FENCE

B10 BORING HOLE NUMBER

NAVY PUBLIC WORKS CENTER PENSACOLA, FLORIDA		
SCALE:	FIGURE 2-1	DRAWN BY: DWG NO: REVISED BY:
SOIL BORING LOCATION MAP SITE 1107, BRONSON FIELD		
CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA		


TREES AND BRUSH
MW-13
MW-12
MW-5
MW-6
TREES AND BRUSH
MW-4
MW-14
MW-1
MW-7
CONC. SLAB
DMW-15
MW-2
MW-8
MW-9
MW-3
DIRT ROAD
MW-10
6160
MATERIAL STORAGE AREA
MW-11
0' 5' 10' 20' 30'
SCALE
FEET
N
LEGEND
FENCE
MW-7 MONITORING WELL NUMBER
NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA
SCALE:
FIGURE 2-2
DRAWN BY:
DWG. NO:
REVISED BY:
MONITORING WELL LOCATION MAP
SITE 1107, BRONSON FIELD
CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA

was placed in the borehole around the PVC riser and set with neat cement. An 8-inch diameter steel manhole cover was placed over the manhole. A two foot by two foot concrete pad was installed around the outside of the manhole cover at the top of the land surface. Construction details of MW-3 are identical to construction details of MW-1, MW-2, and MW-4 thru MW-8 (outlined above) with the following exceptions: 12 feet of solid PVC riser and 22.5 feet in depth. Monitoring well construction diagrams are found in Appendix A. Lithological logs for monitoring wells are found in Appendix C.

Six 22.5 ft. monitoring wells (MW-9 thru MW-14) and one 34.5 ft. deep vertical extent monitoring well (DMW-15) at Site 1107 were installed by W.E.S., Inc. on May 8, 1996. Monitoring wells MW-9 thru MW-14 consist of a 2-inch diameter by 10.0 feet of 0.010-inch slotted Schedule 40 PVC pipe, threaded to 12.0 feet of solid PVC riser. The wells were completed in approximately 8-inch diameter boreholes approximately 22.5 feet in depth using the hollow stem auger drilling method. A sand pack consisted of course silica sand (sand pack mesh size 20-30) and extended from the bottom of the well screen to approximately one foot above the top of the well screen. A one foot Wyoming 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' below ground level. A steel manhole cover was placed in the borehole around the PVC riser and set with neat cement. An 8-inch diameter steel manhole cover was placed over the manhole. A two foot by two foot concrete pad was installed around the outside of the manhole cover at the top of the land surface. Construction details of DMW-15 are identical to construction details of MW-9 thru MW-14 (outlined above) with the following exceptions: 5.0 feet of 0.010 slotted Schedule 40 PVC pipe, 29 feet of solid PVC riser, 34.5 feet in depth, and one foot fine sand seal placed above the sand pack. Monitoring well construction diagrams are found in Appendix A. Lithological logs for monitoring wells are found in Appendix C.

2.2 GROUNDWATER FLOW DIRECTION

The top of casing elevations for monitoring wells M-1 thru MW-14 were surveyed by W.E.S., Inc. personnel on June 6, 1996. No survey bench marks were located near the site and therefore the top of casing elevations were based on assumed benchmark elevation of 50.00 ft at the northwest corner of the existing concrete slab. Groundwater elevations for the groundwater level measurements taken on April 22, 1997 are shown in Table 2-1. A groundwater flow direction map for the groundwater level measurements taken on April 22, 1997 is shown in Figure 2-3. The groundwater flow direction map indicates the groundwater flow direction at the site to be toward the northwest.

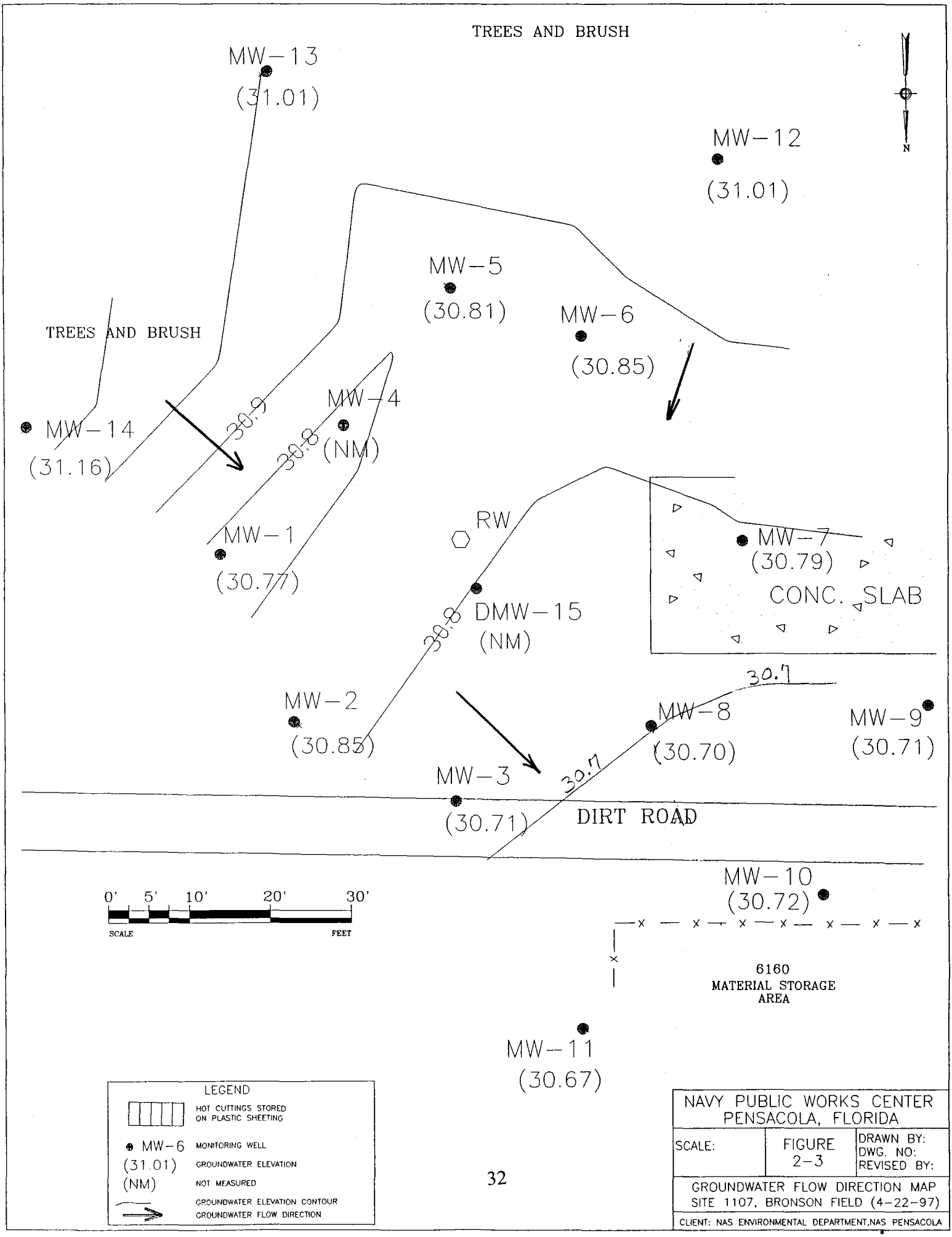
2.3 GROUNDWATER FLOW RATE

There are nine sites at Bronson Field at which contamination assessment reports are being conducted. Because the hydrogeology at the site was generally found consistent at each of the nine sites at Bronson Field, slug tests were performed at only three of the sites (Sites 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.

TABLE 2-1
TOP OF CASING AND GROUNDWATER ELEVATION
U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1107

WELL NUMBER	TOC FT. M.S.L.	DTW (FT) 4/22/97	GROUNDWATER ELEVATION 4/22/97
MW-1	48.22	17.45	30.77
MW-2	47.96	17.11	30.85
MW-3	47.35	16.64	30.71
MW-4	48.00	NM	---
MW-5	48.42	17.61	30.81
MW-6	48.65	17.80	30.85
MW-7	49.98	19.19	30.79
MW-8	48.24	17.54	30.70
MW-9	47.73	17.02	30.71
MW-10	48.63	17.91	30.72
MW-11	48.88	18.21	30.67
MW-12	48.92	17.91	31.01
MW-13	47.56	16.55	31.01
MW-14	48.10	16.94	31.16
DMW-15	48.97	NM	---

NOTES: TOC = Top of Casing
DTW = Depth to Water
Benchmark assumes elevation of 50 ft. M.S.L. at northeast corner of existing concrete slab of former Building 1107, Bronson Field, Florida.


TREES AND BRUSH
MW-13
(31.01)
MW-12
(31.01)
N
MW-5
(30.81)
MW-6
(30.85)
TREES AND BRUSH
MW-14
(31.16)
30.9
30.8
MW-4
(NM)
MW-1
(30.77)
RW
MW-7
(30.79)
CONC. SLAB
DMW-15
(NM)
30.8
30.7
MW-2
(30.85)
MW-8
(30.70)
MW-9
(30.71)
MW-3
(30.71)
30.7
DIRT ROAD
MW-10
(30.72)
0' 5' 10' 20' 30'
SCALE
FEET
6160
MATERIAL STORAGE
AREA
MW-11
(30.67)
LEGEND
HOT CUTTINGS STORED ON PLASTIC SHEETING
MW-6 MONITORING WELL
(31.01) GROUNDWATER ELEVATION
(NM) NOT MEASURED
GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION
NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA
SCALE:
FIGURE 2-3
DRAWN BY:
DWG. NO:
REVISED BY:
GROUNDWATER FLOW DIRECTION MAP
SITE 1107, BRONSON FIELD (4-22-97)
CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA

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 and 1116 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 35 feet below land surface (BLS) during this investigation. The groundwater table was encountered at approximately 15 to 17 feet BLS.

The site specific geology was determined by examination of soil samples collected during the installation of monitoring wells. The shallow subsurface lithology beneath the site is generally characterized by a red/brown fine sand at a depth of 0-13 to 17 ft. and by a red/ brown fine silty sand with traces of clay at a depth of 13 to 17-30 ft.; and white coarse to medium grained sand at a depth of 30-35 ft. Stratigraphic units are shown on lithologic logs compiled during the drilling of the groundwater monitoring wells. Lithologic logs are found in Appendix C.

2.5 SOIL ASSESSMENT

The extent of soil contamination at the site was determined by OVA screening. Eighteen soil borings were installed at the site on February 26 and 27, 1996 by W.E.S. Inc. to a depth of approximately 16 feet BLS. The soil borings were installed using a hollow stem auger. Fifteen additional soil borings were installed during the installation of monitoring wells MW-1 thru DMW-15. Soil samples were collected from soil borings B1 thru B18 and monitoring wells MW-1 thru MW-8 at 1, 4, 7, 10, 13 and 16 feet BLS. Soil samples were collected from the soil borings during the installation of monitoring wells MW-9 thru DMW-15 at 1, 4, 7, 10, 13 and 14 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. A soil contamination distribution map is shown in Figure 2-4. The groundwater table at the site was generally encountered at 15-17 feet BLS. The only soil sample to exceed the 50 ppm level for soil considered to be excessively contaminated from diesel contamination was found at monitoring well MW-11 at 1 foot BLS. The net OVA reading of this soil sample was 60 ppm. 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. Assuming a 1 foot vertical column of soil contamination, the estimated volume of excessively contaminated soil is approximately 8.4 cubic yards.

TABLE 2-2

VOLATILE ORGANIC VAPOR CONCENTRATIONS IN SOIL (OVA HEADSPACE ANALYSIS) FOR SOIL BORINGS B-1 THRU B-18 AND MW-1 THRU MW-14 PERFORMED FEBRUARY 26, 27, 1996 AND MAY 8, 1996

SITE 1107
U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1107

Boring Designation	Depth (Feet BLS)	VOCs Concentration (ppm)[1]
B1	1	0
	4	0
	7	0
	10	0
	13	0
	16	14
B2	1	0
	4	0
	7	0
	10	0
	13	1
	16	2
B3	1	0
	4	0
	7	0
	10	0
	13	0
	16	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]**
B4	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
B5	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
B6	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
B7	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
B9	1	0
	4	0
	7	0
	10	0
	13	0
	16	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]**
B10	1	0
	4	0
	7	0
	10	0
	13	0
	16	2
B11	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
B12	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
B13	1	0
	4	0
	7	0
	10	0
	13	0
	16	9.5
B14	1	0
	4	0
	7	0
	10	0
	13	0
	16	2

[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]**
B15	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
B16	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
B17	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
B18	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
MW-1	1	0
	4	0
	7	0
	10	0
	13	0
	16	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-2	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
MW-3	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
MW-4	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
MW-5	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
MW-6	1	0
	4	0
	7	0
	10	0
	13	0
	16	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-7	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
MW-8	1	0
	4	0
	7	0
	10	0
	13	0
	16	0
MW-9	1	0
	4	0
	7	0
	10	0
	13	0
	14	0
MW-10	1	3
	4	0
	7	0
	10	0
	13	0
	14	0
MW-11	1	60
	4	45
	7	7
	10	3
	13	4
	14	5

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

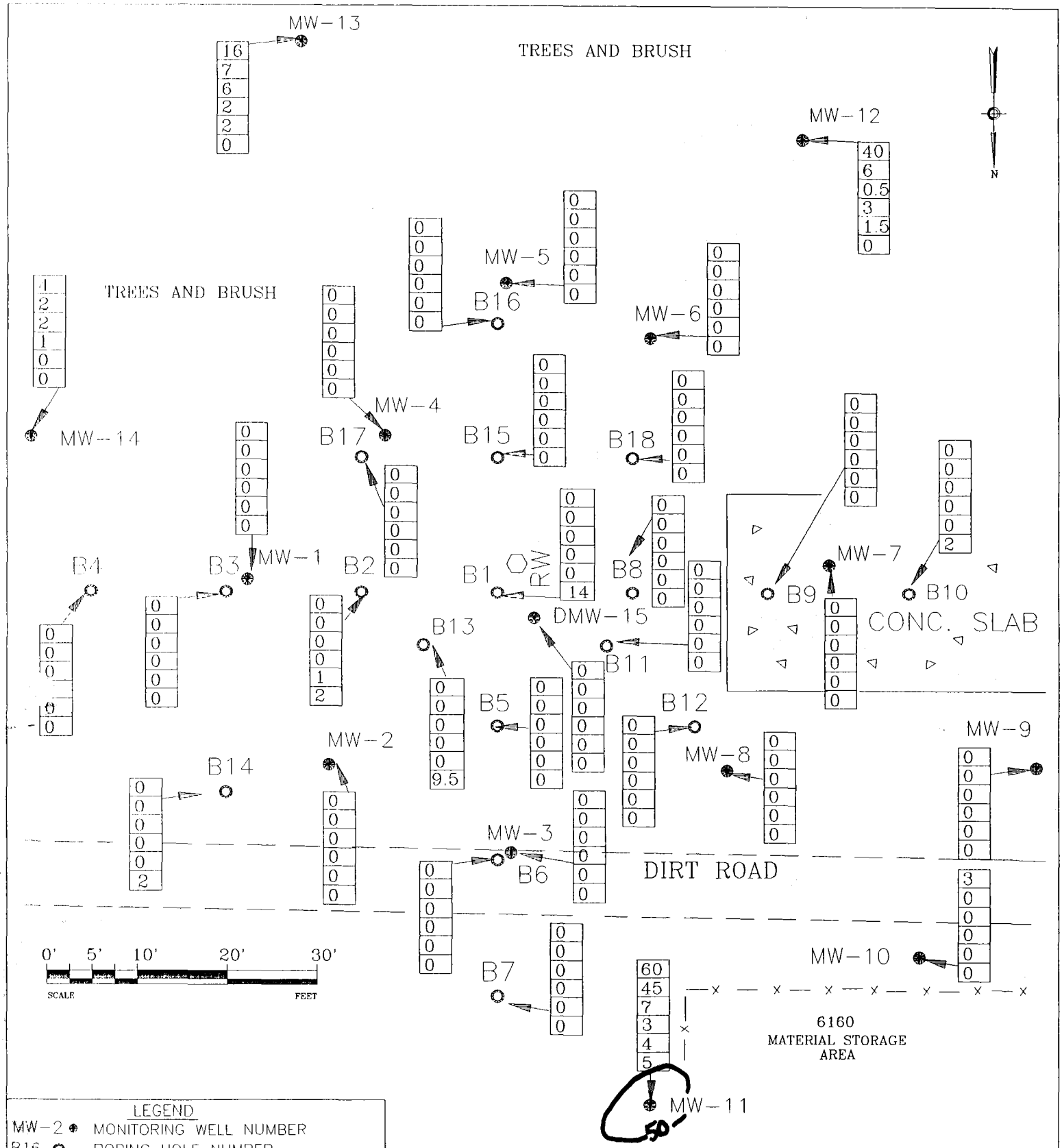
Notes: BLS = below land surface
NS = not sampled
ppm = parts per million
Soil samples analyzed and VOC results reported by NPWC, Pensacola, FL

TABLE 2-2 (Cont.)

Boring Designation	Depth (Feet BLS)	VOCs Concentration (ppm)[1]
MW-12	1	40
	4	6
	7	0.5
	10	3
	13	1.5
	14	0
MW-13	1	16
	4	7
	7	6
	10	2
	13	2
	14	0
MW-14	1	4
	4	2
	7	2
	10	1
	13	0
	14	0
DMW-15	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



LEGEND

MW-2 ● MONITORING WELL NUMBER

B16 ○ BORING HOLE NUMBER

B1 THRU B18 AND MW-1 THRU MW-8

- 0 OVA READING @ BORING DEPTH 1'
- 0 OVA READING @ BORING DEPTH 4'
- 0 OVA READING @ BORING DEPTH 7'
- 0 OVA READING @ BORING DEPTH 10'
- 0 OVA READING @ BORING DEPTH 13'
- 0 OVA READING @ BORING DEPTH 16'

NS NO SAMPLE COLLECTED

—50— ISOCONCENTRATION LINE

—X— FENCE

VOCS = (PARTS PER MILLION) PPM

MW-9 THRU MW-15

- 0 OVA READING @ BORING DEPTH 1'
- 0 OVA READING @ BORING DEPTH 4'
- 0 OVA READING @ BORING DEPTH 7'
- 0 OVA READING @ BORING DEPTH 10'
- 0 OVA READING @ BORING DEPTH 13'
- 0 OVA READING @ BORING DEPTH 14'

NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA

SCALE:	FIGURE 2-4	DRAWN BY: DWG. NO: REVISED BY:

SOIL CONTAMINATION DISTRIBUTION MAP
SITE 1107, BRONSON FIELD

CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA

2.6 SURFACE WATER ASSESSMENT

No surface water was observed at the site or at close proximity to the site. Perdido Bay is the nearest surface water body to the site and is approximately 3,400 feet west-southwest of the site.

2.7 GROUNDWATER QUALITY ASSESSMENT

Groundwater samples were extracted from shallow groundwater monitoring wells MW-1 thru MW-14 and deep vertical extent groundwater monitoring well DMW-15 by W.E.S., Inc. using the methods and procedures outlined in their Comprehensive Quality Assurance Plan No. 900465G. Shallow monitoring wells MW-1 thru MW-8 were sampled on March 11, 1996. Shallow groundwater monitoring wells MW-9 thru MW-14 and deep vertical extent monitoring well DMW-15 were sampled on June 3, 1996. Groundwater samples collected from the monitoring wells were analyzed for volatile organic aromatics (VOAs), polynuclear aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPHs) and ethylene dibromide (EDB) using EPA methods 8260, 8270A, FLPRO and 504, respectively. The analytical laboratory results are found in Appendix D.

Groundwater samples were collected from each monitoring well using the quiescent sampling technique by Navy Public Works Center (PWC) Pensacola laboratory personnel on April 23 and 24, 1997. The groundwater sampling was conducted in accordance with the methods and procedures outlined in PWC's Comprehensive Quality Assurance Plan (CompQAP No. 920121G). The groundwater samples were analyzed for total lead using EPA method 7421. A copy of the laboratory analysis is provided in Appendix D.

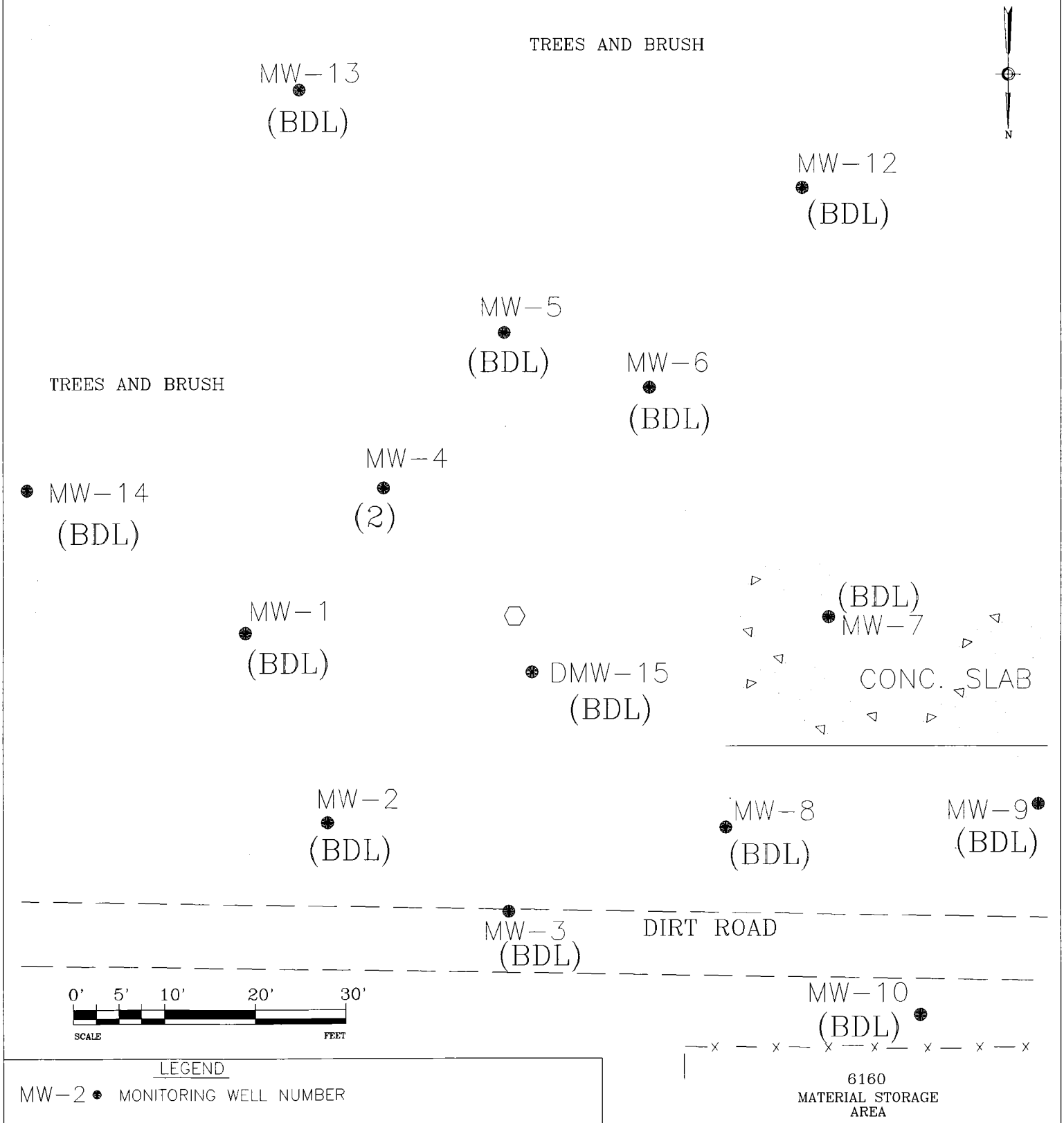
No VOAs were detected in the groundwater samples collected from monitoring wells MW-2, MW-3, MW-5 thru DMW-15. A summary table of the VOAs detected in the monitoring wells is shown in Table 2-3. Benzene was detected in the groundwater sample collected from monitoring well MW-4 at a concentration of 2 ppb which is above the FDEP target level of 1 ppb for benzene. Total BTEX was detected in the groundwater samples collected from monitoring wells MW-1 and MW-4 at 2 ppb and 62 ppb, respectively. The total BTEX concentration in monitoring well MW-4 (62 ppb) was above the FDEP target level of 50 ppb. A benzene and total BTEX distribution map is shown in Figure 2-5 and Figure 2-6, respectively.

No PAHs were detected in the groundwater samples collected from monitoring wells MW-2, MW-3, MW-5, MW-7 or MW-9 thru DMW-15. A summary table of the PAHs detected in the monitoring wells is shown in Table 2-4. Phenanthrene was detected in the groundwater sample collected from monitoring well MW-4 at a concentration of 55 ppb which is above the FDEP target level of detection limit. Pyrene was detected in the groundwater samples collected from monitoring wells MW-1, MW-4, MW-6 and MW-8 at 4 ppb, 50 ppb, 6 ppb and 4 ppb, respectively, which is above the FDEP target level of detection limit. Total naphthalenes were detected in the groundwater samples collected from monitoring wells MW-4 and MW-8 at 435 ppb and 5 ppb, respectively. The total naphthalene concentration detected at monitoring well MW-4 (435 ppb) exceeded the FDEP target level for total

TABLE 2-3
SUMMARY OF VOLATILE ORGANICS ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES COLLECTED FROM MONITORING WELLS MW-1 THRU DMW-15 U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1107

PARAMETER	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	MW-12	MW-13	MW-14	DMW-15
Benzene	BDL	BDL	BDL	2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Ethylbenzene	BDL	BDL	BDL	7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Toluene	BDL	BDL	BDL	12	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Xylenes (Total)	2	BDL	BDL	41	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total BTEX	2	BDL	BDL	62	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

NOTES: Groundwater monitoring analyses for MW-1 thru MW-8 performed March 11, 1996.
Groundwater monitoring analyses for MW-9 thru DMW-15 performed June 3, 1996.
All results reported in parts per billion (ppb) unless otherwise noted.
BDL = Below detection limits
Total BTEX = Summation of benzene, toluene, ethylbenzene and xylenes (total)



LEGEND

MW-2 ● MONITORING WELL NUMBER

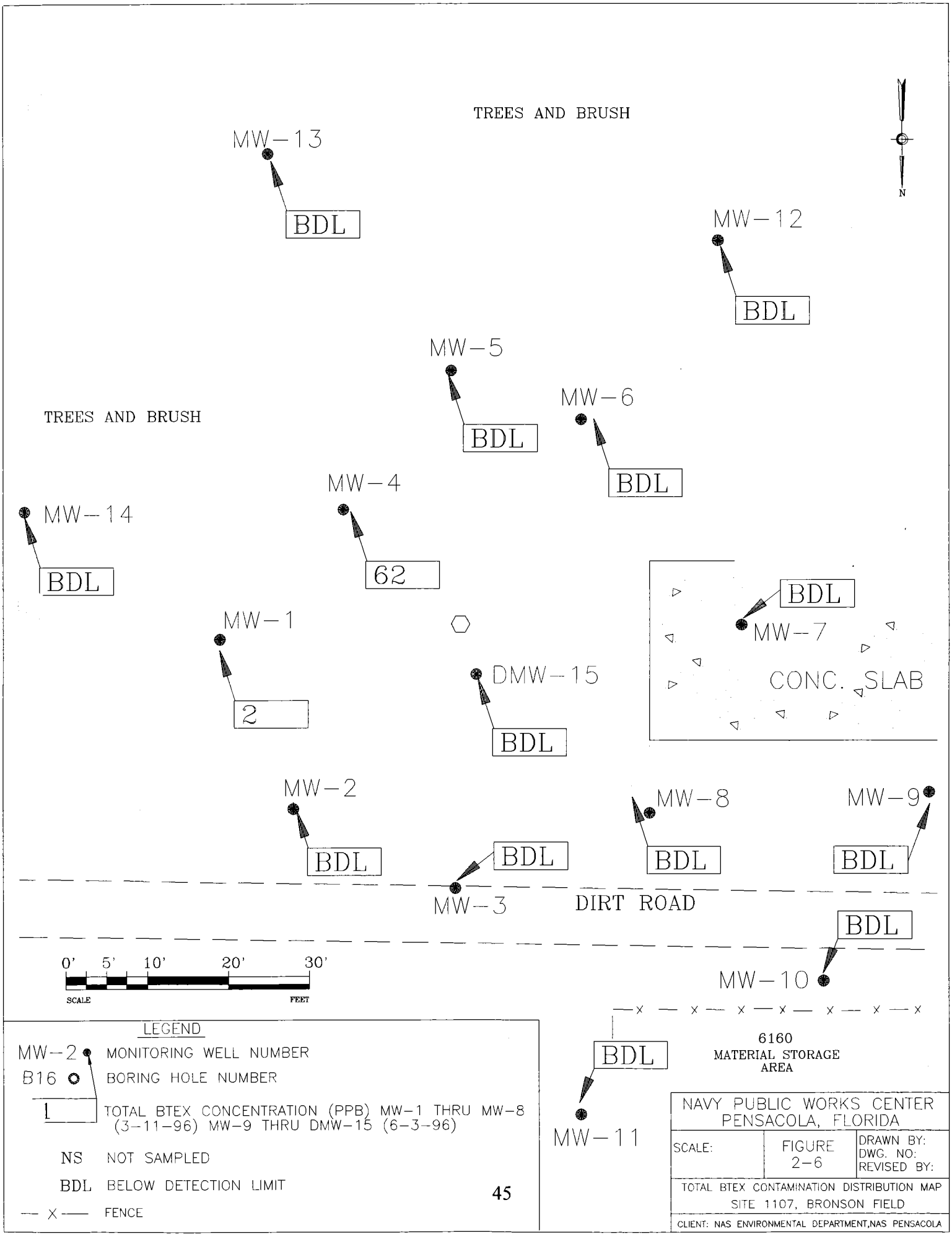
1) BENZENE CONCENTRATION (PPB) MW-1 THRU MW-8 (3-11-96) MW-9 THRU DMW-15 (6-3-96)

(NS) NOT SAMPLED

(BDL) BELOW DETECTION LIMIT

— X — FENCE

NAVY PUBLIC WORKS CENTER PENSACOLA, FLORIDA		
SCALE:	FIGURE 2-5	DRAWN BY: DWG. NO: REVISED BY:
BENZENE CONTAMINATION DISTRIBUTION MAP SITE 1107, BRONSON FIELD		
CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA		


TREES AND BRUSH
MW-13
BDL
MW-12
BDL
MW-5
BDL
MW-6
BDL
TREES AND BRUSH
MW-4
62
MW-14
BDL
MW-1
2
DMW-15
BDL
BDL
MW-7
CONC. SLAB
MW-2
BDL
MW-8
BDL
MW-9
BDL
BDL
MW-3
DIRT ROAD
BDL
MW-10
0' 5' 10' 20' 30'
SCALE
FEET
6160
MATERIAL STORAGE AREA
BDL
MW-11
LEGEND
MW-2 MONITORING WELL NUMBER
B16 BORING HOLE NUMBER
1 TOTAL BTEX CONCENTRATION (PPB) MW-1 THRU MW-8 (3-11-96) MW-9 THRU DMW-15 (6-3-96)
NS NOT SAMPLED
BDL BELOW DETECTION LIMIT
FENCE
NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA
SCALE:
FIGURE 2-6
DRAWN BY:
DWG. NO:
REVISED BY:
TOTAL BTEX CONTAMINATION DISTRIBUTION MAP
SITE 1107, BRONSON FIELD
CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA

naphthalenes. A total naphthalene distribution map is shown in Figure 2-7.

EDBs were not detected in any of the groundwater samples collected from monitoring wells MW-1 thru DMW-15. TPH was detected in the groundwater samples collected from monitoring wells MW-1, MW-2, MW-3, MW-4, MW-6, and MW-8 at concentrations of 2,800 ppb, 420 ppb, 140 ppb, 3,700 ppb, 930 ppb and 1,600 ppb, respectively. The TPH concentrations detected in these monitoring wells were below the FDEP target level of 5,000 ppb. Total lead was not detected in any of the groundwater samples collected from monitoring wells MW-1 thru DMW-15. No free-phase petroleum hydrocarbons were detected in any of the monitoring wells at the site. A summary table of the TPHs, Lead, and EDBs detected in the monitoring wells is shown in Table 2-5.

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 CONCLUSIONS

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

- Initial remedial actions include the removal and proper disposal of approximately 1000 cubic yards of contaminated soil.

- OVA screenings were performed on 33 soil borings, at varying depths in order to delineate the extent of contaminated soils. Soil samples collected from the soil borings were analyzed for volatile organic vapors using an OVA. One soil sample from monitoring well MW-11 (1' BLS) was the only soil sample found to be above the FDEP excessively contaminated level of 50 ppm.

- Fourteen shallow groundwater monitoring wells (MW-1 thru MW-14) and one vertical extent monitoring well (DMW-15) was installed at the site and groundwater samples were collected from each well and analyzed for the kerosene analytical group listed in FDEP Rule 62-770.600(8)(b).

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

- Groundwater depths measured in monitoring wells MW-1 thru MW-14 on April 22, 1997, indicate the groundwater flow direction at the site to be toward the northwest direction.

- No petroleum contaminants were detected in the groundwater samples collected from shallow monitoring wells MW-9 thru MW-14 and deep vertical extent well DMW-15.

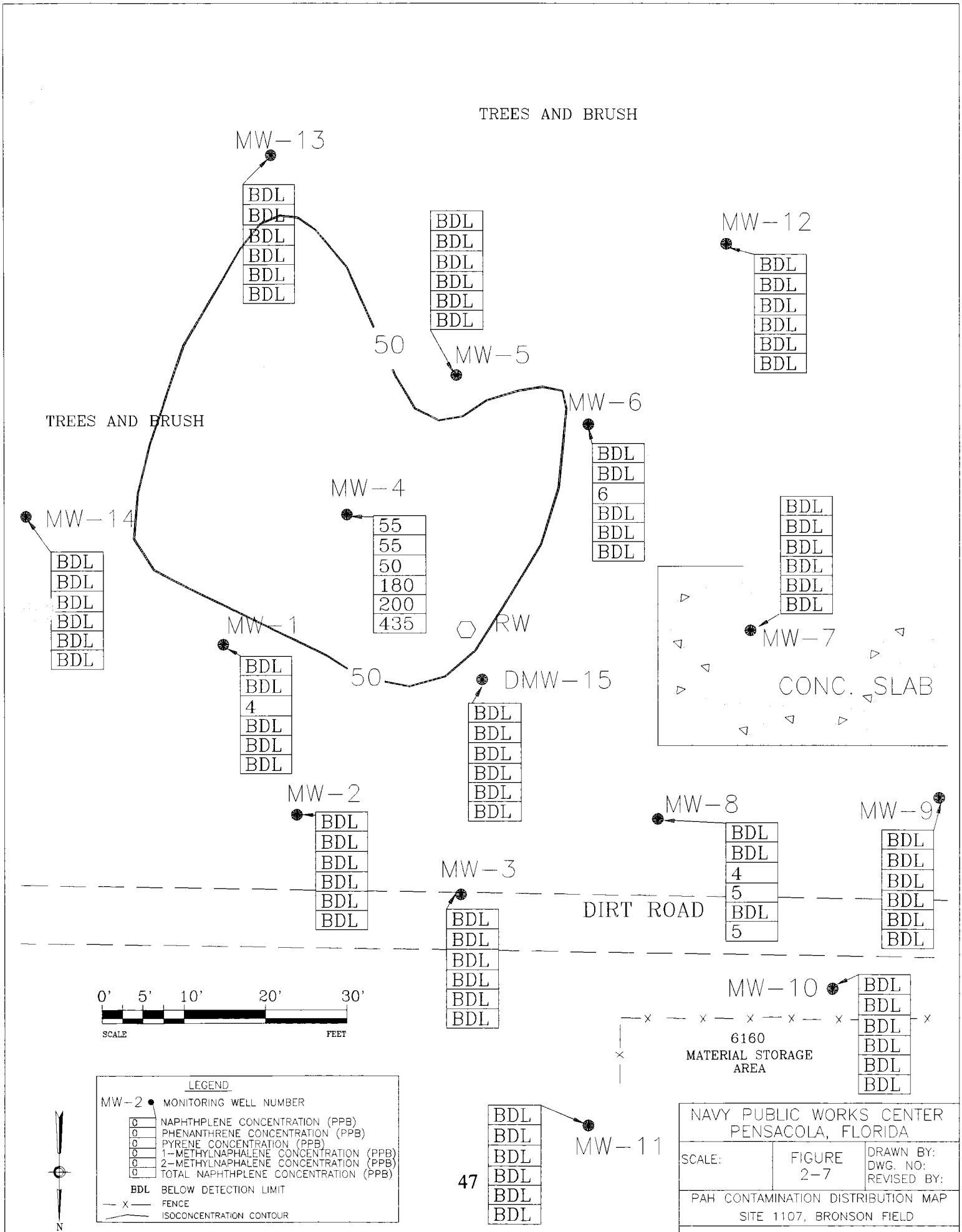

TREES AND BRUSH
MW-13
BDL
BDL
BDL
BDL
BDL
BDL
BDL
BDL
BDL
BDL
BDL
BDL
MW-12
BDL
BDL
BDL
BDL
BDL
BDL
50
MW-5
MW-6
TREES AND BRUSH
BDL
BDL
6
BDL
BDL
BDL
MW-4
55
55
50
180
200
435
MW-14
BDL
BDL
BDL
BDL
BDL
BDL
BDL
BDL
BDL
BDL
BDL
BDL
MW-7
CONC. SLAB
MW-1
RW
BDL
BDL
4
BDL
BDL
BDL
50
DMW-15
BDL
BDL
BDL
BDL
BDL
BDL
MW-2
BDL
BDL
BDL
BDL
BDL
BDL
MW-8
BDL
BDL
4
5
BDL
5
MW-9
BDL
BDL
BDL
BDL
BDL
BDL
MW-3
BDL
BDL
BDL
BDL
BDL
BDL
DIRT ROAD
0' 5' 10' 20' 30'
SCALE
FEET
MW-10
BDL
BDL
BDL
BDL
BDL
BDL
6160
MATERIAL STORAGE
AREA
LEGEND
MW-2 MONITORING WELL NUMBER
0 NAPHTHPLENE CONCENTRATION (PPB)
0 PHENANTHRENE CONCENTRATION (PPB)
0 PYRENE CONCENTRATION (PPB)
0 1-METHYLNAPHALENE CONCENTRATION (PPB)
0 2-METHYLNAPHALENE CONCENTRATION (PPB)
0 TOTAL NAPHTHPLENE CONCENTRATION (PPB)
BDL BELOW DETECTION LIMIT
FENCE
ISOCONCENTRATION CONTOUR
N
BDL
BDL
BDL
BDL
BDL
BDL
MW-11
NAVY PUBLIC WORKS CENTER
PENSACOLA, FLORIDA
SCALE:
FIGURE 2-7
DRAWN BY:
DWG. NO:
REVISED BY:
PAH CONTAMINATION DISTRIBUTION MAP
SITE 1107, BRONSON FIELD
CLIENT: NAS ENVIRONMENTAL DEPARTMENT,NAS PENSACOLA

TABLE 2-4
SUMMARY OF PAHs
ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES
COLLECTED FROM MONITORING WELLS MW-1 THRU DMW-15
U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1107

PARAMETER	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	MW-12	MW-13	MW-14	DMW-15
Naphthalene	BDL	BDL	BDL	55*	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Phenanthrene	BDL	BDL	BDL	55	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Pyrene	4	BDL	BDL	50	BDL	6	BDL	4	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1-Methylnaphthalene	BDL	BDL	BDL	180	BDL	BDL	BDL	5	BDL	BDL	BDL	BDL	BDL	BDL	BDL
2-Methylnaphthalene	BDL	BDL	BDL	200	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TOTAL NAPHTHALENE	BDL	BDL	BDL	435	BDL	BDL	BDL	5	BDL	BDL	BDL	BDL	BDL	BDL	BDL

NOTES:
*The analyte was detected below the detection limit; therefore, it is an estimated value.
BDL = Below detection limits
All results reported in parts per billion (ppb) unless otherwise noted.
Groundwater monitoring analyses for MW-1 thru MW-8 performed March 11, 1996.
Groundwater monitoring analyses for MW-9 thru DMW-15 performed June 3, 1996.

TABLE 2-5
SUMMARY OF TPH, LEAD, and EDBS ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES COLLECTED FROM MONITORING WELLS MW-1 THRU MW-15 AND RECOVERY WELL RC-1
U.S. NAVY OUTLYING LANDING FIELD BRONSON, SITE 1107

PARAMETER	MONITORING WELL NUMBER															
	RC-1	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	DMW-15
TPH	360	2800	420	140	3700	BDL	930	BDL	1600	BDL	BDL	BDL	BDL	BDL	BDL	BDL
LEAD 4/23/97& 4/24/97	NS	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
EDB	NS	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

NOTES:
All results reported in parts per billion (ppb) unless otherwise noted.
Groundwater samples for MW-1 thru MW-8 collected March 11, 1996 unless indicated otherwise.
Groundwater sample for RW-1 collected May 20, 1996 unless indicated otherwise.
Groundwater samples for MW-9 thru DMW-15 collected June 3, 1996 unless indicated otherwise.
BDL = Below detection limits
NS = Not sampled
TPH = Total Petroleum Hydrocarbons

- Monitoring well MW-4 was the only monitoring well to exceed the FDEP regulatory limits of 50 ppb for total BTEX and 100 ppb for total naphthalene at levels of 62 ppb and 435, respectfully.

- TPH concentrations detected in groundwater samples collected from monitoring wells MW-1 thru MW-4, MW-6, and MW-8 were below the FDEP target level of ~~50 ppm~~ for TPH.
  5 ppm or 5000 ppb

- Individual PAHs were detected in the groundwater samples collected from monitoring wells MW-1, MW-4, MW-6, and MW-8 above the FDEP target cleanup levels (i.e., detection limit).

- The site is approximately 420' southwest of active potable water well #2 located at Bronson Field.

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

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

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

3.2 RECOMMENDATIONS

PWC Pensacola recommends, based upon the findings and conclusions contained in this report, that a "Remedial Action Plan" for the soil and a "Monitoring Only Plan" for the groundwater be implemented at Site 1107 located at U.S. Navy Outlying Landing Field (OLF) Bronson, Pensacola as follows:

(1) The one-foot vertical column of excessively contaminated soil at monitoring well MW-11 be removed and properly disposed at a permitted thermal treatment facility. The soil excavation shall be monitored using OVA screening techniques to ensure all excessively contaminated soil is removed.

(2) Monitoring well MW-1 be sampled and analyzed for VOAs, PAHs, and TPHs by EPA methods 8260, 8270A, and FLPRO, respectfully, quarterly for one year; and MW-6, MW-8, and MW-14 be sampled and analyzed for PAHs and TPHs by EPA methods 8270A and FLPRO, respectfully, quarterly for one year.

(3) Monitoring well MW-4, which had the highest petroleum contamination, is considered the source monitoring well. Monitoring wells MW-14 and MW-8 are considered the upgradient and downgradient wells, respectively.

4.0 PROFESSIONAL REVIEW CERTIFICATION

The Contamination Assessment contained in this report was prepared using sound, hydrogeologic principles and judgement. This assessment is based on the geologic investigation and associated information detailed in the text and appended to this report. If conditions are determined to exist that differ from those described, the undersigned engineer should be notified to evaluate the effects of any additional information on the assessment described in this report. This Contamination Assessment Report was developed for U.S. Navy Outlying Landing Field (OLF) Bronson, Site 1107, Pensacola, Florida, and should not be construed to apply to any other site.

Gregory Allen Campbell

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

6/23/97

Date

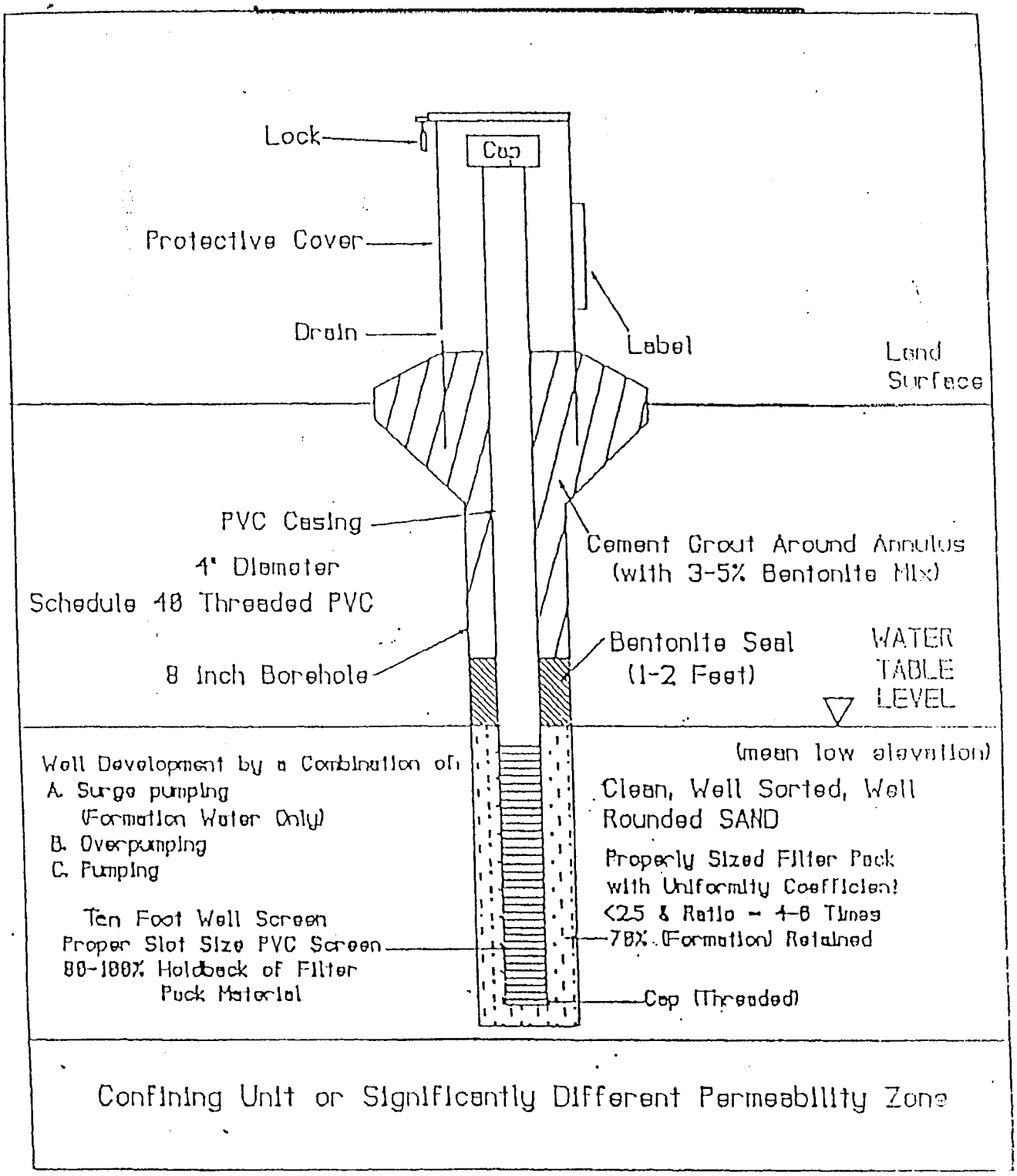
5.0 REFERENCES

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

APPENDICES

APPENDIX A

MONITORING WELL CONSTRUCTION DIAGRAMS



DECEMBER, 1991
M. KENNEDY &
D. STAPLES

BASIC MONITOR WELL
DESIGN IN A WATER
TABLE AQUIFER

Water Equipment Services, Inc.
6389 TOWER LANE
SARASOTA, FLORIDA 34240
PH. (813) 371-7617
FAX (813) 378-5218

MONITOR WELL CONSTRUCTION DETAIL

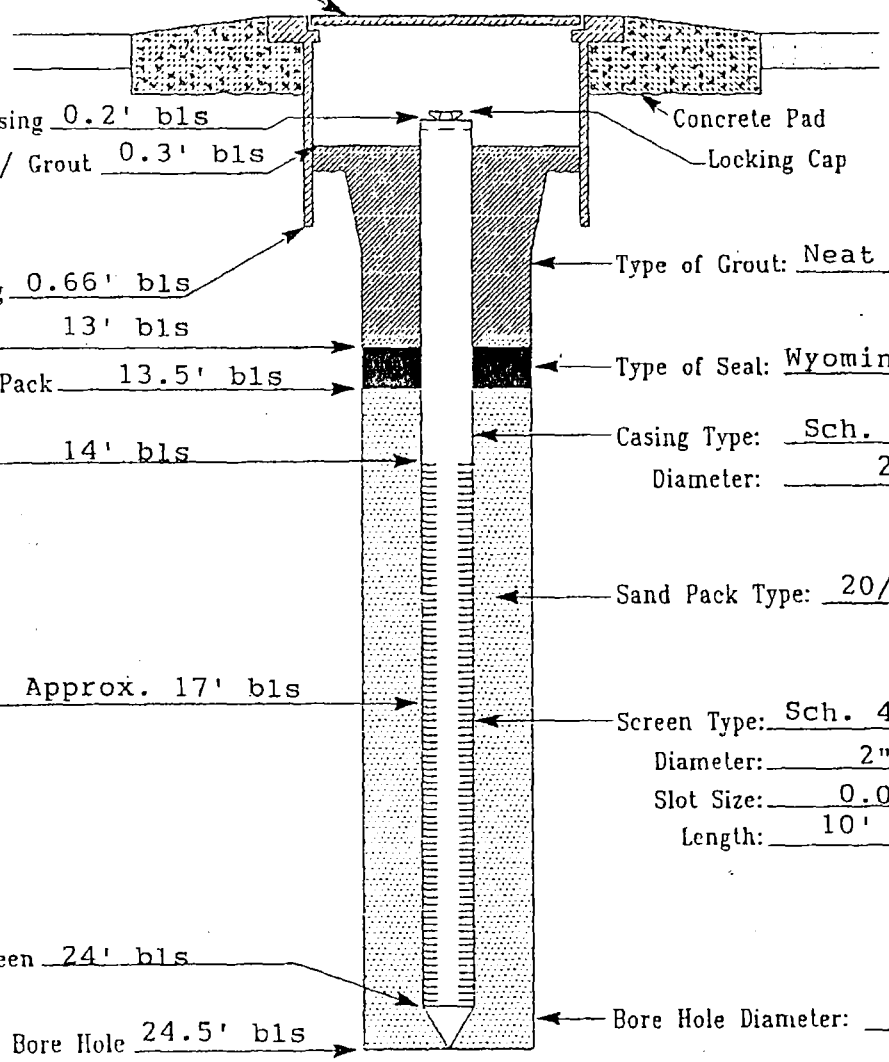
LOGGED BY: Dave Gettinger
DRILLING CONTRACTOR: SFT & D
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-1,2,4,5,6,7,8
TOC ELEVATION:

CLIENT: ROICC
LOCATION: NAS Pensacola
JOB NUMBER: N6511495D2126 DO #7
DATE: Start: 2/26/96 Finish: 2/27/96
TIME: Start: Finish:

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):
Site 1107

NOT TO SCALE

Depths in Reference to Ground Level



Top of Manhole 0.1' als

Vault Type/Size: Steel/8"

Top of Well Casing 0.2' bls

Top of Cement/ Grout 0.3' bls

Concrete Pad

Locking Cap

Bottom of Manhole Casing 0.66' bls

Type of Grout: Neat Cement

Top of Seal 13' bls

Top of Gravel Pack 13.5' bls

Type of Seal: Wyoming Bentonite

Top of Screen 14' bls

Casing Type: Sch. 40 PVC
Diameter: 2"

Sand Pack Type: 20/30 Silica

Ground Water Approx. 17' bls

Screen Type: Sch. 40 PVC
Diameter: 2"
Slot Size: 0.01"
Length: 10'

Bottom of Screen 24' bls

Total Depth of Bore Hole 24.5' bls

Bore Hole Diameter: 8¼"

Water Equipment Services, Inc.
6389 TOWER LANE
SARASOTA, FLORIDA 34240
PH. (813) 371-7617
FAX (813) 378-5210

MONITOR WELL CONSTRUCTION DETAIL

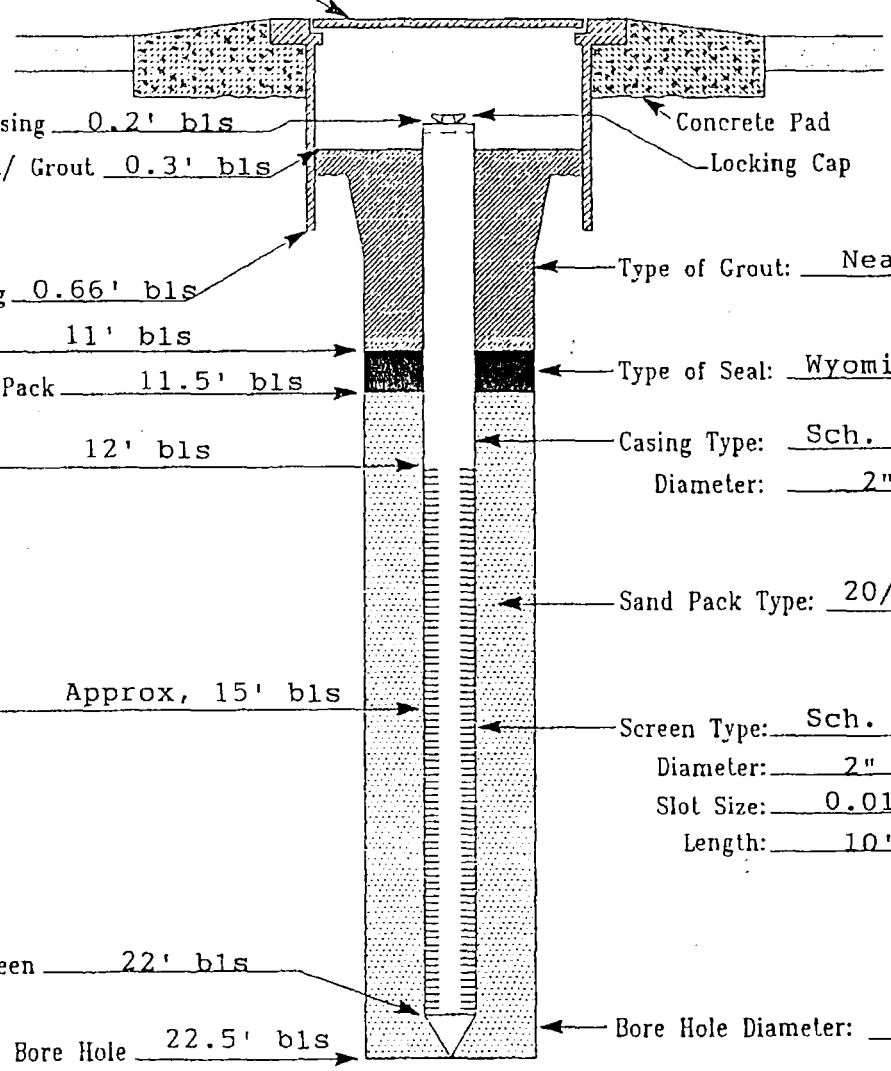
LOGGED BY: Dave Gettinger
DRILLING CONTRACTOR: SFT & D
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-3
TOC ELEVATION:

CLIENT: ROICC
LOCATION: NAS Pensacola
JOB NUMBER: N6511495D2126 DO #7
DATE: Start: 2/26/96 Finish: 2/26/96
TIME: Start: Finish:

COMMENTS: (Lost circulation interval, Water level changes, Hole collapse interval, etc.):
Site 11.07

NOT TO SCALE

Depths in Reference to Ground Level



Top of Manhole 0.1' als

Vault Type/Size: Steel/8"

Top of Well Casing 0.2' bls

Top of Cement/ Grout 0.3' bls

Concrete Pad

Locking Cap

Bottom of Manhole Casing 0.66' bls

Type of Grout: Neat Cement

Top of Seal 11' bls

Top of Gravel Pack 11.5' bls

Type of Seal: Wyoming Bentonite

Top of Screen 12' bls

Casing Type: Sch. 40 PVC
Diameter: 2"

Sand Pack Type: 20/30 Silica

Ground Water Approx, 15' bls

Screen Type: Sch. 40 PVC
Diameter: 2"
Slot Size: 0.01"
Length: 10'

Bottom of Screen 22' bls

Total Depth of Bore Hole 22.5' bls

Bore Hole Diameter: 8¼"

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Environmental Division

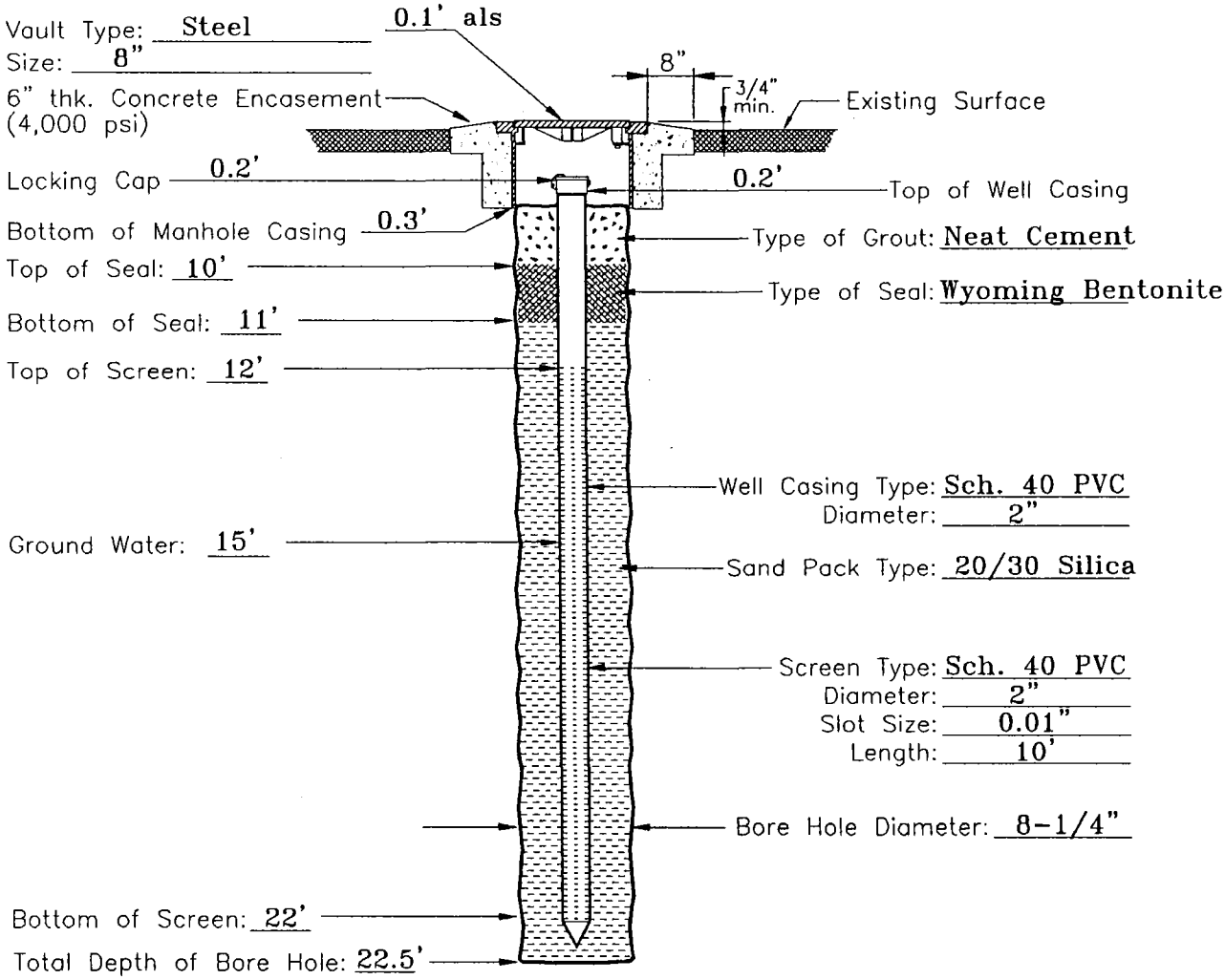
MONITOR WELL CONSTRUCTION DETAIL

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

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

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1107, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/8/96 Finish: 5/8/96
TIME Start: 1015 Finish: 1045

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



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

DRAWING ABOVE IS NOT TO SCALE

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

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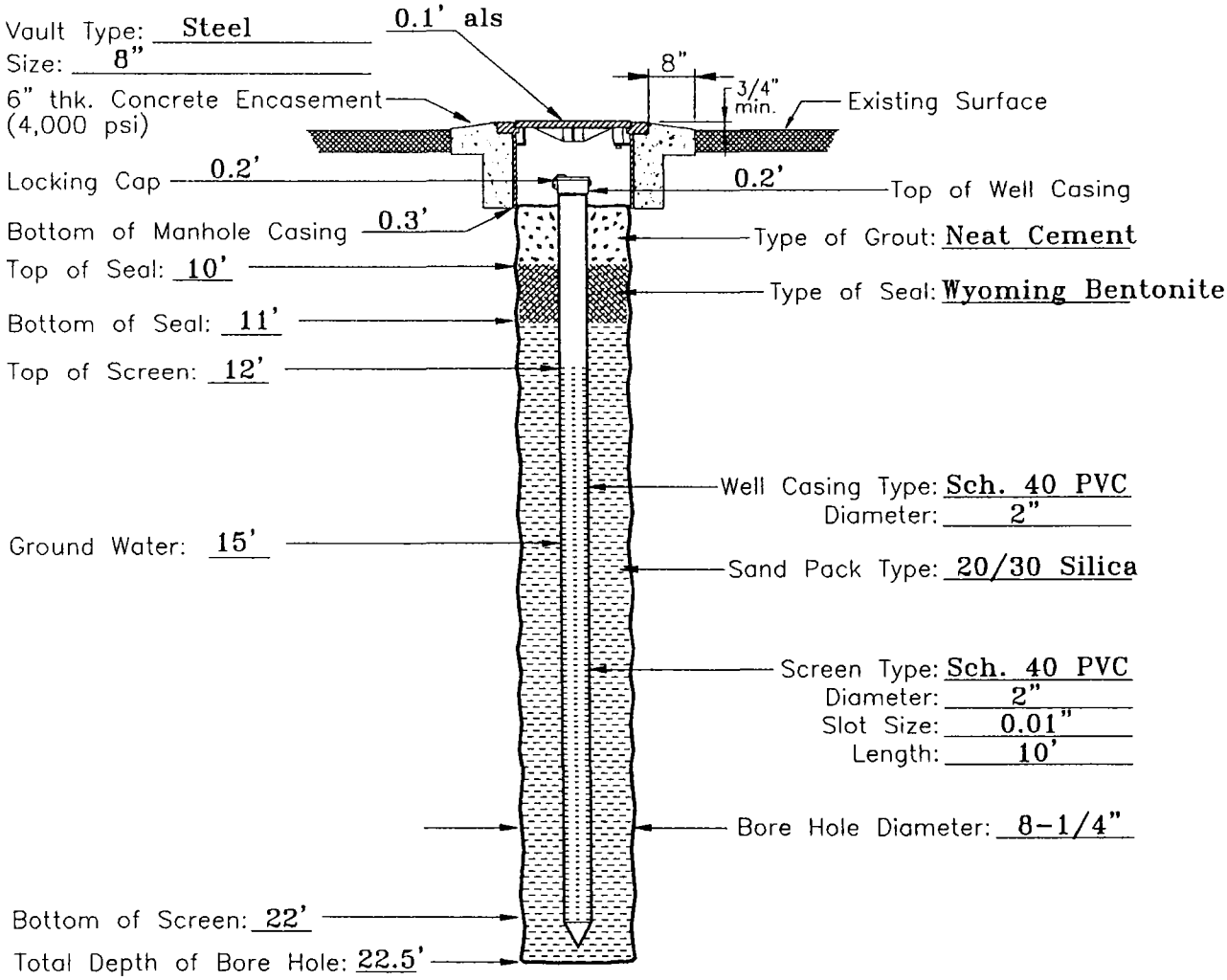
Sarasota, FL 34240-8810
(941) 371-7617
(941) 378-5218 Fax

MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1107, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/8/96 Finish: 5/8/96
TIME Start: 1045 Finish: 1130

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



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

DRAWING ABOVE IS NOT TO SCALE

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

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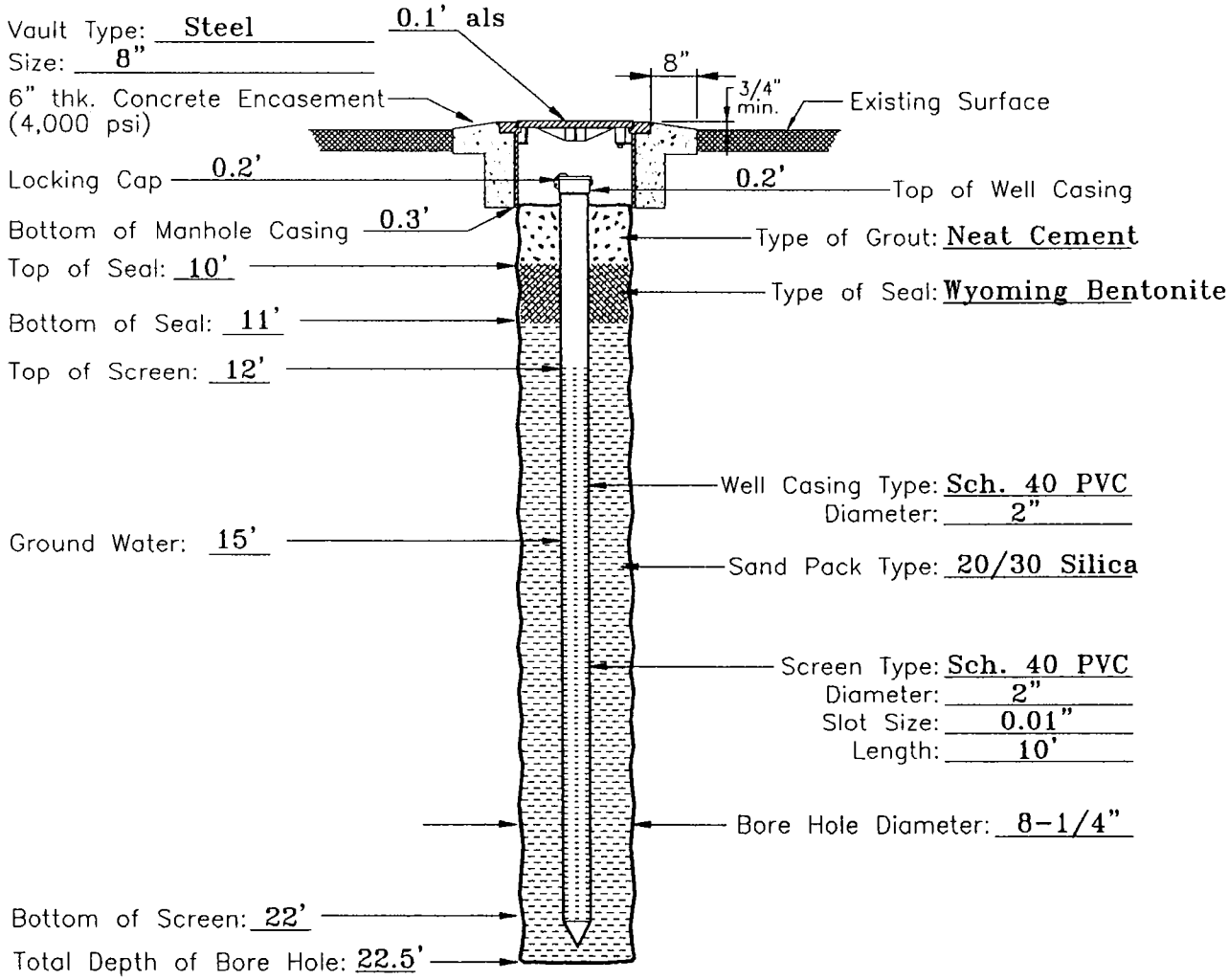
MONITOR WELL CONSTRUCTION DETAIL

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

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1107, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/8/96 Finish: 5/8/96
TIME Start: 1130 Finish: 1215

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



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

DRAWING ABOVE IS NOT TO SCALE

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

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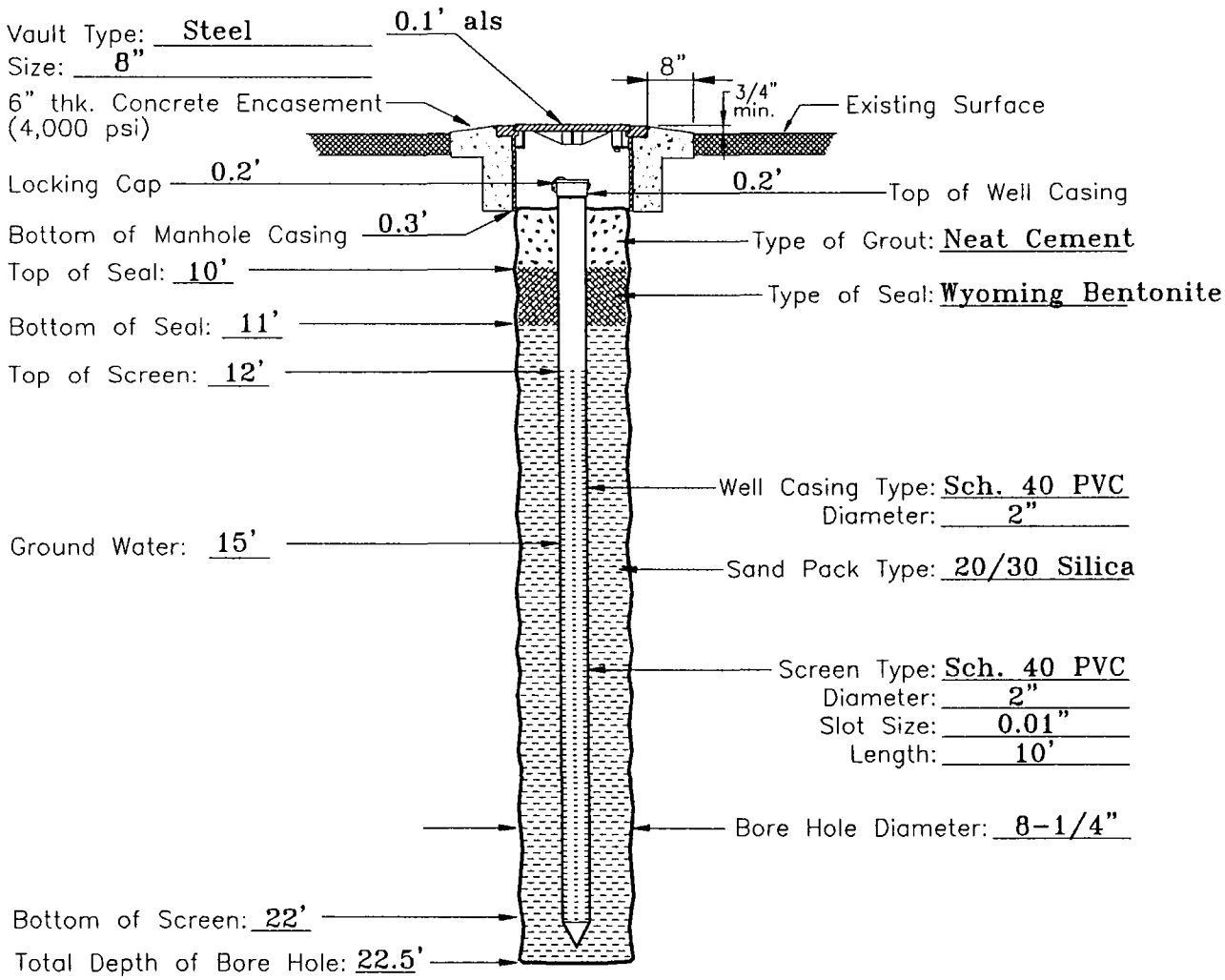
MONITOR WELL CONSTRUCTION DETAIL

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

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

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1107, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/8/96 Finish: 5/8/96
TIME Start: 1215 Finish: 1300

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



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

DRAWING ABOVE IS NOT TO SCALE

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

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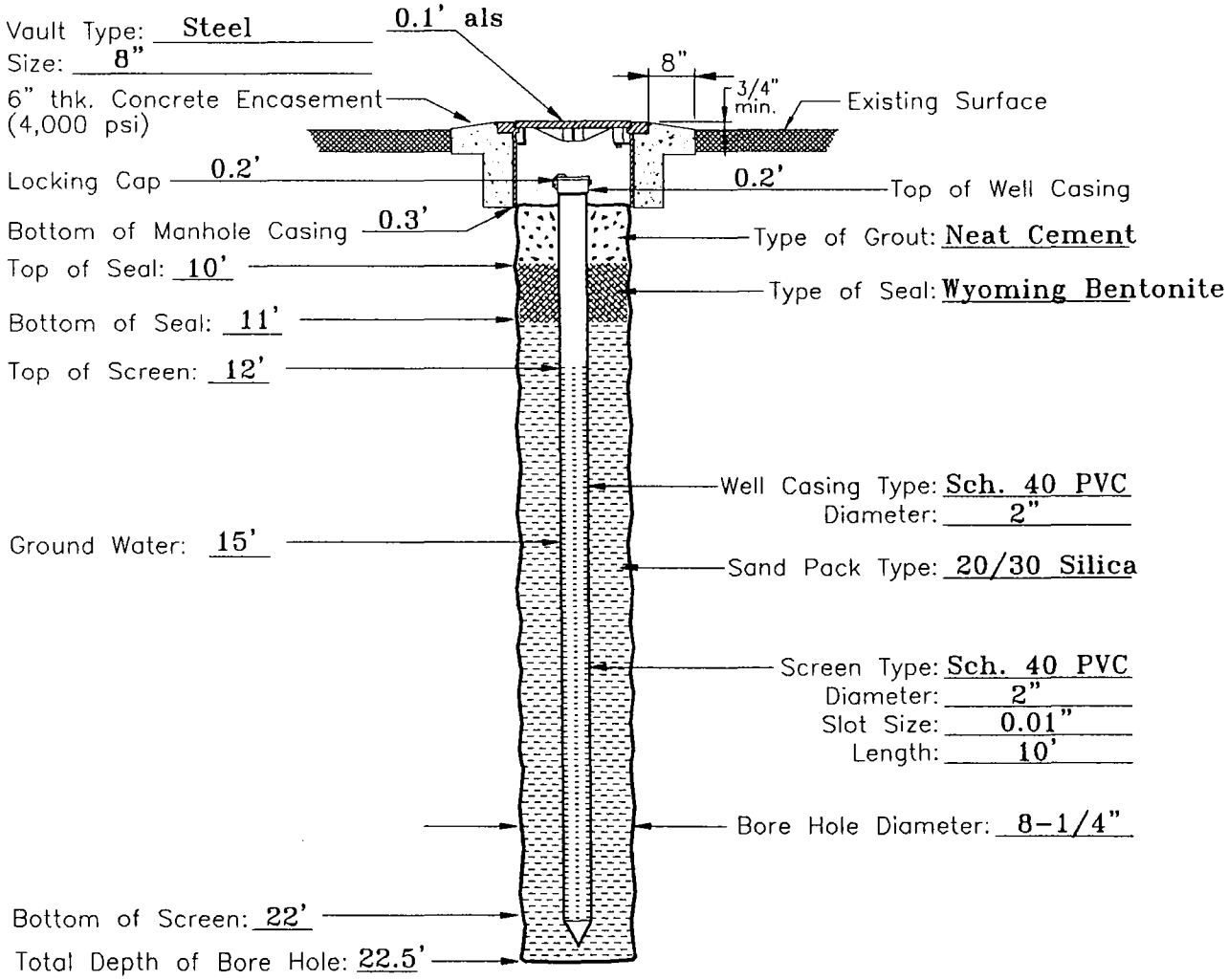
MONITOR WELL CONSTRUCTION DETAIL

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

LOGGED BY: Patrick J. Brown
DRILLING CONTRACTOR: S. FL Test & Dr.
DRILLER'S NAME: Craig Griffey
WELL NUMBER: MW-13

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1107, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/8/96 Finish: 5/8/96
TIME Start: 1300 Finish: 1345

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



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

DRAWING ABOVE IS NOT TO SCALE

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

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MONITOR WELL CONSTRUCTION DETAIL

6389 Tower Lane
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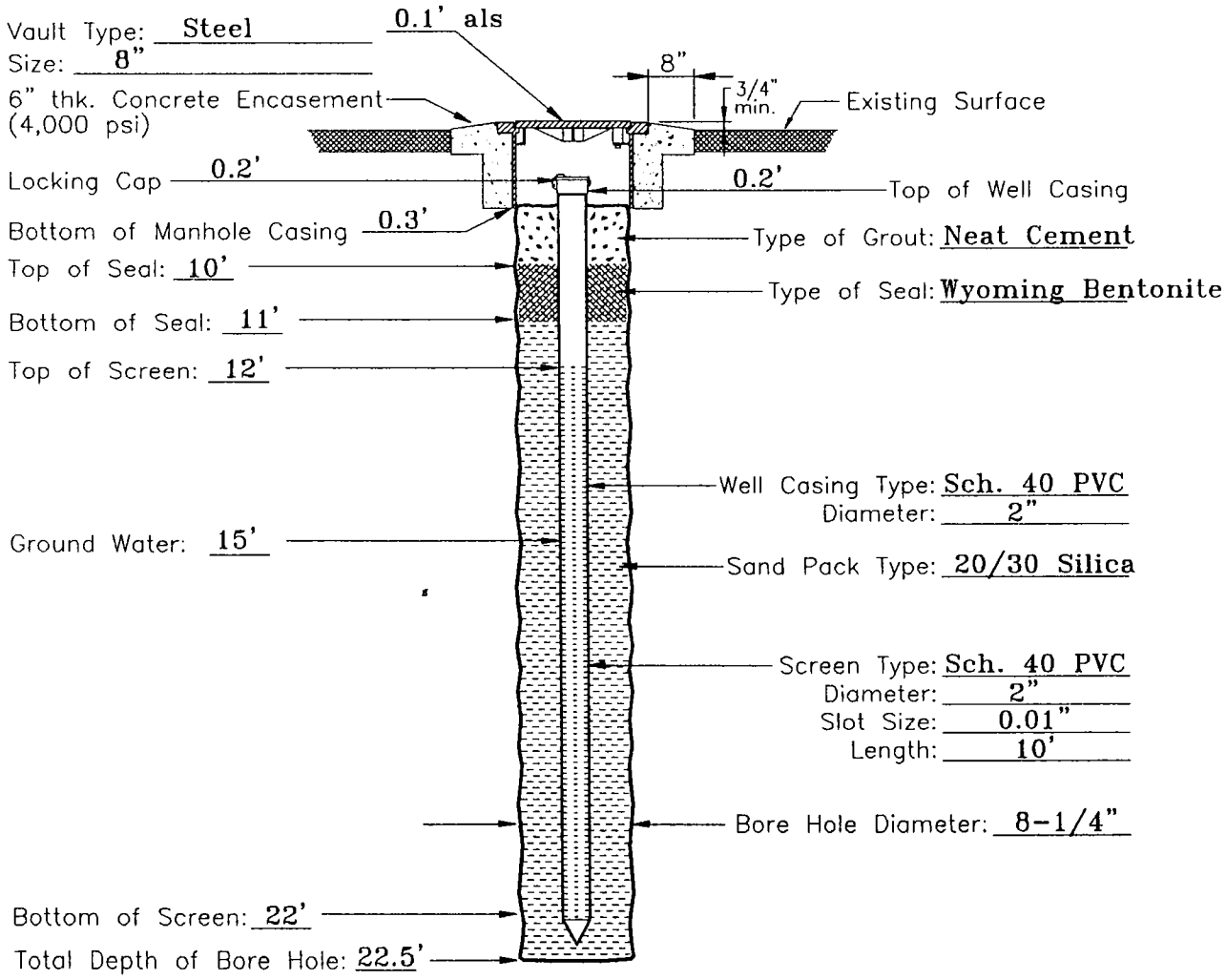
(941) 371-7617
(941) 378-5218 Fax

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

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1107, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/8/96 Finish: 5/8/96
TIME Start: 1500 Finish: 1600

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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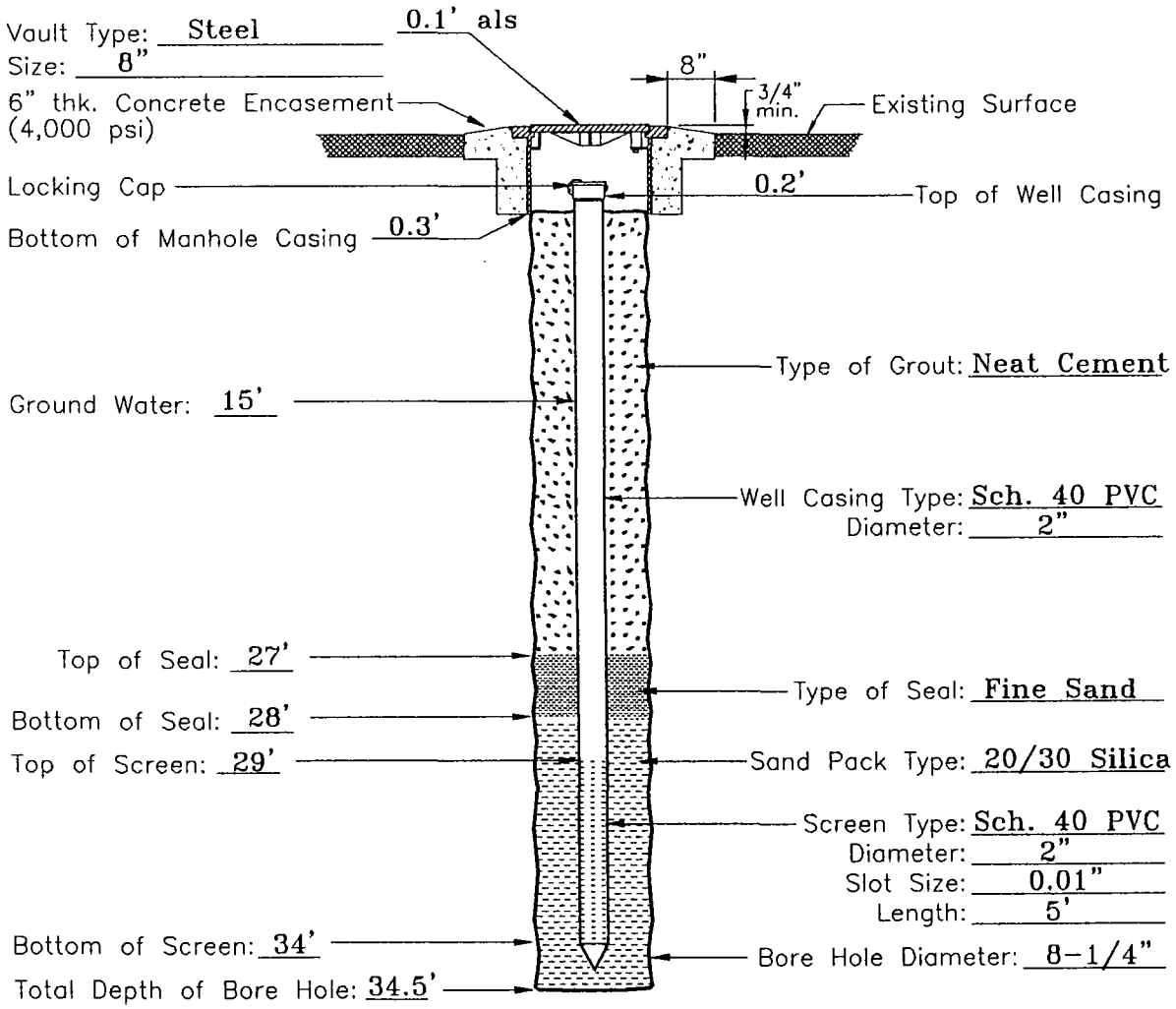
(941) 378-5218 Fax

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-15

CLIENT: NPWC, ROICC, NAS Pensacola, FL
LOCATION: Site 1107, Bronson Field
JOB NUMBER: N65114-95-D-2126
DATE Start: 5/08/96 Finish: 5/08/96
TIME Start: 1345 Finish: 1445

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



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

DRAWING ABOVE IS NOT TO SCALE

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

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

Sincerely,

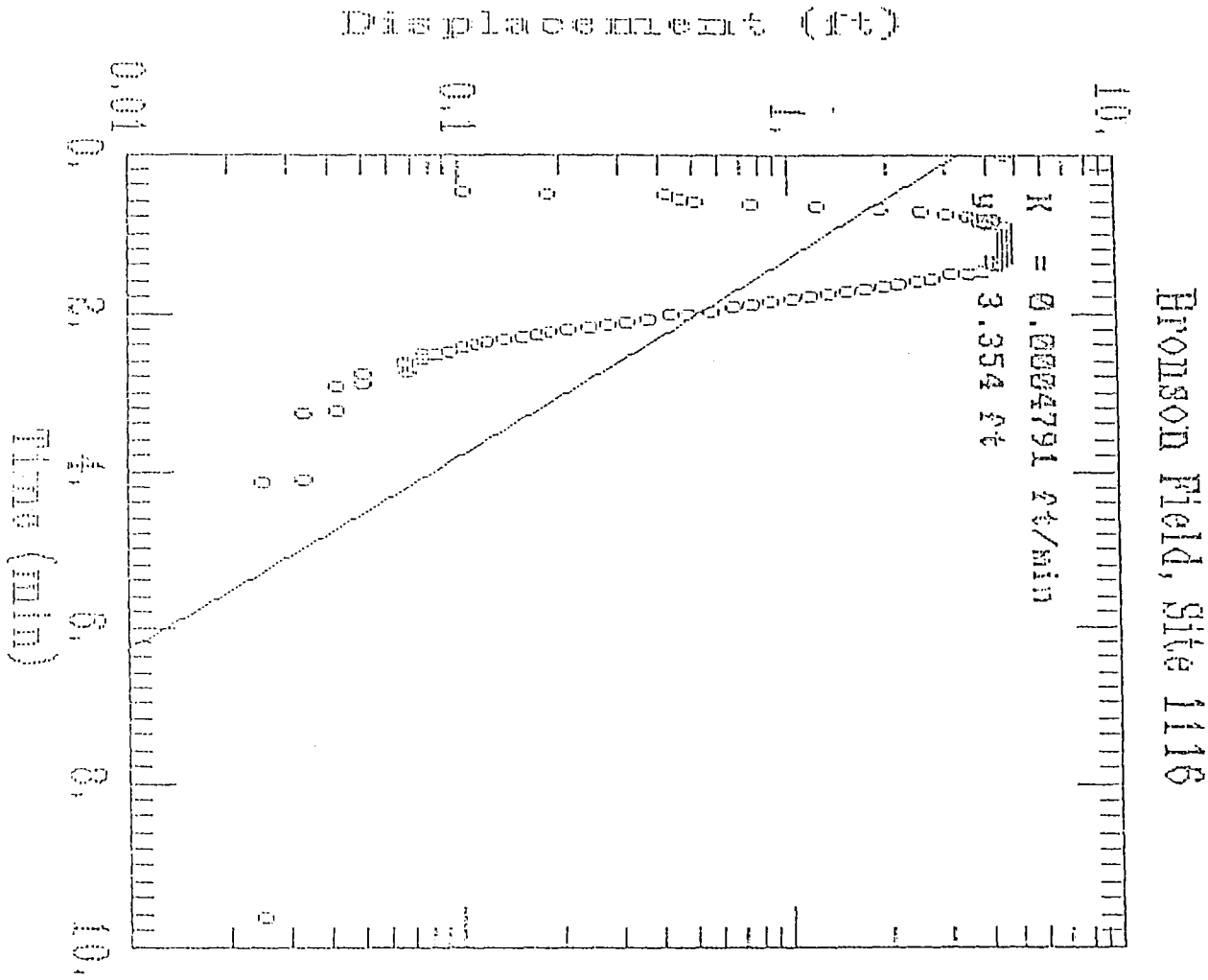
W.E.S., Inc.
Environmental Division

Patrick J. Brown
Staff Geologist

Michael J. Walsh, P.G.
Project Administrator

cc: File

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


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

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						
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	+5.2385	1.80	+5.2977	2.93	+6.4130	4.07	+6.4214
0.70	+4.5795	1.83	+5.4329	2.97	+6.4130	4.10	+6.4214
0.73	+3.9373	1.87	+5.5765	3.00	+6.4130	4.13	+6.4299
0.77	+3.4557	1.90	+5.6683	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 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						
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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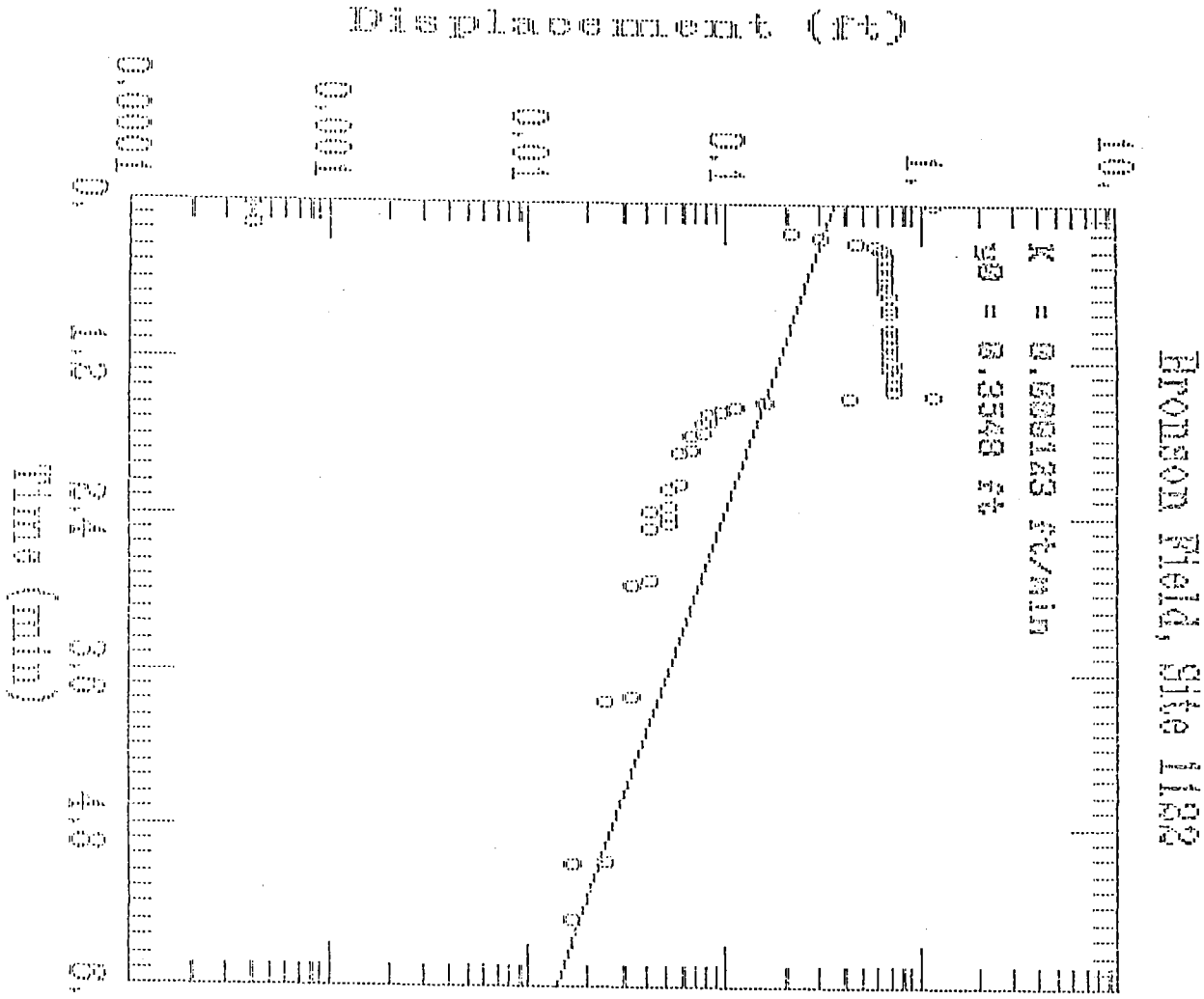
Proton Field Site 1188
K = 0.000123 ft/min
B = 0.2548 ft
Elevation (ft)
Displacement (ft)
0
0.2
0.4
0.6
0.8
1.0
0.0001
0.001
0.01
0.1
1
10

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

Program: STEP TEST

Readings: 166

Start Time: 15:43:04

Start Date: 09/11

Range: 0015 PSI

Channels: 1

Units: Ft-H2O

Step 1

Interval 00:00:02

Readings 300

Time	Chnl 1						
0.00	+7.1481	1.13	+6.4637	2.27	+7.0974	3.40	+7.1143
0.03	+7.1481	1.17	+6.4552	2.30	+7.0974	3.43	+7.1143
0.07	+7.1481	1.20	+6.4552	2.33	+7.0974	3.47	+7.1143
0.10	+7.1481	1.23	+6.4468	2.37	+7.1058	3.50	+7.1143
0.13	+7.1481	1.27	+6.4552	2.40	+7.0974	3.53	+7.1143
0.17	+7.1481	1.30	+6.4468	2.43	+7.0974	3.57	+7.1143
0.20	+7.1565	1.33	+6.4468	2.47	+7.0974	3.60	+7.1143
0.23	+6.9369	1.37	+6.4383	2.50	+7.1058	3.63	+7.1143
0.27	+6.8524	1.40	+6.4383	2.53	+7.1058	3.67	+7.1143
0.30	+6.6834	1.43	+6.4383	2.57	+7.1058	3.70	+7.1143
0.33	+6.5735	1.47	+6.0074	2.60	+7.1058	3.73	+7.1143
0.37	+6.5228	1.50	+6.7256	2.63	+7.1058	3.77	+7.1143
0.40	+6.5059	1.53	+6.9375	2.67	+7.1058	3.80	+7.1143
0.43	+6.4975	1.57	+7.0382	2.70	+7.1058	3.83	+7.1227
0.47	+6.4975	1.60	+7.0551	2.73	+7.1058	3.87	+7.1227
0.50	+6.4890	1.63	+7.0636	2.77	+7.1058	3.90	+7.1227
0.53	+6.4890	1.67	+7.0636	2.80	+7.1058	3.93	+7.1227
0.57	+6.4890	1.70	+7.0720	2.83	+7.1058	3.97	+7.1227
0.60	+6.4806	1.73	+7.0720	2.87	+7.1058	4.00	+7.1227
0.63	+6.4806	1.77	+7.0720	2.90	+7.1058	4.03	+7.1227
0.67	+6.4806	1.80	+7.0805	2.93	+7.1143	4.07	+7.1227
0.70	+6.4721	1.83	+7.0805	2.97	+7.1143	4.10	+7.1227
0.73	+6.4721	1.87	+7.0805	3.00	+7.1143	4.13	+7.1227
0.77	+6.4721	1.90	+7.0805	3.03	+7.1143	4.17	+7.1227
0.80	+6.4721	1.93	+7.0889	3.07	+7.1143	4.20	+7.1227
0.83	+6.4637	1.97	+7.0889	3.10	+7.1143	4.23	+7.1227
0.87	+6.4637	2.00	+7.0889	3.13	+7.1143	4.27	+7.1227
0.90	+6.4637	2.03	+7.0889	3.17	+7.1143	4.30	+7.1227
0.93	+6.4637	2.07	+7.0889	3.20	+7.1143	4.33	+7.1227
0.97	+6.4637	2.10	+7.0889	3.23	+7.1143	4.37	+7.1227
1.00	+6.4552	2.13	+7.0889	3.27	+7.1143	4.40	+7.1227
1.03	+6.4552	2.17	+7.0889	3.30	+7.1143	4.43	+7.1227
1.07	+6.4637	2.20	+7.0974	3.33	+7.1143	4.47	+7.1227
1.10	+6.4637	2.23	+7.0974	3.37	+7.1143	4.50	+7.1227

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

Program: STEP TEST

Readings: 166

Start Time: 15:43:04

Start Date: 09/11

Range: 0015 PSI

Channels: 1

Units: Ft-H2O

Step 1

Interval 00:00:02

Readings 300

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

Test 1 aborted at Step 1

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

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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

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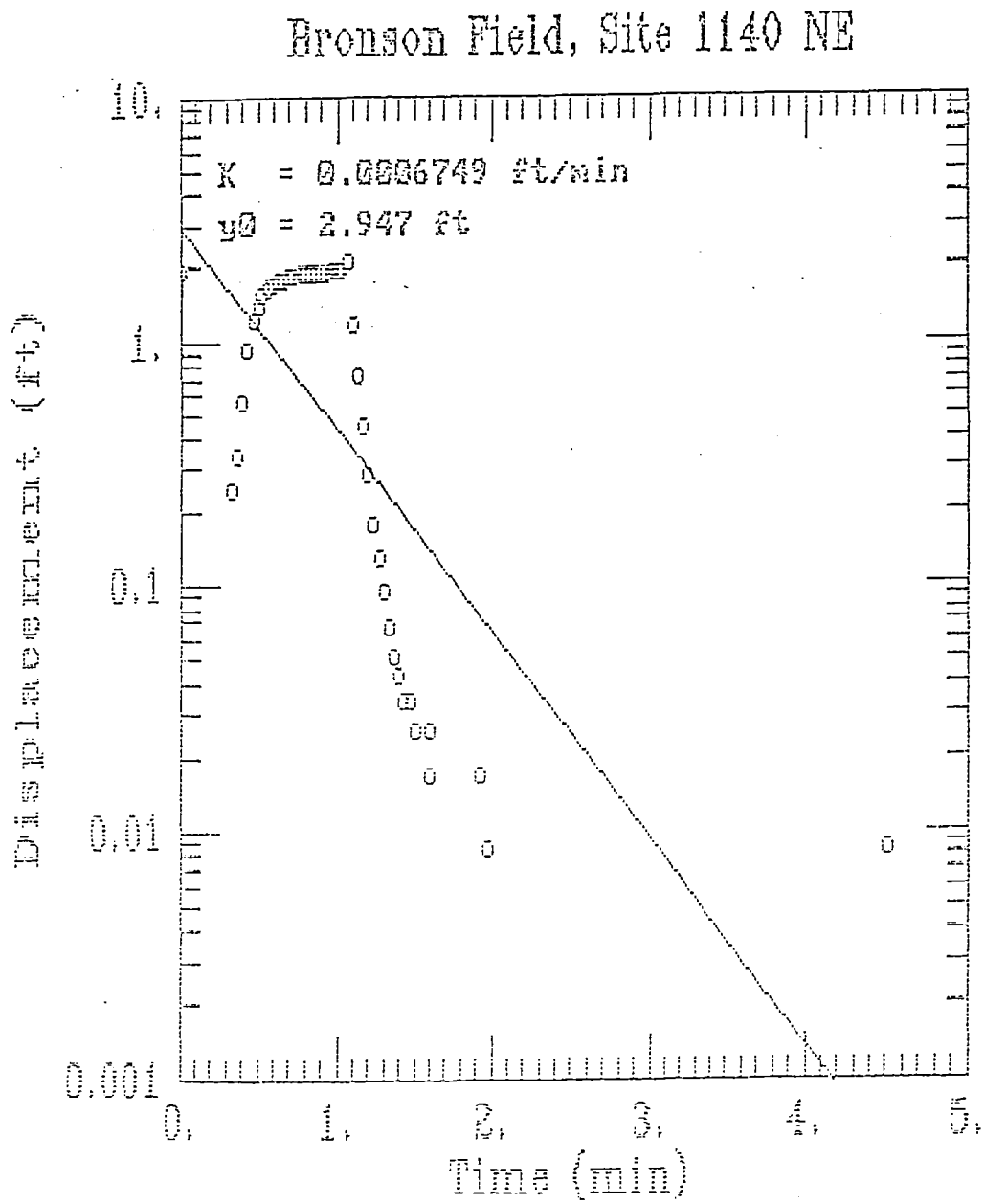

AQTESOLV

GERAGHTY & MILLER, INC.

Modeling Group

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

Program: STEP TEST

Readings: 139

Start Time: 14:43:37

Start Date: 09/11

Range: 0015 PSI

Channels: 1

Units: Ft-H2O

Step 1

Interval 00:00:02

Readings 300

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

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

Program: STEP TEST

Readings: 139

Start Time: 14:43:37

Start Date: 09/11

Range: 0015 PSI

Channels: 1

Units: Ft-H2O

Step 1

Interval 00:00:02

Readings 300

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

Test 1 aborted at Step 1

APPENDIX C

LITHOLOGIC LOG

Site 1107	LOGGED BY: Dave Gettinger	SHEET 1 OF 1	
Naval Air Station	Contractor: WES, Inc.	Dr. Method: HSA	
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobil	
	Start Date: 02/26/96	Completed: 02/26/96	
MONITOR WELL NO.: MW-1	Start Time:	Finish Time:	
Delivery Order 0008	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE				100%			0		
					2				
				100%	4		0		
HOLLOW STEM AUGUR					6				
				100%			0		
					8	0'-17'; Light Brown Fine Sand			
				100%	10		0		
					12				
				100%			0		
					14				
				100%	16		0		
			Water Table @ Approx. 17' bls						
					18	17'-24'; Dark Brown Fine Silty Sand			
				100%			520	0	520
					20				
				100%	22		520	0	520
					24				

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

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

Date: 2/28/96

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

Site 1107	LOGGED BY: Dave Gettinger	SHEET 1 OF 1	
Naval Air Station	Contractor: WES, Inc.	Dr. Method: HSA	
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobil	
	Start Date: 02/26/96	Completed: 02/26/96	
MONITOR WELL NO.: MW-2	Start Time:	Finish Time:	
Delivery Order 0008	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE				100%			0		
					2				
				100%	4		0		
					6				
HOLLOW STEM AUGUR				100%			0		
					8	0'-17'; Light Brown Fine Sand			
				100%	10		0		
					12				
				100%			0		
					14				
				100%	16		0		
			Water Table @ Approx. 17' bls						
					18	17'-24'; Dark Brown Fine Silty Sand			
				100%			80	0	80
					20				
				100%	22		86	0	86
					24				

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

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

Date 2/28/96

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

C-2

Site 1107	LOGGED BY: Dave Gettinger	SHEET 1 OF 1	
Naval Air Station	Contractor: WES, Inc.	Dr. Method: HSA	
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobil	
	Start Date: 02/26/96	Completed: 02/26/96	
MONITOR WELL NO.: MW-3	Start Time:	Finish Time:	
Delivery Order 0008	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE				100%			0		
					2	0'-4'; Red/ Brown Fine Silty Sand (Road Fill)			
				100%	4		0		
HOLLOW STEM AUGUR					6				
				100%			0		
					8	4'-15'; Light Brown Fine Sand			
				100%	10		0		
					12				
				100%			0		
					14				
			Water Table @ Approx. 15' bls						
				100%	16		0		
					18	15'-22'; Dark Brown Fine Silty Sand			
				100%			0		
					20				
				100%	22		0		

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

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181
Date 2/28/96

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

C-3

Site 1107	LOGGED BY: Dave Gettinger	SHEET 1 OF 1	
Naval Air Station	Contractor: WES, Inc.	Dr. Method: HSA	
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobil	
	Start Date: 02/26/96	Completed: 02/26/96	
MONITOR WELL NO.: MW-4	Start Time:	Finish Time:	
Delivery Order 0008	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HOLLOW STEM AUGUR				100%			0		
					2				
				100%	4		0		
					6				
				100%			0		
					8	0'-17'; Light Brown Fine Sand			
				100%	10		0		
					12				
				100%			0		
					14				
				100%	16		0		
			Water Table @ Approx. 17' bls						
					18	17'-24'; Dark Brown Fine Silty Sand			
				100%			>1000	0	>1000
					20				
				100%	22		>1000	0	>1000
					24				

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

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

2/28/96
Date

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

Site 1107	LOGGED BY: Dave Gettinger	SHEET 1 OF 1
Naval Air Station	Contractor: WES, Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobil
	Start Date: 02/26/96	Completed: 02/26/96
MONITOR WELL NO.: MW-5	Start Time:	Finish Time:
Delivery Order 0008	Contract No. N65114-95-D-2126	CONTAMINATION DATA

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE				100%			0		
					2				
				100%	4		0		
HOLLOW STEM AUGUR					6				
				100%			0		
					8	0'-17'; Light Brown Fine Sand			
				100%	10		0		
					12				
				100%			0		
					14				
				100%	16		0		
			Water Table @ Approx. 17' bls						
					18	17'-24'; Dark Brown Fine Silty Sand			
				100%			0		
					20				
				100%	22		0		
					24				

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

Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181
2/28/96
Date

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

Site 1107	LOGGED BY: Dave Gettinger	SHEET 1 OF 1	
Naval Air Station	Contractor: WES, Inc.	Dr. Method: HSA	
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobil	
	Start Date: 02/27/96	Completed: 02/27/96	
MONITOR WELL NO.: MW-6	Start Time:	Finish Time:	
Delivery Order 0008	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE				100%			0		
					2				
				100%	4		0		
					6				
HOLLOW STEM AUGUR				100%			0		
					8	0'-17'; Light Brown Fine Sand			
				100%	10		0		
					12				
				100%			0		
					14				
				100%	16		0		
			Water Table @ Approx. 17' bls						
					18	17'-24'; Dark Brown Fine Silty Sand			
				100%			280	0	280
					20				
				100%	22		160	0	160
					24				

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

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STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

Site 1107	LOGGED BY: Dave Gettinger	SHEET 1 OF 1	
Naval Air Station	Contractor: WES, Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobil
	Start Date: 02/27/96	Completed:	02/27/96
MONITOR WELL NO.: MW-7	Start Time:	Finish Time:	
Delivery Order 0008	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE				100%			0		
					2				
				100%	4		0		
					6				
HOLLOW STEM AUGUR				100%			0		
					8	0'-17'; Light Brown Fine Sand			
				100%	10		0		
					12				
				100%			0		
					14				
				100%	16		0		
			'Water Table @ Approx. 17' bls						
					18	17'-24'; Dark Brown Fine Silty Sand			
				100%			0		
					20				
				100%	22		0		
					24				

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Site 1107	LOGGED BY: Dave Gettinger	SHEET 1 OF 1	
Naval Air Station	Contractor: WES, Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobil
	Start Date: 02/27/96	Completed:	02/27/96
MONITOR WELL NO.: MW-8	Start Time:	Finish Time:	
Delivery Order 0008	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE				100%			0		
					2				
				100%	4		0		
HOLLOW STEM AUGUR					6				
				100%			0		
					8	0'-17'; Light Brown Fine Sand			
				100%	10		0		
					12				
				100%			0		
					14				
				100%	16		0		
			Water Table @ Approx. 17' bls						
					18	17'-24'; Dark Brown Fine Silty Sand			
				100%			340	0	340
					20				
				100%	22		200	0	200
					24				

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Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 0001181
Date: 2/28/96

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

C-8

Site 1107	LOGGED BY: Patrick J. Brown	SHEET 1 OF 1	
Bronson Field	Contractor: WES, Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobil
	Start Date: 05/08/96	Completed:	05/08/96
MONITOR WELL NO.: MW-10	Start Time: 1045	Finish Time:	1130
Delivery Order 0015	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE				100%		0'-1', Brown Loam w/ Humus.	6	3	3
					2				
				100%	4		0	NR	0
HOLLOW STEM AUGUR					6	1'-13'; Red/Brown, Silty Fine Sand.			
				100%			0	NR	0
					8				
				100%	10		0	NR	0
					12				
				100%			0	NR	0
					14		0	NR	0
			Water Table @ Approx. 15' bls						
				100%	16	13'-19; Red/Brown Becoming Increasingly Lighter w/Depth, Silty Fine Sand. Trace of Clay. Mottled @ WT.			
					18				
				100%					
					20	19'-23'; Red/Brown, Clayey Fine Sand.			
				100%	22				
						End of Boring @ 23' bls.			
					24				

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Reviewed by: Michael J. Walsh
Florida Professional Geologist No. 0001181
05/15/96
Date

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

C-10

Site 1107	LOGGED BY: Patrick J. Brown	SHEET 1 OF 1	
Bronson Field	Contractor: WES, Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobil
	Start Date: 05/08/96	Completed:	05/08/96
MONITOR WELL NO.: MW-9	Start Time: 1015	Finish Time:	1045
Delivery Order 0015	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HOLLOW STEM AUGUR				100%		0'-1', Brown Loam w/ Humus.	0	NR	0
					2				
				100%	4		0	NR	0
					6	1'-13'; Red/Brown, Silty Fine Sand.			
				100%			0	NR	0
					8				
				100%	10		0	NR	0
					12				
				100%			0	NR	0
					14		0	NR	0
			Water Table @ Approx. 15' bls						
				100%	16	13'-19; Red/Brown Becoming Increasingly Lighter w/Depth, Silty Fine Sand. Trace of Clay. Mottled @ WT.			
					18				
				100%					
					20	19'-23'; Red/Brown, Clayey Fine Sand.			
				100%	22				
						End of Boring @ 23' bls.			
					24				

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Florida Professional Geologist No. 0001181
05/15/96
Date

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PROFESSIONAL LICENSE
No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

Site 1107	LOGGED BY: Patrick J. Brown	SHEET 1 OF 1
Bronson Field	Contractor: WES, Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobil
	Start Date: 05/08/96	Completed: 05/08/96
MONITOR WELL NO.: MW-11	Start Time: 1130	Finish Time: 1215
Delivery Order 0015	Contract No. N65114-95-D-2126	CONTAMINATION DATA

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE				100%		0'-1', Brown Loam w/ Humus.	120	60	60
					2				
				100%	4		90	45	45
HOLLOW STEM AUGUR					6	1'-13'; Red/Brown, Silty Fine Sand.			
				100%			15	8	7
					8				
				100%	10		6	3	3
					12				
				100%			8	4	4
					14		10	5	5
			Water Table @ Approx. 15' bls						
				100%	16	13'-19; Red/Brown Becoming Increasingly Lighter w/Depth, Silty Fine Sand. Trace of Clay. Mottled @ WT.			
					18				
				100%					
					20	19'-23'; Red/Brown, Clayey Fine Sand.			
				100%	22				
						End of Boring @ 23' bls.			
					24				

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05/15/96
Date

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PROVISIONAL LICENSE
0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

C-11

Site 1107	LOGGED BY: Patrick J. Brown	SHEET 1 OF 1
Bronson Field	Contractor: WES, Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobil
	Start Date: 05/08/96	Completed: 05/08/96
MONITOR WELL NO.: MW-12	Start Time: 1215	Finish Time: 1300
Delivery Order 0015	Contract No. N65114-95-D-2126	CONTAMINATION DATA

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE HOLLOW STEM AUGUR				100%		0'-1', Brown Loam w/ Humus.	80	40	40
					2				
				100%	4		6	NR	6
					6	1'-13'; Red/Brown, Silty Fine Sand.			
				100%			0.5	NR	0.5
					8				
				100%	10		3	NR	3
					12				
				100%			1.5	NR	1.5
					14		0	NR	0
			Water Table @ Approx. 15' bls						
				100%	16	13'-19; Red/Brown Becoming Increasingly Lighter w/Depth, Silty Fine Sand. Trace of Clay. Mottled @ WT.			
					18				
				100%					
					20	19'-23'; Red/Brown, Clayey Fine Sand.			
				100%	22				
						End of Boring @ 23' bls.			
					24				

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Reviewed by: Michael J. Walsh, P.G.
Florida Professional Geologist No. 000118

05/15/96
Date

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STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

C-12

Site 1107	LOGGED BY: Patrick J. Brown	SHEET 1 OF 1	
Bronson Field	Contractor: WES, Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobil
	Start Date: 05/08/96	Completed:	05/08/96
MONITOR WELL NO.: MW-13	Start Time: 1300	Finish Time:	1345
Delivery Order 0015	Contract No. N65114-95-D-2126	CONTAMINATION DATA	

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE				100%		0'-1', Brown Loam w/ Humus.	32	16	16
					2				
				100%	4		14	7	7
HOLLOW STEM AUGUR					6	1'-13'; Red/Brown, Silty Fine Sand.			
				100%			12	6	6
					8				
				100%	10		4	2	2
					12				
				100%			2	NR	2
					14		0	NR	0
			Water Table @ Approx. 15' bls						
				100%	16	13'-19; Red/Brown Becoming Increasingly Lighter w/Depth, Silty Fine Sand. Trace of Clay. Mottled @ WT.			
					18				
				100%					
					20	19'-23'; Red/Brown, Clayey Fine Sand.			
				100%	22				
						End of Boring @ 23' bls.			
					24				

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No. PG0001181
STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

C-13

Site 1107	LOGGED BY: Patrick J. Brown	SHEET 1 OF 1
Bronson Field	Contractor: WES, Inc.	Dr. Method: HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig: Mobil
	Start Date: 05/08/96	Completed: 05/08/96
MONITOR WELL NO.: MW-14	Start Time: 1500	Finish Time: 1600
Delivery Order 0015	Contract No. N65114-95-D-2126	CONTAMINATION DATA

TYPE	NUMB	BLOW	SAMP. INTV. (FT.)	SAMP. RECV. (IN)	DEPTH	DESCRIPTION OF MATERIALS AND CONDITIONS	OVA RESULTS (PPM) CARBON FILTER W/O	WITH	NOTES NET
POST HOLE				100%		0'-1', Brown Loam w/ Humus.	8	4	4
					2				
				100%	4		3	1	2
HOLLOW STEM AUGUR					6	1'-13'; Red/Brown, Silty Fine Sand.			
				100%			3	1	2
					8				
				100%	10		1	NR	1
					12				
				100%			0	NR	0
					14		0	NR	0
			Water Table @ Approx. 15' bls						
				100%	16	13'-19; Red/Brown Becoming Increasingly Lighter w/Depth, Silty Fine Sand. Trace of Clay. Mottled @ WT.			
					18				
				100%					
					20	19'-23'; Red/Brown, Clayey Fine Sand.			
				100%	22				
						End of Boring @ 23' bls.			
					24				

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STATE OF FLORIDA
PROFESSIONAL GEOLOGIST

C-14

Site 1107	LOGGED BY: Patrick J. Brown	SHEET 1 OF 1	
Bronson Field	Contractor: WES, Inc.	Dr. Method:	HSA
Pensacola, Florida	Driller: South Florida Testing & Drilling	Dr. Rig:	Mobil
	Start Date: 05/08/96	Completed:	05/08/96
MONITOR WELL NO.: DMW-15	Start Time: 1345	Finish Time:	1445
Delivery Order 0015	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	NR	0
					4	0'-13'; Red/Brown, Silty Fine Sand. (FILL)	0	NR	0
HOLLOW				100%	8		0	NR	0
					12		0	NR	0
				100%		13'-30'; Red/Brown Becoming Increasingly Lighter w/Depth, Silty Fine Sand. Trace of Clay. Discolored, Petro. Stained Segments @ WT.	0	NR	0
STEM			Water Table @ Approx. 15' bls		16				
				100%	20				
AUGUR					24				
				100%					
					28	30'-35'; White, Coarse to Medium Grained Sand. Sub-rounded, Frosted. Occasional Dark Accessory Minerals.			
				100%	32				
						End of Boring @ 35' bls.			
					36				

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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: Paul Semmes

Lab ID Number: 9406160A
Sample Date: 15 Jun 94
Received Date: 15 Jun 94
Sample Site: Bronson Field
Job Order #: 120 6810

Sample ID#		1- 4341	2- 4342	3- 4343	4- 4344
Sample Name		B 1107 CTR	B 1107 North	B 1107 East	B 1107 South
Collector Name		M. Chambers	M. Chambers	M. Chambers	M. Chambers
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	15 Jun 94 @ 1506	15 Jun 94 @ 1506	15 Jun 94 @ 1507	15 Jun 94 @ 1507
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab
Analyst		Joe Moore	Joe Moore	Joe Moore	Joe Moore
Date of Analysis		16 Jun 94	16 Jun 94	16 Jun 94	16 Jun 94
Sample Matrix		UST Soil	UST Soil	UST Soil	UST Soil
Dilution		Dilution X 1	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER		ID#			ID#			ID#			ID#		
Volatiles by GCMS (Capillary)	METHOD #	1- 4341	units	Det. Limit	2- 4342	units	Det. Limit	3- 4343	units	Det. Limit	4- 4344	units	Det. 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	7	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
sec-Butylbenzene	EPA 8260	7	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
tert-Butylbenzene	EPA 8260	11	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	23	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	9	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
p-Isopropyltoluene	EPA 8260	11	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
Methylene chloride	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1

Navy Public Works Center
Environmental Laboratory

Laboratory Report
Volatiles by Method 8260

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

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

Lab ID Number: 9406160A
Sample Date: 15 Jun 94
Received Date: 15 Jun 94
Sample Site: Bronson Field
Job Order #: 120 6810

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Volatiles by GCMS (Capillary)	METHOD #	1- 4341	units	Limit	2- 4342	units	Limit	3- 4343	units	Limit	4- 4344	units	Limit
Naphthalene	EPA 8260	47	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
n-Propylbenzene	EPA 8260	20	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	5	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	403	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
1,3,5-Trimethylbenzene	EPA 8260	73	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	75	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1
m,p-Xylene	EPA 8260	190	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2	BDL	ug/kg	2
Methyl-tert-butyl ether	EPA 8260	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1	BDL	ug/kg	1

Surrogate Recoveries Compound	Acceptance Limits				
1,2-Dichloroethane-d4	70-121	106	111	112	108
Toluene-d8	84-138	108	99	101	103
Bromofluorobenzene	59-113	126*	108	109	105

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

Approved by: Jerry Dees, Laboratory Director

Date: 17-Jun-94 @ 14:08

PWC5090/14

End of Report

Navy Public Works Center
Environmental Laboratory

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

Laboratory Report
Volatiles by Method 8260

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

Lab ID Number: 9406160B
Sample Date: 15 Jun 94
Received Date: 15 Jun 94
Sample Site: Bronson Field
Job Order #: 120 6810

Sample ID#		1- 4345			2-			3-			4-		
Sample Name		Bldg. 1107 West											
Collector Name		M. Chambers											
Date/Time	Comp start												
Collected	Comp stop												
(Military)	Grab	15 Jun 94 @ 1508											
Sample Type	Comp/Grab	Grab											
Analyst		Joe Moore											
Date of Analysis		16 Jun 94											
Sample Matrix		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- 4345	units	Limit	2-	units	Limit	3-	units	Limit	4-	units	Limit
Benzene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Bromobenzene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Bromochloromethane	EPA 8260	BDL	ug/kg	2		ug/kg	2		ug/kg	2		ug/kg	2
Bromodichloromethane	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Bromoform	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Bromomethane	EPA 8260	BDL	ug/kg	2		ug/kg	2		ug/kg	2		ug/kg	2
n-Butylbenzene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
sec-Butylbenzene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
tert-Butylbenzene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Carbon Tetrachloride	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Chlorobenzene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Chloroethane	EPA 8260	BDL	ug/kg	2		ug/kg	2		ug/kg	2		ug/kg	2
Chloroform	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Chloromethane	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
2-Chlorotoluene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
4-Chlorotoluene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Dibromochloromethane	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
1,2-Dibromo-3-chloropropane	EPA 8260	BDL	ug/kg	5		ug/kg	5		ug/kg	5		ug/kg	5
1,2-Dibromoethane	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Dibromomethane	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
1,2-Dichlorobenzene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
1,3-Dichlorobenzene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
1,4-Dichlorobenzene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Dichlorodifluoromethane	EPA 8260	BDL	ug/kg	2		ug/kg	2		ug/kg	2		ug/kg	2
1,1-Dichloroethane	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
1,2-Dichloroethane	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
1,1-Dichloroethene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
cis-1,2-Dichloroethene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
trans-1,2-Dichloroethene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
1,2-Dichloropropane	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
1,3-Dichloropropane	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
2,2-Dichloropropane	EPA 8260	BDL	ug/kg	4		ug/kg	4		ug/kg	4		ug/kg	4
1,1-Dichloropropene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Ethylbenzene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Hexachlorobutadiene	EPA 8260	BDL	ug/kg	2		ug/kg	2		ug/kg	2		ug/kg	2
Isopropylbenzene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
p-Isopropyltoluene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Methylene chloride	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1

Navy Public Works Center
Environmental Laboratory

Laboratory Report
Volatiles by Method 8260

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

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

Lab ID Number: 9406160B
Sample Date: 15 Jun 94
Received Date: 15 Jun 94
Sample Site: Bronson Field
Job Order #: 120 6810

PARAMETER Volatiles by GCMS (Capillary)	METHOD #	ID# 1- 4345	units	Det. Limit	ID# 2-	units	Det. Limit	ID# 3-	units	Det. Limit	ID# 4-	units	Det. Limit
Naphthalene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
n-Propylbenzene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Styrene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
1,1,1,2-Tetrachloroethane	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
1,1,2,2-Tetrachloroethane	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Tetrachloroethene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Toluene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
1,2,3-Trichlorobenzene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
1,2,4-Trichlorobenzene	EPA 8260	BDL	ug/kg	2		ug/kg	2		ug/kg	2		ug/kg	2
1,1,1-Trichloroethane	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
1,1,2-Trichloroethane	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Trichloroethene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Trichlorofluoromethane	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
1,2,3-Trichloropropane	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
1,2,4-Trimethylbenzene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
1,3,5-Trimethylbenzene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
Vinyl Chloride	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
o-Xylene	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1
m,p-Xylene	EPA 8260	BDL	ug/kg	2		ug/kg	2		ug/kg	2		ug/kg	2
Methyl-tert-butyl ether	EPA 8260	BDL	ug/kg	1		ug/kg	1		ug/kg	1		ug/kg	1

Surrogate Recoveries Compound	Acceptance Limits				
1,2-Dichloroethane-d4	70-121	105			
Toluene-d8	84-138	103			
Bromofluorobenzene	59-113	104			

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

Approved by: Jerry Dees, Laboratory Director

Date: 17-Jun-94 @ 14:09

PWC509014

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

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: 9407207B
Sample Date: 23 Jun 94
Received Date: 23 Jun 94
Sample Site: Bronson Field
Job Order #: 120 6810

Sample ID#	Lab	1- 4543			2-			3-			4-			
Sample Name	Requester	B1107 Groundwater												
Collector Name		M. Chambers/P. Semmes												
Date/Time	Comp start													
Collected	Comp stop													
(Military)	Grab	23 Jun 94 @ 1401												
Sample Type	Comp/Grab	Grab												
Analyst		Joe Moore												
Date of Analysis		30 Jun 94												
Sample Matrix		Water												
Dilution		Dilution	X	10	Dilution	X	1	Dilution	X	1	Dilution	X	1	
PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.	
Volatiles by GCMS (Capillary)	METHOD #	1- 4543	units	Limit	2-	units	Limit	3-	units	Limit	4-	units	Limit	
Benzene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
Bromobenzene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
Bromochloromethane	EPA 8260	BDL	ug/l	20		ug/l	2		ug/l	2		ug/l	2	
Bromodichloromethane	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
Bromoform	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
Bromomethane	EPA 8260	BDL	ug/l	20		ug/l	2		ug/l	2		ug/l	2	
n-Butylbenzene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
sec-Butylbenzene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
tert-Butylbenzene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
Carbon Tetrachloride	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
Chlorobenzene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
Chloroethane	EPA 8260	BDL	ug/l	20		ug/l	2		ug/l	2		ug/l	2	
Chloroform	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
Chloromethane	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
2-Chlorotoluene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
4-Chlorotoluene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
Dibromochloromethane	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
1,2-Dibromo-3-chloropropane	EPA 8260	BDL	ug/l	50		ug/l	5		ug/l	5		ug/l	5	
1,2-Dibromoethane	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
Dibromomethane	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
1,2-Dichlorobenzene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
1,3-Dichlorobenzene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
1,4-Dichlorobenzene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
Dichlorodifluoromethane	EPA 8260	BDL	ug/l	20		ug/l	2		ug/l	2		ug/l	2	
1,1-Dichloroethane	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
1,2-Dichloroethane	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
1,1-Dichloroethene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
cis-1,2-Dichloroethene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
trans-1,2-Dichloroethene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
1,2-Dichloropropane	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
1,3-Dichloropropane	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
2,2-Dichloropropane	EPA 8260	BDL	ug/l	40		ug/l	4		ug/l	4		ug/l	4	
1,1-Dichloropropene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
Ethylbenzene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
Hexachlorobutadiene	EPA 8260	BDL	ug/l	20		ug/l	2		ug/l	2		ug/l	2	
Isopropylbenzene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
p-Isopropyltoluene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1	
Methylene chloride	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	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: 9407207B
Sample Date: 23 Jun 94
Received Date: 23 Jun 94
Sample Site: Bronson Field
Job Order #: 120 6810

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Volatiles by GCMS (Capillary)	METHOD #	1- 4543	units	Limit	2-	units	Limit	3-	units	Limit	4-	units	Limit
Naphthalene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1
n-Propylbenzene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1
Styrene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1
1,1,1,2-Tetrachloroethane	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1
1,1,2,2-Tetrachloroethane	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1
Tetrachloroethene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1
Toluene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1
1,2,3-Trichlorobenzene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1
1,2,4-Trichlorobenzene	EPA 8260	BDL	ug/l	20		ug/l	2		ug/l	2		ug/l	2
1,1,1-Trichloroethane	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1
1,1,2-Trichloroethane	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1
Trichloroethene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1
Trichlorofluoromethane	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1
1,2,3-Trichloropropane	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1
1,2,4-Trimethylbenzene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1
1,3,5-Trimethylbenzene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1
Vinyl Chloride	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1
o-Xylene	EPA 8260	BDL	ug/l	10		ug/l	1		ug/l	1		ug/l	1
m,p-Xylene	EPA 8260	BDL	ug/l	20		ug/l	2		ug/l	2		ug/l	2

Surrogate Recoveries Compound	Acceptance Limits				
1,2-Dichloroethane-d4	76-114	91			
Toluene-d8	88-110	101			
Bromofluorobenzene	86-115	99			

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 20-Jul-94 @ 10:45

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
Extractables by Method 8270A

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

Lab ID Number: 9407207A
Sample Date: 23 Jun 94
Received Date: 23 Jun 94
Sample Site: Bronson Field
Job Order #: 120 6810

Sample ID#	Lab	1- 4543	2-	3-	4-
Sample Name	Requester	B1107 Groundwater			
Collector Name		M. Chambers/P. Semmes			
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	23 Jun 94 @ 1401			
Sample Type	Comp/Grab	Grab			
Analyst		Joe Moore			
Date of Analysis		9 Jul 94			
Sample Matrix		Water			
Dilution		Dilution X 5	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER		ID#			ID#			ID#			ID#		
BNA Extr.:	METHOD #	1- 4543	units	Det. Limit	2-	units	Det. Limit	3-	units	Det. Limit	4-	units	Det. Limit
Acenaphthene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Acenaphthylene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Acetophenone	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
2-Acetylaminofluorene	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
Aldrin	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
4-Aminobiphenyl	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Aniline	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Anthracene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Aramite	EPA 8270A	BDL	ug/l	125		ug/l	25		ug/l	25		ug/l	25
Benzidine	EPA 8270A	BDL	ug/l	250		ug/l	50		ug/l	50		ug/l	50
Benzoic Acid	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Benz(a)anthracene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Benzo(b)fluoranthene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Benzo(k)fluoranthene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Benzo(g,h,i)perylene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Benzo(a)pyrene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
p-Benzoquinone	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Benzyl alcohol	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
alpha-BHC	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
beta-BHC	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
delta-BHC	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
gamma-BHC (Lindane)	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
Bis(2-chloroethoxy)methane	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Bis(2-chloroethyl)ether	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Bis(2-chloroisopropyl)ether	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Bis(2-ethylhexyl)phthalate	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
4-Bromophenyl phenyl ether	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Butyl benzyl phthalate	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
4-Chloroaniline	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
Chlorobenzilate	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
4-Chloro-3-methylphenol	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
2-Chloronaphthalene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
2-Chlorophenol	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
4-Chlorophenyl phenyl ether	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Chrysene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
4,4'-DDD	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
4,4'-DDE	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
4,4'-DDT	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Dibenzo(a,h)anthracene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Dibenzofuran	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Di-n-butyl phthalate	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
1,2-Dichlorobenzene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
1,3-Dichlorobenzene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5

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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
Extractables by Method 8270A

Lab ID Number: 9407207A
Sample Date: 23 Jun 94
Received Date: 23 Jun 94
Sample Site: Bronson Field
Job Order #: 120 6810

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
BNA Extr.:	METHOD #	1- 4543	units	Limit	2-	units	Limit	3-	units	Limit	4-	units	Limit
1,4-Dichlorobenzene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
3,3-Dichlorobenzidine	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
2,4-Dichlorophenol	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
2,6-Dichlorophenol	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Dieldrin	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
Diethyl phthalate	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Dimethoate	EPA 8270A	BDL	ug/l	125		ug/l	25		ug/l	25		ug/l	25
Dimethylaminazobenzene	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
7,12-Dimethylbenz(a)anthracene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
3,3'-Dimethylbenzidine	EPA 8270A	BDL	ug/l	125		ug/l	25		ug/l	25		ug/l	25
a,a,-Dimethylphenethylamine	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
2,4-Dimethylphenol	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Dimethyl phthalate	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
4,6-Dinitro-o-cresol	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
2,4-Dinitrophenol	EPA 8270A	BDL	ug/l	125		ug/l	25		ug/l	25		ug/l	25
2,4-Dinitrotoluene	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
2,6-Dinitrotoluene	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
1,2-Diphenylhydrazine	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
Di-n-octyl phthalate	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
Endosulfan-I	EPA 8270A	BDL	ug/l	100		ug/l	20		ug/l	20		ug/l	20
Endosulfan-II	EPA 8270A	BDL	ug/l	100		ug/l	20		ug/l	20		ug/l	20
Endosulfan Sulfate	EPA 8270A	BDL	ug/l	100		ug/l	20		ug/l	20		ug/l	20
Endrin	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
Endrin aldehyde	EPA 8270A	BDL	ug/l	100		ug/l	20		ug/l	20		ug/l	20
Endrin ketone	EPA 8270A	BDL	ug/l	100		ug/l	20		ug/l	20		ug/l	20
Ethyl methanesulfonate	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
Fluoranthene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Fluorene	EPA 8270A	83	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Heptachlor	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
Heptachlor epoxide	EPA 8270A	BDL	ug/l	100		ug/l	20		ug/l	20		ug/l	20
Hexachlorobenzene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Hexachlorobutadiene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Hexachlorocyclopentadiene	EPA 8270A	BDL	ug/l	125		ug/l	25		ug/l	25		ug/l	25
Hexachloroethane	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Indeno(1,2,3-cd)pyrene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Isodrin	EPA 8270A	BDL	ug/l	125		ug/l	25		ug/l	25		ug/l	25
Isophorone	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
3-Methylcholanthrene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Methyl methanesulfonate	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
2-Methylnaphthalene	EPA 8270A	650	ug/l	25		ug/l	5		ug/l	5		ug/l	5
o-Cresol	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
m,p-Cresols	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Naphthalene	EPA 8270A	97	ug/l	25		ug/l	5		ug/l	5		ug/l	5
1,4-Naphthoquinone	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
1-Naphthylamine	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
2-Naphthylamine	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
2-Nitroaniline	EPA 8270A	BDL	ug/l	125		ug/l	25		ug/l	25		ug/l	25
3-Nitroaniline	EPA 8270A	BDL	ug/l	125		ug/l	25		ug/l	25		ug/l	25
4-Nitroaniline	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
Nitrobenzene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
2-Nitrophenol	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
4-Nitrophenol	EPA 8270A	BDL	ug/l	125		ug/l	25		ug/l	25		ug/l	25

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Laboratory Report
Extractables by Method 8270A

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

Lab ID Number: 9407207A
Sample Date: 23 Jun 94
Received Date: 23 Jun 94
Sample Site: Bronson Field
Job Order #: 120 6810

PARAMETER BNA Extr.:	METHOD #	ID# 1- 4543	units	Det. Limit	ID# 2-	units	Det. Limit	ID# 3-	units	Det. Limit	ID# 4-	units	Det. Limit
5-Nitro-o-toluidine	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
N-nitrosodibutylamine	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
N-nitrosodiethylamine	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
N-nitrosodimethylamine	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
N-nitrosomethylethylamine	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
N-nitrosodiphenylamine	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
N-nitrosodi-n-propylamine	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
N-nitrosomorpholine	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
N-nitrosopiperidine	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
N-nitrosopyrrolidine	EPA 8270A	BDL	ug/l	100		ug/l	20		ug/l	20		ug/l	20
Pentachlorobenzene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Pentachloronitrobenzene	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
Pentachlorophenol	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
Phenacetin	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
Phenanthrene	EPA 8270A	164	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Phenol	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
1,4-Phenylenediamine	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Phorate	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
2-Picoline	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
Pronamide	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Pyrene	EPA 8270A	123	ug/l	25		ug/l	5		ug/l	5		ug/l	5
Pyridine	EPA 8270A	BDL	ug/l	125		ug/l	25		ug/l	25		ug/l	25
Safrole	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
2,3,4,6-Tetrachlorophenol	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
Thionazine	EPA 8270A	BDL	ug/l	125		ug/l	25		ug/l	25		ug/l	25
o-Toluidine	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
1,2,4-Trichlorobenzene	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
2,4,5-Trichlorophenol	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
2,4,6-Trichlorophenol	EPA 8270A	BDL	ug/l	25		ug/l	5		ug/l	5		ug/l	5
1,3,5-Trinitrobenzene	EPA 8270A	BDL	ug/l	50		ug/l	10		ug/l	10		ug/l	10
Total extractable petroleum hydrocarbons (est.)		BDL	ug/l	5000		ug/l	1000		ug/l	1000		ug/l	1000

SURROGATE RECOVERIES Compound	Acceptance Limits				
2-Fluorophenol	35-114	120			
Phenol-d5	43-116	128			
Nitrobenzene-d5	33-141	105			
2-Fluorobiphenyl	15-115	72			
2,4,6-Tribromophenol	24-118	99			
Terphenyl-d14	10-123	119			

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit. Elevated detection limits due to matrix interference. Other compounds identified - 1-Methylnaphthalene = 419 ug/l.

Approved by: Jerry Dees, Laboratory Director

Date/Time: 20-Jul-94 @ 10:41

PWC 5090/14

Navy Public Works Center
Environmental Laboratory

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

Laboratory Report
TCLP Organics

Lab ID Number: 9407206A
Sample Date: 24 Jun 94
Received Date: 24 Jun 94
Sample Site: Bronson Field
Job Order #: 120 4876

Sample ID#	Lab	1- 4463	2- 4464	3- 4465	4-
Sample Name	Requester	B - 1105	B - 1107 North	B - 1107 South	
Collector Name		M. Chambers	M. Chambers	M. Chambers	
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	24 Jun 94 @ 1406	24 Jun 94 @ 1418	24 Jun 94 @ 1426	
Sample Type	Comp/Grab	Grab	Grab	Grab	
Analyst		J. W. Moore	J. W. Moore	J. W. Moore	
Date of Analysis		28 Jun 94	28 Jun 94	28 Jun 94	
Sample Matrix		TCLP Extract of Soil	TCLP Extract of Soil	TCLP Extract of Soil	
Dilution		Dilution X 1	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER: TCLP VOL. Vol. by GCMS (Capillary)	METHOD #	Sample ID# 1- 4463	units	Det. Limit	Sample ID# 2- 4464	units	Det. Limit	Sample ID# 3- 4465	units	Det. Limit	Sample ID# 4-	units	Det. Limit
Benzene	EPA 8260	BDL	mg/l	0.002	BDL	mg/l	0.002	BDL	mg/l	0.002		mg/l	0.002
Carbon Tetrachloride	EPA 8260	BDL	mg/l	0.005	BDL	mg/l	0.005	BDL	mg/l	0.005		mg/l	0.005
Chlorobenzene	EPA 8260	BDL	mg/l	0.005	BDL	mg/l	0.005	BDL	mg/l	0.005		mg/l	0.005
Chloroform	EPA 8260	BDL	mg/l	0.005	BDL	mg/l	0.005	BDL	mg/l	0.005		mg/l	0.005
1,4-Dichlorobenzene	EPA 8260	BDL	mg/l	0.002	BDL	mg/l	0.002	BDL	mg/l	0.002		mg/l	0.002
1,2-Dichloroethane	EPA 8260	BDL	mg/l	0.005	BDL	mg/l	0.005	BDL	mg/l	0.005		mg/l	0.005
1,1-Dichloroethylene	EPA 8260	BDL	mg/l	0.010	BDL	mg/l	0.010	BDL	mg/l	0.010		mg/l	0.010
Methyl ethyl ketone (MEK)	EPA 8260	BDL	mg/l	0.010	BDL	mg/l	0.010	BDL	mg/l	0.010		mg/l	0.010
Tetrachloroethylene	EPA 8260	BDL	mg/l	0.005	BDL	mg/l	0.005	BDL	mg/l	0.005		mg/l	0.005
Trichloroethylene	EPA 8260	BDL	mg/l	0.002	BDL	mg/l	0.002	BDL	mg/l	0.002		mg/l	0.002
Vinyl chloride	EPA 8260	BDL	mg/l	0.005	BDL	mg/l	0.005	BDL	mg/l	0.005		mg/l	0.005
Surrogate Recoveries Volatile Compounds	Acceptance Limits												
1,2-Dichloroethane-d4	76-114	95			94			93					
Toluene-d8	88-110	100			100			101					
Bromofluorobenzene	86-115	99			99			100					

Dilution		Dilution X 1			Dilution X 1			Dilution X 1			Dilution X 1		
PARAMETER: TCLP BNA Extr. by GCMS (Capillary)	METHOD #	Sample ID# 1- 4463	units	Det. Limit	Sample ID# 2- 4464	units	Det. Limit	Sample ID# 3- 4465	units	Det. Limit	Sample ID# 4-	units	Det. Limit
m-Cresol (3-Methylphenol)	EPA 8270A	BDL	mg/l	0.010	BDL	mg/l	0.010	BDL	mg/l	0.010		mg/l	0.010
o-Cresol (2-Methylphenol)	EPA 8270A	BDL	mg/l	0.010	BDL	mg/l	0.010	BDL	mg/l	0.010		mg/l	0.010
p-Cresol (4-Methylphenol)	EPA 8270A	BDL	mg/l	0.010	BDL	mg/l	0.010	BDL	mg/l	0.010		mg/l	0.010
Cresylic Acid (Total cresols)	EPA 8270A	BDL	mg/l	0.010	BDL	mg/l	0.010	BDL	mg/l	0.010		mg/l	0.010
1,4-Dichlorobenzene	EPA 8270A	BDL	mg/l	0.010	BDL	mg/l	0.010	BDL	mg/l	0.010		mg/l	0.010
Hexachlorobenzene	EPA 8270A	BDL	mg/l	0.010	BDL	mg/l	0.010	BDL	mg/l	0.010		mg/l	0.010
Hexachlorobutadiene	EPA 8270A	BDL	mg/l	0.010	BDL	mg/l	0.010	BDL	mg/l	0.010		mg/l	0.010
Hexachloroethane	EPA 8270A	BDL	mg/l	0.010	BDL	mg/l	0.010	BDL	mg/l	0.010		mg/l	0.010
Nitrobenzene	EPA 8270A	BDL	mg/l	0.010	BDL	mg/l	0.010	BDL	mg/l	0.010		mg/l	0.010
Pentachlorophenol	EPA 8270A	BDL	mg/l	0.020	BDL	mg/l	0.020	BDL	mg/l	0.020		mg/l	0.020
Pyridine	EPA 8270A	BDL	mg/l	0.020	BDL	mg/l	0.020	BDL	mg/l	0.020		mg/l	0.020
2,4,5-Trichlorophenol	EPA 8270A	BDL	mg/l	0.020	BDL	mg/l	0.020	BDL	mg/l	0.020		mg/l	0.020
2,4,6-Trichlorophenol	EPA 8270A	BDL	mg/l	0.020	BDL	mg/l	0.020	BDL	mg/l	0.020		mg/l	0.020
Surrogate Recoveries Extractable Compounds	Acceptance Limits												
2-Fluorophenol	21-110	47			56			52					
Phenol-d5	10-110	27			34			31					
Nitrobenzene-d5	35-114	56			70			67					
2-Fluorobiphenyl	43-116	66			77			74					
2,4,6-Tribromophenol	10-123	69			86			78					
Terphenyl-d14	33-141	64			75			71					

Navy Public Works Center
Environmental Laboratory

Laboratory Report
TCLP Pesticides/Herbicides

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: 9407206A
Sample Date: 24 Jun 94
Received Date: 24 Jun 94
Sample Site: Bronson Field
Job Order #: 120 4876

Analyst		J. W. Moore			J. W. Moore			J. W. Moore			J. W. Moore		
Date of Analysis		28 Jun 94			28 Jun 94			28 Jun 94			28 Jun 94		
Dilution		Dilution	X	1	Dilution	X	1	Dilution	X	1	Dilution	X	1
PARAMETER: TCLP P/H		Sample ID#		Det.	Sample ID#		Det.	Sample ID#		Det.			Det.
Extr. by GC (Capillary)	METHOD #	1- 4463	units	Limit	2- 4464	units	Limit	3- 4465	units	Limit	4-	units	Limit
Chlordane	EPA 8080A	BDL	mg/l	0.001	BDL	mg/l	0.001	BDL	mg/l	0.001		mg/l	0.001
Endrin	EPA 8080A	BDL	mg/l	0.0002	BDL	mg/l	0.0002	BDL	mg/l	0.0002		mg/l	0.0002
Heptachlor	EPA 8080A	BDL	mg/l	0.0001	BDL	mg/l	0.0001	BDL	mg/l	0.0001		mg/l	0.0001
Heptachlor epoxide	EPA 8080A	BDL	mg/l	0.002	BDL	mg/l	0.002	BDL	mg/l	0.002		mg/l	0.002
Gamma-BHC (Lindane)	EPA 8080A	BDL	mg/l	0.0001	BDL	mg/l	0.0001	BDL	mg/l	0.0001		mg/l	0.0001
Methoxychlor	EPA 8080A	BDL	mg/l	0.001	BDL	mg/l	0.001	BDL	mg/l	0.001		mg/l	0.001
Toxaphene	EPA 8080A	BDL	mg/l	0.001	BDL	mg/l	0.001	BDL	mg/l	0.001		mg/l	0.001
2,4-D*	EPA 8150A	BDL	mg/l	0.06	BDL	mg/l	0.06	BDL	mg/l	0.06		mg/l	0.002
2,4,5-TP (Silvex)*	EPA 8150A	BDL	mg/l	0.002	BDL	mg/l	0.01	BDL	mg/l	0.01		mg/l	0.001
Surrogate Recoveries Extractable Compounds	Acceptance Limits												
Tet-Cl-m-xylene	60-140	107			117			102					
Decachlorobiphenyl	60-140	110			95			82					
Dichlorophenyl acetic acid	50-120	89			87			86					

Comments: mg/l=milligrams per liter.
* - Analysis conducted by ATI.

Approved by: Jerry Dees, Laboratory Director

Date: 07/20/94 @ 10:03

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
TCLP Metals

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

Lab ID Number:	94072068
Sample Date:	24 Jun 94
Received Date:	24 Jun 94
Sample Site:	Bronson Field
Job Order #:	120 6810

Sample ID#	Lab	1- 4463	2- 4464	3- 4465	4-	Analyst(s):
Sample Name	Requester	B - 1105	B - 1107 North	B - 1107 South		Jim Taylor
Collector Name		M. Chambers	M. Chambers	M. Chambers		Brian Nelson
Date/Time	Comp start					LAW Environmental
Collected	Comp stop					Date(s) of analysis:
(Military)	Grab	24 Jun 94 @ 1406	24 Jun 94 @ 1418	24 Jun 94 @ 1426		8 & 11 Jul 94
Sample Type	Comp/Grab	Grab	Grab	Grab		
Sample Matrix		TCLP Extract of Soil	TCLP Extract of Soil	TCLP Extract of Soil		

PARAMETER	SW-846	ID#			Det.	ID#			Det.	ID#			Det.	ID#			Det.	
TCLP Metals:	METHOD #	1-	4463	units	Limit	2-	4464	units	Limit	3-	4465	units	Limit	4-		units	Limit	Preservative(s)
Arsenic(As)	EPA 6010A	X	<0.5	mg/l	0.5	X	<0.5	mg/l	0.5	X	<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	X	<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	X	<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	X	<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	X	<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	X	<0.0002	mg/l	0.0002			mg/l	0.02	None
Selenium(Se)	EPA 6010A	X	<0.1	mg/l	0.1	X	<0.1	mg/l	0.1	X	<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	X	<0.0005	mg/l	0.0005			mg/l	0.5	None

D-12

Comments: mg/l=milligrams per liter.

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: 20-Jul-94 10:12

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: 9407208B
Received Date: 27 Jun 94
Sample Site: Bronson Field
Job Order #: 120 6810

Sample ID#	Lab	1- 4593	2- 4594	3-	4-
Sample Name	Requester	B1107 North Disposal Dirt	B1107 South Disposal Dirt		
Collector Name		M. Chambers/P. Semmes	M. Chambers/P. Semmes		
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	27 Jun 94 @ 1404	27 Jun 94 @ 1405		
Sample Type	Comp/Grab	Grab	Grab		
Analyst		J. W. Moore	J. W. Moore		
Date of Analysis		8 Jul 94	8 Jul 94		
Sample Matrix		Soil	Soil		
Dilution		Dilution X 100	Dilution X 100	Dilution X 1	Dilution X 1

PARAMETER		ID#			ID#			ID#			ID#		
Volatiles by GCMS (Capillary)	METHOD #	1- 4593	units	Det. Limit	2- 4594	units	Det. Limit	3-	units	Det. Limit	4-	units	Det. Limit
Benzene	EPA 8260	970	ug/kg	100	540	ug/kg	100		ug/kg	1		ug/kg	1
Bromobenzene	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
Bromochloromethane	EPA 8260	BDL	ug/kg	200	BDL	ug/kg	200		ug/kg	2		ug/kg	2
Bromodichloromethane	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
Bromoform	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
Bromomethane	EPA 8260	BDL	ug/kg	200	BDL	ug/kg	200		ug/kg	2		ug/kg	2
n-Butylbenzene	EPA 8260	1600	ug/kg	100	4600	ug/kg	100		ug/kg	1		ug/kg	1
sec-Butylbenzene	EPA 8260	480	ug/kg	100	490	ug/kg	100		ug/kg	1		ug/kg	1
tert-Butylbenzene	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
Carbon Tetrachloride	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
Chlorobenzene	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
Chloroethane	EPA 8260	BDL	ug/kg	200	BDL	ug/kg	200		ug/kg	2		ug/kg	2
Chloroform	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
Chloromethane	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
2-Chlorotoluene	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
4-Chlorotoluene	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
Dibromochloromethane	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
1,2-Dibromo-3-chloropropane	EPA 8260	BDL	ug/kg	500	BDL	ug/kg	500		ug/kg	5		ug/kg	5
1,2-Dibromoethane	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
Dibromomethane	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
1,2-Dichlorobenzene	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
1,3-Dichlorobenzene	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
1,4-Dichlorobenzene	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
Dichlorodifluoromethane	EPA 8260	BDL	ug/kg	200	BDL	ug/kg	200		ug/kg	2		ug/kg	2
1,1-Dichloroethane	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
1,2-Dichloroethane	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
1,1-Dichloroethene	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
cis-1,2-Dichloroethene	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
trans-1,2-Dichloroethene	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
1,2-Dichloropropane	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
1,3-Dichloropropane	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
2,2-Dichloropropane	EPA 8260	BDL	ug/kg	400	BDL	ug/kg	400		ug/kg	4		ug/kg	4
1,1-Dichloropropene	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
Ethylbenzene	EPA 8260	1040	ug/kg	100	1000	ug/kg	100		ug/kg	1		ug/kg	1
Hexachlorobutadiene	EPA 8260	BDL	ug/kg	200	BDL	ug/kg	200		ug/kg	2		ug/kg	2
Isopropylbenzene	EPA 8260	560	ug/kg	100	540	ug/kg	100		ug/kg	1		ug/kg	1
p-Isopropyltoluene	EPA 8260	1200	ug/kg	100	1200	ug/kg	100		ug/kg	1		ug/kg	1
Methylene chloride	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1

Navy Public Works Center
Environmental Laboratory

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NAS Pensacola, Fl. 32508-6500
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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: 9407208B
Received Date: 27 Jun 94
Sample Site: Bronson Field
Job Order #: 120 6810

PARAMETER Volatiles by GCMS (Capillary)	METHOD #	ID# 1- 4593	units	Det. Limit	ID# 2- 4594	units	Det. Limit	ID# 3-	units	Det. Limit	ID# 4-	units	Det. Limit
Naphthalene	EPA 8260	63000	ug/kg	100	58000	ug/kg	100		ug/kg	1		ug/kg	1
n-Propylbenzene	EPA 8260	1200	ug/kg	100	1200	ug/kg	100		ug/kg	1		ug/kg	1
Styrene	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
1,1,1,2-Tetrachloroethane	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
1,1,2,2-Tetrachloroethane	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
Tetrachloroethene	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
Toluene	EPA 8260	250	ug/kg	100	100	ug/kg	100		ug/kg	1		ug/kg	1
1,2,3-Trichlorobenzene	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
1,2,4-Trichlorobenzene	EPA 8260	BDL	ug/kg	200	BDL	ug/kg	200		ug/kg	2		ug/kg	2
1,1,1-Trichloroethane	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
1,1,2-Trichloroethane	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
Trichloroethene	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
Trichlorofluoromethane	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
1,2,3-Trichloropropane	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
1,2,4-Trimethylbenzene	EPA 8260	12000	ug/kg	100	12000	ug/kg	100		ug/kg	1		ug/kg	1
1,3,5-Trimethylbenzene	EPA 8260	4900	ug/kg	100	4800	ug/kg	100		ug/kg	1		ug/kg	1
Vinyl Chloride	EPA 8260	BDL	ug/kg	100	BDL	ug/kg	100		ug/kg	1		ug/kg	1
o-Xylene	EPA 8260	2400	ug/kg	100	2400	ug/kg	100		ug/kg	1		ug/kg	1
m,p-Xylene	EPA 8260	1200	ug/kg	200	1200	ug/kg	200		ug/kg	2		ug/kg	2

Surrogate Recoveries Compound	Acceptance Limits				
1,2-Dichloroethane-d4	70-121	100	101		
Toluene-d8	84-138	101	100		
Bromofluorobenzene	59-113	110	110		

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.
Elevated detection limits due to matrix interference.

Approved by: Jerry Dees, Laboratory Director Date: 20-Jul-94 @ 11:53

PWC5090/14

End of Report

Navy Public Works Center
Environmental Laboratory

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

Laboratory Report
BNA Extractables by 8270A

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

Lab ID Number: 9407208A
Sample Date: 27 Jun 94
Received Date: 27 Jun 94
Sample Site: Bronson Field
Job Order #: 120 6810

Sample ID#	Lab	1- 4593	2- 4594	3-	4-
Sample Name	Requester	B1107 North Disposal Dirt	B1107 South Disposal Dirt		
Collector Name		M. Chambers/P. Semmes	M. Chambers/P. Semmes		
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	27 Jun 94 @ 1404	27 Jun 94 @ 1405		
Sample Type	Comp/Grab	Grab	Grab		
Analyst		M. Chambers	M. Chambers		
Date of Analysis		10 Jul 94	10 Jul 94		
Sample Matrix		Soil	Soil		
Dilution		Dilution X 10	Dilution X 10	Dilution X 1	Dilution X 1

PARAMETER BNA Extr.:	METHOD #	ID# 1- 4593	units	Det. Limit	ID# 2- 4594	units	Det. Limit	ID# 3-	units	Det. Limit	ID# 4-	units	Det. Limit
Acenaphthene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Acenaphthylene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Acetophenone	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
2-Acetylaminofluorene	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
Aldrin	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
4-Aminobiphenyl	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Aniline	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Anthracene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Aramite	EPA 8270A	BDL	ug/kg	8250	BDL	ug/kg	8250		ug/kg	825		ug/kg	825
Benzidine	EPA 8270A	BDL	ug/kg	16500	BDL	ug/kg	16500		ug/kg	1650		ug/kg	1650
Benzoic Acid	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Benz(a)anthracene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Benzo(b)fluoranthene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Benzo(k)fluoranthene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Benzo(g,h,i)perylene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Benzo(a)pyrene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
p-Benzoquinone	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Benzyl alcohol	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
alpha-BHC	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
beta-BHC	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
delta-BHC	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
gamma-BHC (Lindane)	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
Bis(2-chloroethoxy)methane	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Bis(2-chloroethyl)ether	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Bis(2-chloroisopropyl)ether	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Bis(2-ethylhexyl)phthalate	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
4-Bromophenyl phenyl ether	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Butyl benzyl phthalate	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
4-Chloroaniline	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
Chlorobenzilate	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
4-Chloro-3-methylphenol	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
2-Chloronaphthalene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
2-Chlorophenol	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
4-Chlorophenyl phenyl ether	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Chrysene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
4,4'-DDD	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
4,4'-DDE	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
4,4'-DDT	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Dibenzo(a,h)anthracene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Dibenzofuran	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Di-n-butyl phthalate	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
1,2-Dichlorobenzene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
1,3-Dichlorobenzene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165

Navy Public Works Center
Environmental Laboratory

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

Laboratory Report
BNA Extractables by 8270A

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

Lab ID Number: 9407208A
Sample Date: 27 Jun 94
Received Date: 27 Jun 94
Sample Site: Bronson Field
Job Order #: 120 6810

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
BNA Extr.:	METHOD #	1- 4593	units	Limit	2- 4594	units	Limit	3-	units	Limit	4-	units	Limit
1,4-Dichlorobenzene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
3,3-Dichlorobenzidine	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
2,4-Dichlorophenol	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
2,6-Dichlorophenol	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Dieldrin	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
Diethyl phthalate	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Dimethoate	EPA 8270A	BDL	ug/kg	8250	BDL	ug/kg	8250		ug/kg	825		ug/kg	825
Dimethylaminazobenzene	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
7,12-Dimethylbenz(a)anthracene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
3,3'-Dimethylbenzidine	EPA 8270A	BDL	ug/kg	8250	BDL	ug/kg	8250		ug/kg	825		ug/kg	825
a,a,-Dimethylphenethylamine	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
2,4-Dimethylphenol	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Dimethyl phthalate	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
4,6-Dinitro-o-cresol	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
2,4-Dinitrophenol	EPA 8270A	BDL	ug/kg	8250	BDL	ug/kg	8250		ug/kg	825		ug/kg	825
2,4-Dinitrotoluene	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
2,6-Dinitrotoluene	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
1,2-Diphenylhydrazine	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
Di-n-octyl phthalate	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
Endosulfan-I	EPA 8270A	BDL	ug/kg	6600	BDL	ug/kg	6600		ug/kg	660		ug/kg	660
Endosulfan-II	EPA 8270A	BDL	ug/kg	6600	BDL	ug/kg	6600		ug/kg	660		ug/kg	660
Endosulfan Sulfate	EPA 8270A	BDL	ug/kg	6600	BDL	ug/kg	6600		ug/kg	660		ug/kg	660
Endrin	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
Endrin aldehyde	EPA 8270A	BDL	ug/kg	6600	BDL	ug/kg	6600		ug/kg	660		ug/kg	660
Endrin ketone	EPA 8270A	BDL	ug/kg	6600	BDL	ug/kg	6600		ug/kg	660		ug/kg	660
Ethyl methanesulfonate	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
Fluoranthene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Fluorene	EPA 8270A	28000	ug/kg	1650	29000	ug/kg	1650		ug/kg	165		ug/kg	165
Heptachlor	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
Heptachlor epoxide	EPA 8270A	BDL	ug/kg	6600	BDL	ug/kg	6600		ug/kg	660		ug/kg	660
Hexachlorobenzene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Hexachlorobutadiene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Hexachlorocyclopentadiene	EPA 8270A	BDL	ug/kg	8250	BDL	ug/kg	8250		ug/kg	825		ug/kg	825
Hexachloroethane	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Indeno(1,2,3-cd)pyrene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Isodrin	EPA 8270A	BDL	ug/kg	8250	BDL	ug/kg	8250		ug/kg	825		ug/kg	825
Isophorone	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
3-Methylcholanthrene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Methyl methanesulfonate	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
2-Methylnaphthalene	EPA 8270A	350000	ug/kg	1650	330000	ug/kg	1650		ug/kg	165		ug/kg	165
o-Cresol	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
m,p-Cresols	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Naphthalene	EPA 8270A	77000	ug/kg	1650	66000	ug/kg	1650		ug/kg	165		ug/kg	165
1,4-Naphthoquinone	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
1-Naphthylamine	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
2-Naphthylamine	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
2-Nitroaniline	EPA 8270A	BDL	ug/kg	8250	BDL	ug/kg	8250		ug/kg	825		ug/kg	825
3-Nitroaniline	EPA 8270A	BDL	ug/kg	8250	BDL	ug/kg	8250		ug/kg	825		ug/kg	825
4-Nitroaniline	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
Nitrobenzene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
2-Nitrophenol	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
4-Nitrophenol	EPA 8270A	BDL	ug/kg	8250	BDL	ug/kg	8250		ug/kg	825		ug/kg	825

Navy Public Works Center
Environmental Laboratory

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

Laboratory Report
BNA Extractables by 8270A

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

Lab ID Number: 9407208A
Sample Date: 27 Jun 94
Received Date: 27 Jun 94
Sample Site: Bronson Field
Job Order #: 120 6810

PARAMETER BNA Extr.:	METHOD #	ID# 1- 4593	units	Det. Limit	ID# 2- 4594	units	Det. Limit	ID# 3-	units	Det. Limit	ID# 4-	units	Det. Limit
5-Nitro-o-toluidine	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
N-nitrosodibutylamine	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
N-nitrosodiethylamine	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
N-nitrosodimethylamine	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
N-nitrosomethylethylamine	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
N-nitrosodiphenylamine	EPA 8270A	8000	ug/kg	3300	8000	ug/kg	3300		ug/kg	330		ug/kg	330
N-nitrosodi-n-propylamine	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
N-nitrosomorpholine	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
N-nitrosopiperidine	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
N-nitrosopyrrolidine	EPA 8270A	BDL	ug/kg	6600	BDL	ug/kg	6600		ug/kg	660		ug/kg	660
Pentachlorobenzene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Pentachloronitrobenzene	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
Pentachlorophenol	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
Phenacetin	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
Phenanthrene	EPA 8270A	72000	ug/kg	1650	63000	ug/kg	1650		ug/kg	165		ug/kg	165
Phenol	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
1,4-Phenylenediamine	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Phorate	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
2-Picoline	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
Pronamide	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
Pyrene	EPA 8270A	38000	ug/kg	1650	32000	ug/kg	1650		ug/kg	165		ug/kg	165
Pyridine	EPA 8270A	BDL	ug/kg	8250	BDL	ug/kg	8250		ug/kg	825		ug/kg	825
Safrole	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
2,3,4,6-Tetrachlorophenol	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330
Thionazine	EPA 8270A	BDL	ug/kg	8250	BDL	ug/kg	8250		ug/kg	825		ug/kg	825
o-Toluidine	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
1,2,4-Trichlorobenzene	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
2,4,5-Trichlorophenol	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
2,4,6-Trichlorophenol	EPA 8270A	BDL	ug/kg	1650	BDL	ug/kg	1650		ug/kg	165		ug/kg	165
1,3,5-Trinitrobenzene	EPA 8270A	BDL	ug/kg	3300	BDL	ug/kg	3300		ug/kg	330		ug/kg	330

SURROGATE RECOVERIES Compound	Acceptance Limits				
Nitrobenzene-d5	23-120	111	103		
2-Fluorobiphenyl	30-115	117	115		
Terphenyl-d14	18-137	96	95		
Phenol-d5	24-125	99	104		
2-Fluorophenol	25-121	60	80		
2,4,6-Tribromophenol	19-122	38	36		

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.
Other compounds identified: ID#4593 - 1-Methylnaphthalene = 210000 ug/kg, #4594 - 1-Methylnaphthalene = 190000 ug/kg.

Approved by: Jerry Doss, Laboratory Director

Date/Time: 20-Jul-94 @ 11:45

PWC5090/14

Navy Public Works Center
Environmental Laboratory

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

Laboratory Report
Total Petroleum Hydrocarbons(418.1)

Requester:	NPWC Environemtnal	Lab ID Number:	9407208D
Address:	Bldg. 3691	Sample Date:	27 Jun 94
	NAS Pensacola, FL 32508	Received Date:	27 Jun 94
Phone #:	452-3094	Sample Site:	Bronson field
Contact:	Paul Semmes	Job Order #:	120 6810

Sample ID#	Lab	1- 4593	2- 4594	3-	4-	Analyst(s):
Sample Name	Requester	B1107 North Disposal Dirt	B1107 South Disposal Dirt			ATI
Collector Name		M. Chambers/P. Semmes	M. Chambers/P. Semmes			
Date/Time	Comp start					
Collected	Comp stop					Date(s) of analysis:
(Military)	Grab	27 Jun 94 @ 1404	27 Jun 94 @ 1405			
Sample Type	Comp/Grab	Grab	Grab			
Sample Matrix		Soil	Soil			

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.	
Metals:	METHOD #	1- 4593	units	Limit	2- 4594	units	Limit	3-	units	Limit	4-	units	Limit	Preservative(s)
TPH (IR)*	EPA 418.1	X 60000	mg/kg	1100	X 67000	mg/kg	1100		mg/kg	10		mg/kg	10	

Comments: mg/kg=milligrams per kilogram. mg/l=milligrams per liter.

* - Analysis conducted by ATI.

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Approved by: Jerry Dees, Laboratory Director

Date/Time: 26-Jul-94 08:22

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
TCLP Metals

Requester:	NPWC Environmental	Lab ID Number:	9407208C
Address:	Bldg. 3691	Sample Date:	27 Jun 94
	NAS Pensacola, FL 32508	Received Date:	27 Jun 94
Phone #:	452-3094	Sample Site:	Bronson Field
Contact:	Paul Semmes	Job Order #:	120 6810

Sample ID#	Lab	1- 4593	2- 4594	3-	4-	Analyst(s):
Sample Name	Requester	B1107 North Disposal Dirt	B1107 South Disposal Dirt			Jim Taylor
Collector Name		M. Chambers/P. Semmes	M. Chambers/P. Semmes			Brian Nelson
Date/Time Collected (Military)	Comp start					
	Comp stop					Date(s) of analysis:
	Grab	27 Jun 94 @ 1404	27 Jun 94 @ 1405			8 & 11 Jul 94
Sample Type	Comp/Grab	Grab	Grab			
Sample Matrix		TCLP Extract of Soil	TCLP Extract of Soil			

PARAMETER TCLP Metals:	SW-846 METHOD #	ID# 1- 4593	units	Det. Limit	ID# 2- 4594	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 0.2	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	0.5		mg/l	0.5	None

Comments: mg/l=milligrams per liter. * - Analysis conducted by ATI.

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: 20-Jul-94 12:24

End of Report

PWC 5090/14

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Navy Public Works Center
Environmental Laboratory

Laboratory Report
Total PAH's by Method 8270A

Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508–6500
Phone (904) 452–4728
Autovon 922–4728

Requester: NPWC Environmental
Address: Bldg. 3887, NAS Pensacola, FL 32508
Phone #: 452–3180
Contact: Greg Campbell

Report Number: 9601030 A
Sample Date: 5 Jan 96
Received Date: 5 Jan 96
Sample Site: Bronson Field, Bldg. 1107
Job Order #: 130 5001

Sample ID#	Lab	1– 60072	2–	3–	4–
Sample Name	Requester	SB #1 @ 16'			
Collector Name		P. J. Brown			
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	5 Jan 96 @ 1200			
Sample Type	Comp/Grab	Grab			
Analyst		M. Chambers/B. Jacquart			
Date of Analysis		16 Jan 96			
Sample Matrix		Soil			
Dilution		Dilution X 50	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Polynuclear Aromatics (PAH's)	METHOD #	1– 60072	units	Limit	2–	units	Limit	3–	units	Limit	4–	units	Limit
Acenaphthene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165
Acenaphthylene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165
Anthracene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165
Benzo(a)anthracene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165
Benzo(a)pyrene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165
Benzo(b)fluoranthene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165
Benzo(g,h,i)perylene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165
Benzo(k)fluoranthene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165
Chrysene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165
Dibenzo(a,h)anthracene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165
Fluoranthene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165
Fluorene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165
Indeno(1,2,3–cd)pyrene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165
Naphthalene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165
Phenanthrene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165
Pyrene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165
1–Methylnaphthalene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165
2–Methylnaphthalene	EPA 8270A	BDL	ug/kg	8250		ug/kg	165		ug/kg	165		ug/kg	165

SURROGATE RECOVERIES Compound	Acceptance Limits				
Nitrobenzene–d5	23–120	117			
2–Fluorobiphenyl	30–115	118*			
Terphenyl–d14	18–137	135			

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.
* = Surrogate recovered outside acceptance limits due to matrix interference.

Approved by: J. W. Moore, Chemist
Jerry Dees, Laboratory Director
for Jerry Dees

Date/Time: 29–Jan–96 @ 09:12
Report Generated

PWC5090/14

End of Report

Navy Public Works Center
Environmental Laboratory

Bldg 3887, Code 920
NAS Pensacola, Fl. 32508
Phone (904) 452-4728/3642
Autovon 922-4728/3642
FAX (904) 452-2799/2387

Laboratory Report
Total RCRA Metals

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

Report Number: 9601030 B
Sample Date: 5 Jan 96
Received Date: 5 Jan 96
Sample Site: Bronson Field, Bldg. 1107
Job Order #: 130 5001

Sample ID#	Lab	1- 60072	2-	3-	4-
Sample Name	Requester	SB #1 @ 16'			
Collector Name		P. J. Brown			
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	5 Jan 96 @ 1200			
Sample Type	Comp/Grab	Grab			
Sample Matrix		Soil			

Analyst(s):
ICP - Brian Nelson
Mercury - Brian Nelson

Date(s) of analysis:
ICP - 20 Jan 96
Mercury - 25 Jan 96

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.	
Metals:	**METHOD #**	1- 60072	units	Limit	2-	units	Limit	3-	units	Limit	4-	units	Limit	**Preservative(s)**
Arsenic(As)	EPA 6010A	X BDL	mg/kg	15		mg/kg	15		mg/kg	15		mg/kg	15	None
Barium(Ba)	EPA 6010A	X BDL	mg/kg	1		mg/kg	1		mg/kg	1		mg/kg	1	None
Cadmium(Cd)	EPA 6010A	X BDL	mg/kg	1		mg/kg	1		mg/kg	1		mg/kg	1	None
Chromium(Cr)	EPA 6010A	X BDL	mg/kg	1		mg/kg	1		mg/kg	1		mg/kg	1	None
Lead(Pb)	EPA 6010A	X BDL	mg/kg	5		mg/kg	5		mg/kg	5		mg/kg	5	None
Mercury(Hg)	EPA 7471	X BDL	mg/kg	0.1		mg/kg	0.1		mg/kg	0.1		mg/kg	0.1	None
Selenium(Se)	EPA 6010A	X BDL	mg/kg	15		mg/kg	15		mg/kg	15		mg/kg	15	None
Silver(Ag)	EPA 6010A	X BDL	mg/kg	1		mg/kg	1		mg/kg	1		mg/kg	1	None

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

Approved by: JW Moore, Chemist
Jerry Dees, Laboratory Director
for Jerry Dees

Date/Time: 29-Jan-96 09:11

End of Report

PWC 5090/14

ANALYTICAL TECHNOLOGIES, INC. 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"Method Report Summary"

Accession Number: 601134
Client: NAS, CO, PWC
Project Number: CALL #9012
Project Name: BRONSON FLO #1@16'
Project Location: BLDG 1107
Test: TOTAL PETROLEUM HYDROCARBONS (418.1)

Client Sample Id:	Parameter:	Unit:	Result:
BRONSON FLD #1@16'	TOTAL PETROLEUM HYDROCARBON	MG/KG	19000

Navy Public Works Center
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Laboratory Report

601/602 Volatiles by Method 8260

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

Report Number: 9603051 A
Sample Date: 11 Mar 96
Received Date: 12 Mar 96
Sample Site: Bronson Field, Bldg. 1107
Job Order #: 130 5001

Sample ID#		1- 60992			2- 60993			3- 60994			4- 60995		
Sample Name		MW-1			MW-2			MW-3			MW-4		
Collector Name		P. J. B.			P. J. B.			P. J. B.			P. J. B.		
Date/Time	Comp start												
Collected	Comp stop												
(Military)	Grab	11 Mar 96 @ 1300			11 Mar 96 @ 1230			11 Mar 96 @ 1200			11 Mar 96 @ 1330		
Sample Type	Comp/Grab	Grab			Grab			Grab			Grab		
Analyst		M. Chambers/J. Moore			M. Chambers/J. Moore			M. Chambers/J. Moore			M. Chambers/J. Moore		
Date of Analysis		13 Mar 96			13 Mar 96			13 Mar 96			13 Mar 96		
Sample Matrix		Groundwater			Groundwater			Groundwater			Groundwater		
Dilution		Dilution X 1			Dilution X 1			Dilution X 1			Dilution X 1		
PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Volatiles by GCMS (Capillary)	METHOD #	1- 60992	units	Limit	2- 60993	units	Limit	3- 60994	units	Limit	4- 60995	units	Limit
Benzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	2	ug/l	1
Bromodichloromethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Bromoform	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Bromomethane	SW 8260	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2
Carbon Tetrachloride	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Chlorobenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Chloroethane	SW 8260	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2
2-Chloroethylvinyl ether	SW 8260	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
Chloroform	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Chloromethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Dibromochloromethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,2-Dichlorobenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,3-Dichlorobenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,4-Dichlorobenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Dichlorodifluoromethane	SW 8260	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2
1,1-Dichloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,2-Dichloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,1-Dichloroethene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
trans-1,2-Dichloroethene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,2-Dichloropropane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
cis-1,3-Dichloropropene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
trans-1,3-Dichloropropene	SW 8260	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4
Ethylbenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	7	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	12	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	2	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	41	ug/l	2

Navy Public Works Center
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Laboratory Report

601/602 Volatiles by Method 8260

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

Report Number: 9603051 A
Sample Date: 11 Mar 96
Received Date: 12 Mar 96
Sample Site: Bronson Field, Bldg. 1107
Job Order #: 130 5001

Additional Compounds Identified	METHOD #	1– ID# 60992	units	Det. Limit	2– ID# 60993	units	Det. Limit	3– ID# 60994	units	Det. Limit	4– ID# 60995	units	Det. Limit
Acetone	SW 8260	10	ug/l	10	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Isopropylbenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	1	ug/l	1
p–Isopropyltoluene	SW 8260	2	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	2	ug/l	1
Naphthalene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	12	ug/l	1
n–Propylbenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	2	ug/l	1
1,2,4–Trimethylbenzene	SW 8260	2	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	24	ug/l	1
1,3,5–Trimethylbenzene	SW 8260	4	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	9	ug/l	1

Surrogate Recoveries Compound	Acceptance Limits				
1,2–Dichloroethane–d4	76–114	103	103	104	108
Toluene–d8	88–110	98	97	99	98
Bromoflourobenzene	86–115	99	100	101	98

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

Approved by: Jim Tatler QC Officer
Jerry Dees, Laboratory Director

Date/Time: 20–Mar–96 @ 09:05
Report Generated

PWC 5090/14

End of Report

Navy Public Works Center
Environmental Laboratory

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Laboratory Report
601/602 Volatiles by Method 8260

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

Report Number: 9603050 A
Sample Date: 11 Mar 96
Received Date: 12 Mar 96
Sample Site: Bronson Field, Bldg. 1107
Job Order #: 130 5001

Sample ID#		1- 60988	2- 60989	3- 60990	4- 60991
Sample Name		MW-5	MW-6	MW-7	MW-8
Collector Name		P. J. B.	P. J. B.	P. J. B.	P. J. B.
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	11 Mar 96 @ 1400	11 Mar 96 @ 1430	11 Mar 96 @ 1100	11 Mar 96 @ 1130
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab
Analyst		M. Chambers/J. Moore	M. Chambers/J. Moore	M. Chambers/J. Moore	M. Chambers/J. Moore
Date of Analysis		13 Mar 96	13 Mar 96	13 Mar 96	13 Mar 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 #	ID# 1- 60988	units	Det. Limit	ID# 2- 60989	units	Det. Limit	ID# 3- 60990	units	Det. Limit	ID# 4- 60991	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 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,2-Dichlorobenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,3-Dichlorobenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,4-Dichlorobenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Dichlorodifluoromethane	SW 8260	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2
1,1-Dichloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,2-Dichloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,1-Dichloroethene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
trans-1,2-Dichloroethene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,2-Dichloropropane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
cis-1,3-Dichloropropene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
trans-1,3-Dichloropropene	SW 8260	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4
Ethylbenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Methylene chloride	SW 8260	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5
Methyl-tert-butyl Ether (MTBE)	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,1,2,2-Tetrachloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Tetrachloroethene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Toluene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,1,1-Trichloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
1,1,2-Trichloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Trichloroethene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Trichlorofluoromethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Vinyl Chloride	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1
Xylenes (Total)	SW 8260	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2

Additional Compounds Identified	METHOD #	ID# 1- 60988	units	Det. Limit	ID# 2- 60989	units	Det. Limit	ID# 3- 60990	units	Det. Limit	ID# 4- 60991	units	Det. Limit
p-Isopropyltoluene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	2	ug/l	1
1,2,4-Trimethylbenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	2	ug/l	1
1,3,5-Trimethylbenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1	4	ug/l	1

Surrogate Recoveries Compound	Acceptance Limits				
1,2-Dichloroethane-d4	76-114	105	103	106	104
Toluene-d8	88-110	100	99	99	100
Bromoflourobenzene	86-115	102	98	100	101

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

Approved by: Jim Taylor QC. Officer
Jerry Dees, Laboratory Director

Date/Time: 19-Mar-96 @ 13:53
Report Generated

PWC 5090/14

End of Report

Navy Public Works Center
Environmental Laboratory

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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: 9603049 A
Sample Date: 11 Mar 96
Received Date: 12 Mar 96
Sample Site: Bronson Field, Bldg. 1107
Job Order #: 130 5001

Sample ID#		1- 60985	2- 60986	3- 60987	4-
Sample Name		Eq. Blank	Duplicate	Trip Blank	
Collector Name		P. J. B.	P. J. B.	P. J. B.	
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	11 Mar 96 @ 1045	11 Mar 96 @ N/S	11 Mar 96 @ N/S	
Sample Type	Comp/Grab	Grab	Grab	Grab	
Analyst		M. Chambers/J. Moore	M. Chambers/J. Moore	M. Chambers/J. Moore	
Date of Analysis		13 Mar 96	13 Mar 96	13 Mar 96	
Sample Matrix		Delonized water	Groundwater	Deionized water	
Dilution		Dilution X 1	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER Volatiles by GCMS (Capillary)	METHOD #	ID# 1- 60985	units	Det. Limit	ID# 2- 60986	units	Det. Limit	ID# 3- 60987	units	Det. Limit	ID# 4-	units	Det. Limit
Benzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Bromodichloromethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Bromoform	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Bromomethane	SW 8260	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2		ug/l	2
Carbon Tetrachloride	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Chlorobenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Chloroethane	SW 8260	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2		ug/l	2
2-Chloroethylvinyl ether	SW 8260	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3		ug/l	3
Chloroform	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Chloromethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Dibromochloromethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,2-Dichlorobenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,3-Dichlorobenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,4-Dichlorobenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Dichlorodifluoromethane	SW 8260	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2		ug/l	2
1,1-Dichloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,2-Dichloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,1-Dichloroethene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
trans-1,2-Dichloroethene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,2-Dichloropropane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
cis-1,3-Dichloropropene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
trans-1,3-Dichloropropene	SW 8260	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4		ug/l	4
Ethylbenzene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Methylene chloride	SW 8260	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5		ug/l	5
Methyl-tert-butyl Ether (MTBE)	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,1,2,2-Tetrachloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Tetrachloroethene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Toluene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,1,1-Trichloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
1,1,2-Trichloroethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Trichloroethene	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Trichlorofluoromethane	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Vinyl Chloride	SW 8260	BDL	ug/l	1	BDL	ug/l	1	BDL	ug/l	1		ug/l	1
Xylenes (Total)	SW 8260	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2		ug/l	2

Additional Compounds Identified	METHOD #	ID# 1- 60985	units	Det. Limit	ID# 2- 60986	units	Det. Limit	ID# 3- 60987	units	Det. Limit	
None	SW 8260										

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

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

Approved by: Jim Taylor Q.C. Officer
Jerry Dees, Laboratory Director

Date/Time: 28-Mar-96 @ 15:33
Report Generated

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
Autovon 922-4728

Laboratory Report
Total PAH's by Method 8270A

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

Report Number: 9603051 B
Sample Date: 11 Mar 96
Received Date: 12 Mar 96
Sample Site: Bronson Field, Bldg. 1107
Job Order #: 130 5001

Sample ID#	Lab	1- 60992	2- 60993	3- 60994	4- 60995
Sample Name	Requester	MW-1	MW-2	MW-3	MW-4
Collector Name		P. J. B.	P. J. B.	P. J. B.	P. J. B.
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	11 Mar 96 @ 1300	11 Mar 96 @ 1230	11 Mar 96 @ 1200	11 Mar 96 @ 1330
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab
Analyst		M. Chambers	M. Chambers	M. Chambers	M. Chambers
Date of Analysis		19 Mar 96	18 Mar 96	18 Mar 96	18 Mar 96
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Dilution		Dilution X 1	Dilution X 1	Dilution X 1	Dilution X 10

PARAMETER	ANALYSIS	ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Polynuclear Aromatics (PAH's)	METHOD #	1- 60992	units	Limit	2- 60993	units	Limit	3- 60994	units	Limit	4- 60995	units	Limit
Acenaphthene	SW846 8270	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	50
Acenaphthylene	SW846 8270	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	50
Anthracene	SW846 8270	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	20
Benzo(a)anthracene	SW846 8270	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	30
Benzo(a)pyrene	SW846 8270	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	20
Benzo(b)fluoranthene	SW846 8270	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	40
Benzo(g,h,i)perylene	SW846 8270	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	30
Benzo(k)fluoranthene	SW846 8270	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	40
Chrysene	SW846 8270	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	30
Dibenzo(a,h)anthracene	SW846 8270	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	30
Fluoranthene	SW846 8270	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	20
Fluorene	SW846 8270	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	40
Indeno(1,2,3-cd)pyrene	SW846 8270	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	20
Naphthalene	SW846 8270	BDL	ug/l	7	BDL	ug/l	7	BDL	ug/l	7	55**	ug/l	70
Phenanthrene	SW846 8270	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3	55	ug/l	30
Pyrene	SW846 8270	4	ug/l	3	BDL	ug/l	3	BDL	ug/l	3	50	ug/l	30
1-Methylnaphthalene	SW846 8270	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5	180	ug/l	50
2-Methylnaphthalene	SW846 8270	BDL	ug/l	7	BDL	ug/l	7	BDL	ug/l	7	200	ug/l	70

SURROGATE RECOVERIES Compound	Acceptance Limits				
Nitrobenzene-d5	35-114	68	67	68	116*
2-Fluorobiphenyl	43-116	67	74	68	127*
Terphenyl-d14	33-141	87	95	87	121*

Comments: ug/l=micrograms per liter. ug/kg=micrograms per kilogram. BDL=Below Detection Limit.
* = Surrogate recovered outside acceptance limits due to matrix interference.
** = The analyte was detected below the detection limit; therefore, it is an estimated value.

Approved by: Jim [illegible] QC Officer
Jerry Dees, Laboratory Director

Date/Time: 20-Mar-96 @ 09:14
Report Generated

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
Autovon 922–4728

Laboratory Report
Total PAH's by Method 8270A

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

Report Number:	9603050 B
Sample Date:	11 Mar 96
Received Date:	12 Mar 96
Sample Site:	Bronson Field, Bldg. 1107
Job Order #:	130 5001

Sample ID#	Lab	1– 60988	2– 60989	3– 60990	4– 60991
Sample Name	Requester	MW–5	MW–6	MW–7	MW–8
Collector Name		P. J. B.	P. J. B.	P. J. B.	P. J. B.
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	11 Mar 96 @ 1400	11 Mar 96 @ 1430	11 Mar 96 @ 1100	11 Mar 96 @ 1130
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab
Analyst		M. Chambers	M. Chambers	M. Chambers	M. Chambers
Date of Analysis		18 Mar 96	18 Mar 96	18 Mar 96	19 Mar 96
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Dilution		Dilution X 1	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER	ANALYSIS	ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Polynuclear Aromatics (PAH's)	METHOD #	1– 60988	units	Limit	2– 60989	units	Limit	3– 60990	units	Limit	4– 60991	units	Limit
Acenaphthene	SW846 8270	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5
Acenaphthylene	SW846 8270	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5
Anthracene	SW846 8270	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2
Benzo(a)anthracene	SW846 8270	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
Benzo(a)pyrene	SW846 8270	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2
Benzo(b)fluoranthene	SW846 8270	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4
Benzo(g,h,i)perylene	SW846 8270	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
Benzo(k)fluoranthene	SW846 8270	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4
Chrysene	SW846 8270	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
Dibenzo(a,h)anthracene	SW846 8270	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
Fluoranthene	SW846 8270	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2
Fluorene	SW846 8270	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4	BDL	ug/l	4
Indeno(1,2,3–cd)pyrene	SW846 8270	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2	BDL	ug/l	2
Naphthalene	SW846 8270	BDL	ug/l	7	BDL	ug/l	7	BDL	ug/l	7	BDL	ug/l	7
Phenanthrene	SW846 8270	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3	BDL	ug/l	3
Pyrene	SW846 8270	BDL	ug/l	3	6	ug/l	3	BDL	ug/l	3	4	ug/l	3
1–Methylnaphthalene	SW846 8270	BDL	ug/l	5	BDL	ug/l	5	BDL	ug/l	5	5	ug/l	5
2–Methylnaphthalene	SW846 8270	BDL	ug/l	7	BDL	ug/l	7	BDL	ug/l	7	BDL	ug/l	7

SURROGATE RECOVERIES Compound	Acceptance Limits				
Nitrobenzene–d5	35–114	74	78	81	69
2–Fluorobiphenyl	43–116	75	83	82	68
Terphenyl–d14	33–141	95	93	100	77

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

Approved by: Jim Taylor QC Officer
Jerry Dees, Laboratory Director

Date/Time: 19–Mar–96 @ 14:28
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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
Autovon 922-4728

Laboratory Report
Total PAH's by Method 8270A

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

Report Number: 9603049 B
Sample Date: 11 Mar 96
Received Date: 12 Mar 96
Sample Site: Bronson Field, Bldg. 1107
Job Order #: 130 5001

Sample ID#	Lab	1- 60985	2- 60986	3-	4-
Sample Name	Requester	Eq. Blank	Duplicate		
Collector Name		P. J. B.	P. J. B.		
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	11 Mar 96 @ 1045	11 Mar 96 @ N/S		
Sample Type	Comp/Grab	Grab	Grab		
Analyst		M. Chambers	M. Chambers		
Date of Analysis		18 Mar 96	18 Mar 96		
Sample Matrix		Deionized water	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- 60985	units	Limit	2- 60986	units	Limit	3-	units	Limit	4-	units	Limit
Acenaphthene	SW846 8270	BDL	ug/l	5	BDL	ug/l	5		ug/l	5		ug/l	5
Acenaphthylene	SW846 8270	BDL	ug/l	5	BDL	ug/l	5		ug/l	5		ug/l	5
Anthracene	SW846 8270	BDL	ug/l	2	BDL	ug/l	2		ug/l	2		ug/l	2
Benzo(a)anthracene	SW846 8270	BDL	ug/l	3	BDL	ug/l	3		ug/l	3		ug/l	3
Benzo(a)pyrene	SW846 8270	BDL	ug/l	2	BDL	ug/l	2		ug/l	2		ug/l	2
Benzo(b)fluoranthene	SW846 8270	BDL	ug/l	4	BDL	ug/l	4		ug/l	4		ug/l	4
Benzo(g,h,i)perylene	SW846 8270	BDL	ug/l	3	BDL	ug/l	3		ug/l	3		ug/l	3
Benzo(k)fluoranthene	SW846 8270	BDL	ug/l	4	BDL	ug/l	4		ug/l	4		ug/l	4
Chrysene	SW846 8270	BDL	ug/l	3	BDL	ug/l	3		ug/l	3		ug/l	3
Dibenzo(a,h)anthracene	SW846 8270	BDL	ug/l	3	BDL	ug/l	3		ug/l	3		ug/l	3
Fluoranthene	SW846 8270	BDL	ug/l	2	BDL	ug/l	2		ug/l	2		ug/l	2
Fluorene	SW846 8270	BDL	ug/l	4	BDL	ug/l	4		ug/l	4		ug/l	4
Indeno(1,2,3-cd)pyrene	SW846 8270	BDL	ug/l	2	BDL	ug/l	2		ug/l	2		ug/l	2
Naphthalene	SW846 8270	BDL	ug/l	7	BDL	ug/l	7		ug/l	7		ug/l	7
Phenanthrene	SW846 8270	BDL	ug/l	3	BDL	ug/l	3		ug/l	3		ug/l	3
Pyrene	SW846 8270	BDL	ug/l	3	BDL	ug/l	3		ug/l	3		ug/l	3
1-Methylnaphthalene	SW846 8270	BDL	ug/l	5	BDL	ug/l	5		ug/l	5		ug/l	5
2-Methylnaphthalene	SW846 8270	BDL	ug/l	7	BDL	ug/l	7		ug/l	7		ug/l	7

SURROGATE RECOVERIES Compound	Acceptance Limits				
Nitrobenzene-d5	35-114	82	74		
2-Fluorobiphenyl	43-116	80	75		
Terphenyl-d14	33-141	100	95		

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

Approved by: Jim Taylor QC Officer
Jerry Dees, Laboratory Director

Date/Time: 19-Mar-96 @ 14:26
Report Generated

PWC 5090/14

End of Report

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

SIGNATURE PAGE

Reviewed by: _____
ATI Project Manager

Client:	NAS, CO, PWC NAS PENSACOLA, FLORIDA
Project Name:	PETROLEUM HYDROCARBONS-FL PRO
Project Number:	CALL #9025
Project Location:	BRONSON 1107
Accession Number:	603284
Project Manager:	JERRY DEES
Sampled By:	P. BROWN

ANALYTICAL TECHNOLOGIES, INC. 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

Analysis Report

Analysis: FLPRO\PETRO. HYDROCARBON RANGE C8-C40

Accession:	603284
Client:	NAS, CO, PWC
Project Number:	CALL #9025
Project Name:	PETROLEUM HYDROCARBONS-FL PRO
Project Location:	BRONSON 1107
Department:	SEMI-VOLATILE FUELS

ANALYTICAL TECHNOLOGIES, INC. 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

"FINAL REPORT FORMAT - SINGLE"

Accession:	603284
Client:	NAS, CO, PWC
Project Number:	CALL #9025
Project Name:	PETROLEUM HYDROCARBONS-FL PRO
Project Location:	BRONSON 1107
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:	001	Sample Date/Time:	11-MAR-96 1045
Client Sample Id:	60985 BRONSON EQ BLANK	Received Date:	15-MAR-96
Batch: FPW023		Extraction Date:	18-MAR-96
Blank: A	Dry Weight %: N/A	Analysis Date:	21-MAR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	ND	100	
NONATRIACONTANE	%REC/SURR	70	42-193	
ORTHO TER PHENYL	%REC/SURR	82	82-142	
ANALYST	INITIALS	BV		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 603284
Client: NAS, CO, PWC
Project Number: CALL #9025
Project Name: PETROLEUM HYDROCARBONS-FL PRO
Project Location: BRONSON 1107
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: 11-MAR-96 N/S
Client Sample Id: 60986 BRONSON DUP Received Date: 15-MAR-96

Batch: FPW023 Extraction Date: 18-MAR-96
Blank: A Dry Weight %: N/A Analysis Date: 21-MAR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	ND	100	
NONATRIACONTANE	%REC/SURR	78	42-193	
ORTHO TER PHENYL	%REC/SURR	98	82-142	
ANALYST	INITIALS	BV		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 603284
Client: NAS, CO, PWC
Project Number: CALL #9025
Project Name: PETROLEUM HYDROCARBONS-FL PRO
Project Location: BRONSON 1107
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: 11-MAR-96 1300
Client Sample Id: 60992 BRONSON MW1 Received Date: 15-MAR-96

Batch: FPW023 Extraction Date: 18-MAR-96
Blank: A Dry Weight %: N/A Analysis Date: 22-MAR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	2800	500	
NONATRIACONTANE	%REC/SURR	D	42-193	
ORTHO TER PHENYL	%REC/SURR	D	82-142	
ANALYST	INITIALS	BV		

Comments:
D = DILUTED OUT.

"FINAL REPORT FORMAT - SINGLE"

Accession: 603284
Client: NAS, CO, PWC
Project Number: CALL #9025
Project Name: PETROLEUM HYDROCARBONS-FL PRO
Project Location: BRONSON 1107
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 Sample Date/Time: 11-MAR-96 1230
Client Sample Id: 60993 BRONSON MW2 Received Date: 15-MAR-96

Batch: FPW023 Extraction Date: 18-MAR-96
Blank: A Dry Weight %: N/A Analysis Date: 22-MAR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	420	100	
NONATRIACONTANE	%REC/SURR	42	42-193	
ORTHO TER PHENYL	%REC/SURR	91	82-142	
ANALYST	INITIALS	BV		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 603284
Client: NAS, CO, PWC
Project Number: CALL #9025
Project Name: PETROLEUM HYDROCARBONS-FL PRO
Project Location: BRONSON 1107
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 Sample Date/Time: 11-MAR-96 1200
Client Sample Id: 60994 BRONSON MW3 Received Date: 15-MAR-96

Batch: FPW023 Extraction Date: 18-MAR-96
Blank: A Dry Weight %: N/A Analysis Date: 21-MAR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	140	100	
NONATRIACONTANE	%REC/SURR	93	42-193	
ORTHO TER PHENYL	%REC/SURR	157	82-142	
ANALYST	INITIALS	BV		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 603284
Client: NAS, CO, PWC
Project Number: CALL #9025
Project Name: PETROLEUM HYDROCARBONS-FL PRO
Project Location: BRONSON 1107
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40
Analysis Method: PRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510 / SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: I

Lab Id: 010 Sample Date/Time: 11-MAR-96 1330
Client Sample Id: 60995 BRONSON MW4 Received Date: 15-MAR-96

Batch: FPW023 Extraction Date: 18-MAR-96
Blank: A Dry Weight %: N/A Analysis Date: 21-MAR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	3700	1000	
NONATRIACONTANE	%REC/SURR	D	42-193	
ORTHO TER PHENYL	%REC/SURR	D	82-142	
ANALYST	INITIALS	BV		

Comments:
D = DILUTED OUT.

"FINAL REPORT FORMAT - SINGLE"

Accession: 603284
Client: NAS, CO, PWC
Project Number: CALL #9025
Project Name: PETROLEUM HYDROCARBONS-FL PRO
Project Location: BRONSON 1107
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: 11-MAR-96 1400
Client Sample Id: 60988 BRONSON MW5 Received Date: 15-MAR-96

Batch: FPW023 Extraction Date: 18-MAR-96
Blank: A Dry Weight %: N/A Analysis Date: 22-MAR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	ND	100	
NONATRIACONTANE	%REC/SURR	47	42-193	
ORTHO TER PHENYL	%REC/SURR	82	82-142	
ANALYST	INITIALS	BV		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 603284
Client: NAS, CO, PWC
Project Number: CALL #9025
Project Name: PETROLEUM HYDROCARBONS-FL PRO
Project Location: BRONSON 1107
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: 11-MAR-96 1430
Client Sample Id: 60989 BRONSON MW6 Received Date: 15-MAR-96

Batch: FPW023 Extraction Date: 18-MAR-96
Blank: A Dry Weight %: N/A Analysis Date: 22-MAR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	930	500	
NONATRIACONTANE	%REC/SURR	D	42-193	
ORTHO TER PHENYL	%REC/SURR	D	82-142	
ANALYST	INITIALS	BV		

Comments:
D = DILUTED OUT.

"FINAL REPORT FORMAT - SINGLE"

Accession: 603284
Client: NAS, CO, PWC
Project Number: CALL #9025
Project Name: PETROLEUM HYDROCARBONS-FL PRO
Project Location: BRONSON 1107
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: 11-MAR-96 1100
Client Sample Id: 60990 BRONSON MW7 Received Date: 15-MAR-96

Batch: FPW023 Extraction Date: 18-MAR-96
Blank: A Dry Weight %: N/A Analysis Date: 22-MAR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	ND	100	
NONATRIACONTANE	%REC/SURR	72	42-193	
ORTHO TER PHENYL	%REC/SURR	96	82-142	
ANALYST	INITIALS	BV		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 603284
Client: NAS, CO, PWC
Project Number: CALL #9025
Project Name: PETROLEUM HYDROCARBONS-FL PRO
Project Location: BRONSON 1107
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: 11-MAR-96 1130
Client Sample Id: 60991 BRONSON MW8 Received Date: 15-MAR-96

Batch: FPW023 Extraction Date: 18-MAR-96
Blank: A Dry Weight %: N/A Analysis Date: 21-MAR-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	1600	1000	
NONATRIACONTANE	%REC/SURR	D	42-193	
ORTHO TER PHENYL	%REC/SURR	D	82-142	
ANALYST	INITIALS	BV		

Comments:
D = DILUTED OUT.

"Method Report Summary"

Accession Number: 603284
Client: NAS, CO, PWC
Project Number: CALL #9025
Project Name: PETROLEUM HYDROCARBONS-FL PRO
Project Location: BRONSON 1107
Test: FLPRO\PETRO. HYDROCARBON RANGE C8-C40

Client Sample Id:	Parameter:	Unit:	Result:
60989 BRONSON MW6	TOTAL PETROLEUM HYDROCARBON	UG/L	930
60991 BRONSON MW8	TOTAL PETROLEUM HYDROCARBON	UG/L	1600
60992 BRONSON MW1	TOTAL PETROLEUM HYDROCARBON	UG/L	2800
60993 BRONSON MW2	TOTAL PETROLEUM HYDROCARBON	UG/L	420
60994 BRONSON MW3	TOTAL PETROLEUM HYDROCARBON	UG/L	140
60995 BRONSON MW4	TOTAL PETROLEUM HYDROCARBON	UG/L	3700

ANALYTICAL TECHNOLOGIES, INC. 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

Quality Control Report

Analysis: FLPRO\PETRO. HYDROCARBON RANGE C8-C40

Accession:	603284
Client:	NAS, CO, PWC
Project Number:	CALL #9025
Project Name:	PETROLEUM HYDROCARBONS-FL PRO
Project Location:	BRONSON 1107
Department:	SEMI-VOLATILE FUELS

ANALYTICAL TECHNOLOGIES, INC. 11 East Olive Road Pensacola, Florida 32514 (904) 474-1001

Date 03-Apr-96

"QC Report"

Title: Water Blank
Batch: FPW023
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: 21-MAR-96 Date Extracted: 20-MAR-96

Parameters:	Units:	Results:	Reporting Limits:
TOTAL PETROLEUM HYDROCARBON	UG/L	ND	100
ORTHO TER PHENYL	%REC/SURR	93	82-142
ANALYST	INITIALS	KS	
C-39	%REC/SURR	63	42-193

Comments:

"QC Report"

Title: Water Reagent
Batch: FPW023
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: 22-MAR-96 RS Date Extracted: 20-MAR-96
RSD Date Analyzed: 22-MAR-96 RSD Date Extracted: 20-MAR-96

Parameters:	Spike Added	Sample Conc	RS Conc	RS %Rec	RSD Conc	RSD %Rec	RPD	RPD Lmts	Rec Lmts
TOTAL PETROLEUM HYDROCARBON	294	<100	271	92	232	79	15	30	57-122
Surrogates:									
ORTHO TER PHENYL				121		103			82-142
C-39				137		107			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
KS = KENDALL SMITH
KK = KERRY KUST
DWB = DAVID W. BOWERS
RP = ROB PEREZ

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

CHAIN OF CUSTODY

PART 1 - Bottle Shipment Information — **ATI ACCESSION #:** 603284

CLIENT: NPWC ENV. LAB CODE 920 — **CLIENT PROJECT NUMBER:** STUB # 6075-6168

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	
12																✓								

Relinquished By:	Time	Date	Received By:	Time	Date

PART 2 - Sample/Project Information

SAMPLE MATRIX CODES

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

PARAMETERS AND PRESERVATIVES REQUESTED

SAMPLE I.D.	SAMPLE DATE	SAMPLE TIME	MATRIX	PETROLEUM HYDROCARBONS BY FL PRO											TOTAL # OF BOTTLES
60985 BROWSON EQ BLUK	3/11/96	~~1400~~ 1045	OI	✓										1	1
60986 DUP		—	GW	✓										2	1
60988 MW5		1400		✓										3	1
60989 MW6		1430		✓										4	1
60990 MW7		1100		✓										5	1
60991 MW8		1130		✓										6	1
60992 MW1		1300		✓										7	1
60993 MW2		1230		✓										8	1
60994 MW3		1200		✓										9	2
60995 MW4	↓	1330	↓	✓										10	~~1~~ 2

Total Number of Bottles/Containers: 12

Relinquished By	Date	Time	Received By	Date	Time
Kathy Brooks	3/15/96	1425	[illegible]	3-15-96	1425

Client NPWC ENV. LAB CODE 920			Purchase Order Number STUB # 6075-6168
Address BLDG 3297			Project Number CALL # 9025
City PENSACOLA	State FL	Zip 32508	Project Name PETROLEUM HYDROCARBONS - FL PRO
Phone Number (904) 452-3642	Fax Number (904) 452-2799		Project Location BRONSON 1107
Project Manager JERRY DEES			Sampled By P. BROWN

TURNAROUND TIMES	check below	SPECIAL INSTRUCTIONS
Standard - 14-21 days	✓	STUB # 6075-6168 VERBAL DUE 3/22/96
RUSH (must be approved in advance)		CALL # 9025 WRITTEN DUE 3/29/96
<- 48 hours - 2x standard price		JOB # 1505001
3-7 days - 1.5x standard price		ITEM # 004
TCLP - 1 week rush 1.5x standard price		
QC Level none I II III IV (circle one)		Copies of report needed 1

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

Navy Public Works Center
Environmental Laboratory

Bldg 3887, Code 920
NAS Pensacola, Fl. 32508-6500
Phone (904) 452-4728
Autovon 922-4728
FAX (904) 452-2387/2799

Laboratory Report
Total Lead

Requester:	NPWC Environmental	Report Number:	9603051 D
Address:	Bldg. 3887	Sample Date:	11 Mar 96
	NAS Pensacola, Fl 32508	Received Date:	12 Mar 96
Phone #:	452-4728	Sample Site:	Bronson Field, Bldg. 1107
Contact:	Greg Campbell	Job Order #:	130 5001

Sample ID#	Lab	1- 60992	2- 60993	3- 60994	4- 60995	Analyst(s):
Sample Name	Requester	MW-1	MW-2	MW-3	MW-4	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	11 Mar 96 @ 1300	11 Mar 96 @ 1230	11 Mar 96 @ 1200	11 Mar 96 @ 1330	ICP - 26 Mar 96
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab	
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	

PARAMETER Metals:	METHOD #	ID# 1- 60992	units	Det. Limit	ID# 2- 60993	units	Det. Limit	ID# 3- 60994	units	Det. Limit	ID# 4- 60995	units	Det. Limit	Preservative(s)
Lead(Pb)	SW 6010	X 0.16	mg/l	0.05	X 0.23	mg/l	0.05	X 0.25	mg/l	0.05	X 0.37	mg/l	0.05	None

D-48

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 01-Apr-96 15:00

End of Report

PWC 5090/14

Navy Public Works Center
Environmental Laboratory
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: 62466
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62466
Sample Name / Location	MW-12 BF - 1107
Collector's Name	PJB
Date & Time Collected	6/3/96 @ 1015
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/6/96 / JM
Date of Analysis	06/6/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 62466	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	112
Toluene-d8	86-119	104
Bromoflourobenzene	85-116	105

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated

D-66

Navy Public Works Center
Environmental Laboratory

Bldg 3887, Code 920
NAS Pensacola, Fl. 32508-6500
Phone (904) 452-4728
Autovon 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: 9603050 D
Sample Date: 11 Mar 96
Received Date: 12 Mar 96
Sample Site: Bronson Field, Bldg. 1107
Job Order #: 130 5001

Sample ID#	Lab	1- 60988	2- 60989	3- 60990	4- 60991	Analyst(s):
Sample Name	Requester	MW-5	MW-6	MW-7	MW-8	ICP - Brian Nelson
Collector Name		P. J. B.	P. J. B.	P. J. B.	P. J. B.	
Date/Time	Comp start					
Collected	Comp stop					Date(s) of analysis:
(Military)	Grab	11 Mar 96 @ 1400	11 Mar 96 @ 1430	11 Mar 96 @ 1100	11 Mar 96 @ 1130	ICP - 26 Mar 96
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab	
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	

PARAMETER Metals:	METHOD #	ID# 1- 60988	units	Det. Limit	ID# 2- 60989	units	Det. Limit	ID# 3- 60990	units	Det. Limit	ID# 4- 60991	units	Det. Limit	Preservative(s)
Lead(Pb)	SW 6010	X 0.52	mg/l	0.05	X 0.28	mg/l	0.05	X 0.23	mg/l	0.05	X 0.12	mg/l	0.05	None

D-49

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 01-Apr-96 14:58

End of Report

PWC 5090/14

Navy Public Works Center
Environmental Laboratory

Bldg 3887, Code 920
NAS Pensacola, Fl. 32508-6500
Phone (904) 452-4728
Autovon 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: 9603049 D
Sample Date: 11 Mar 96
Received Date: 12 Mar 96
Sample Site: Bronson Field, Bldg. 1107
Job Order #: 130 5001

Sample ID#	Lab	1- 60985	2- 60986	3-	4-	Analyst(s):
Sample Name	Requester	Eq. Blank	Duplicate			ICP – Brian Nelson
Collector Name		P. J. B.	P. J. B.			
Date/Time	Comp start					
Collected	Comp stop					Date(s) of analysis:
(Military)	Grab	11 Mar 96 @ 1045	11 Mar 96 @ N/S			ICP – 26 Mar & 1 Apr 96
Sample Type	Comp/Grab	Grab	Grab			
Sample Matrix		Deionized water	Groundwater			

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.	
Metals:	METHOD #	1- 60985	units	Limit	2- 60986	units	Limit	3-	units	Limit	4-	units	Limit	Preservative(s)
Lead(Pb)	SW 6010	X BDL	mg/l	0.05	X 0.42	mg/l	0.05		mg/l	0.05		mg/l	0.05	None

D-50

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: 01-Apr-96 14:58

End of Report

PWC 5090/14

Navy Public Works Center
Environmental Laboratory

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

Laboratory Report
EDB by Method 504

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

Report Number:	9603050 C
Sample Date:	11 Mar 96
Received Date:	12 Mar 96
Sample Site:	Bronson Field, Bldg. 1107
Job Order #:	130 5001

Sample ID#	Lab	1- 60988	2- 60989	3- 60990	4- 60991
Sample Name	Requester	MW-5	MW-6	MW-7	MW-8
Collector Name		P. J. B.	P. J. B.	P. J. B.	P. J. B.
Date/Time	Comp start				
Collected	Comp stop				
(Military)	Grab	11 Mar 96 @ 1400	11 Mar 96 @ 1430	11 Mar 96 @ 1100	11 Mar 96 @ 1130
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab
Analyst		B. Jacquart	B. Jacquart	B. Jacquart	B. Jacquart
Date of Analysis		22 Mar 96	22 Mar 96	22 Mar 96	22 Mar 96
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Dilution		Dilution X 1	Dilution X 1	Dilution X 1	Dilution X 1

PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Volatiles by GCMS (Capillary)	METHOD #	1- 60988	units	Limit	2- 60989	units	Limit	3- 60990	units	Limit	4- 60991	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	109	81	101	91

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

Approved by: Jim Taylor QC Officer
Jerry Dees, Laboratory Director

Date/Time: 29-Mar-96 @ 11:11
Report Generated

PWC 5090/14

End of Report

Navy Public Works Center
Environmental Laboratory

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

Laboratory Report
EDB by Method 504

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

Report Number:	9603051 C
Sample Date:	11 Mar 96
Received Date:	12 Mar 96
Sample Site:	Bronson Field, Bldg. 1107
Job Order #:	130 5001

Sample ID#	Lab	1- 60992			2- 60993			3- 60994			4- 60995		
Sample Name	Requester	MW-1			MW-2			MW-3			MW-4		
Collector Name		P. J. B.			P. J. B.			P. J. B.			P. J. B.		
Date/Time	Comp start												
Collected	Comp stop												
(Military)	Grab	11 Mar 96 @ 1300			11 Mar 96 @ 1230			11 Mar 96 @ 1200			11 Mar 96 @ 1330		
Sample Type	Comp/Grab	Grab			Grab			Grab			Grab		
Analyst		B. Jacquart			B. Jacquart			B. Jacquart			B. Jacquart		
Date of Analysis		22 Mar 96			22 Mar 96			22 Mar 96			22 Mar 96		
Sample Matrix		Groundwater			Groundwater			Groundwater			Groundwater		
Dilution		Dilution X 1			Dilution X 1			Dilution X 1			Dilution X 1		
PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Volatiles by GCMS (Capillary)	METHOD #	1- 60992	units	Limit	2- 60993	units	Limit	3- 60994	units	Limit	4- 60995	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	101	96	96	67

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

Approved by: Jim Taylor Q.C. Officer
Jerry Dees, Laboratory Director

Date/Time: 29-Mar-96 @ 12:40
Report Generated

PWC 5090/14

End of Report

Navy Public Works Center
Environmental Laboratory

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

Laboratory Report
EDB by Method 504

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

Report Number: 9603049 C
Sample Date: 11 Mar 96
Received Date: 12 Mar 96
Sample Site: Bronson Field, Bldg. 1107
Job Order #: 130 5001

Sample ID#	Lab	1- 60985			2- 60986			3- 60987			4-		
Sample Name	Requester	Eq. Blank			Duplicate			Trip Blank					
Collector Name		P. J. B.			P. J. B.			P. J. B.					
Date/Time	Comp start												
Collected	Comp stop												
(Military)	Grab	11 Mar 96 @ 1045			11 Mar 96 @ N/S			11 Mar 96 @ N/S					
Sample Type	Comp/Grab	Grab			Grab			Grab					
Analyst		B. Jacquart			B. Jacquart			B. Jacquart					
Date of Analysis		22 Mar 96			22 Mar 96			22 Mar 96					
Sample Matrix		Deionized water			Groundwater			Deionized water					
Dilution		Dilution X 1			Dilution X 1			Dilution X 1			Dilution X 1		
PARAMETER		ID#		Det.	ID#		Det.	ID#		Det.	ID#		Det.
Volatiles by GCMS (Capillary)	METHOD #	1- 60985	units	Limit	2- 60986	units	Limit	3- 60987	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	83	92	81	

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

Approved by: Jim Taylor QC Officer
Jerry Dees, Laboratory Director

Date/Time: 29-Mar-96 @ 11:09
Report Generated

PWC 5090/14

End of Report

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

"FINAL REPORT FORMAT - SINGLE"

Accession:	605459
Client:	NAS, CO, PWC
Project Number:	CALL #9037
Project Name:	FL PRO
Project Location:	BRONSON FIELD 1101, 1116, 1107
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:	20-MAY-96 1625
Client Sample Id:	RECOVERY WELL	Received Date:	21-MAY-96
Batch: FPW043		Extraction Date:	23-MAY-96
Blank: A	Dry Weight %: N/A	Analysis Date:	03-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	360	100	
NONATRIACONTANE	%REC/SURR	42	42-193	
ORTHO TER PHENYL	%REC/SURR	128	82-142	
ANALYST	INITIALS	KS		

Comments:

NASLAB LAB

NAS, CO, PWC
COMMANDING OFFICER, PUBLIC WORKS CENTER,
NAS PENSACOLA , FL 32508-5303

Accession #: 605459
ATI Project Manager: RICK HAYES
Customer #: 514002
P.O. Number: STUB #6135-4909
Project Number: CALL #9037
Project Name: FL PRO
Project Location: BRONSON FIELD 1101, 1116, 1107
Send Report To: GREG CAMPBLE
Sampled By: RICKY HAGENDORFER/BARRY HICKS
Requirement Code: I
Copies of Report: 1

-- INORGANIC ANALYSIS --

SA #	Client Desc	Matx Code	Group Code	Method Code	Date Sampled	Time Samp	Date Received

-- ORGANIC ANALYSIS --

1	RECOVERY WELL	GW		FLPRO	20-MAY-96	1625	21-MAY-96
2	MW-1 (1116)	GW		FLPRO	20-MAY-96	1910	21-MAY-96
3	MW-1 (1101)	GW		FLPRO	20-MAY-96	1940	21-MAY-96
4	EQUIP. BLANK	WA		FLPRO	20-MAY-96	1900	21-MAY-96

-- MISCELLANEOUS CHARGES --

Lab Code	Description	Qnty

NO MISCELLANEOUS CHARGES

STUB #6135-4909
CALL #9037
JOB #1305001

-- INORGANIC ANALYSIS --

Group Code	Method Code	Description

-- ORGANIC ANALYSIS --

0	FLPRO	FLPRO\PETRO. HYDROCARBON RANGE C8-C40

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: 62464 A
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62464			
Sample Name / Location	MW-10 BF-1107			
Collector's Name	PJB			
Date & Time Collected	6/3/96 @ 0945			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	06/11/96 -BJ			
Date of Analysis	06/11/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	**1- 62464**	**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	99 %

COMMENTS :

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

Approved by : Jerry Deeb, Laboratory Director

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

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

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

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 62464
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62464**		
Sample Name / Location	MW-10 BF-1107		
Collector's Name	PJB		
Date & Time Collected	6/3/96 @ 0945		
Sample Type (composite or grab)	Grab		
Analyst	M. Chambers		
Date of Extraction / Initials	6/5/96; JJ		
Date of Analysis	6/7/96		
Sample Matrix	GW		
Dilution		X	1.23
COMPOUND NAME	1- **62464**	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
'louranthene	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	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	86
2-Flourobiphenyl	43-116	92
Terphenyl -d14	33-141	97

COMMENTS :

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

Approved by : Date : 6/24/96

D-61

Navy Public Works Center
Environmental Laboratory
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: 62464
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62464			
Sample Name / Location	MW-10 BF-1107			
Collector's Name	PJB			
Date & Time Collected	6/3/96 @ 0945			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	06/6/96 / JM			
Date of Analysis	06/6/96			
Sample Matrix	GW			
Dilution		X	1	
Compound Name	**1- 62464**	**units**	**Det. Limit**	**Flags**
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	5	
Chloroform	BDL	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodiflouromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	5	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	5	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichloroflouromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
1,2-Dichloroethane-d4	75-133	108
Toluene-d8	86-119	106
Bromoflourobenzene	85-116	105

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
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

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: 62463 A
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62463			
Sample Name / Location	MW-9 BF - 1107			
Collector's Name	PJB			
Date & Time Collected	6/3/96 @ 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- 62463**	**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	99 %

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

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

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 62463
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62463**		
Sample Name / Location	MW-9 BF - 1107		
Collector's Name	PJB		
Date & Time Collected	6/3/96 @ 0930		
Sample Type (composite or grab)	Grab		
Analyst	M. Chambers		
Date of Extraction / Initials	6/5/96; JJ		
Date of Analysis	6/7/96		
Sample Matrix	GW		
Dilution		X	1.29
COMPOUND NAME	1- **62463**	units	Det. Limit
Acenaphthene	BDL	UG/L	6
Acenaphthylene	BDL	UG/L	6
Anthracene	BDL	UG/L	3
Benzo(a)anthracene	BDL	UG/L	4
Benzo(a)pyrene	BDL	UG/L	3
Benzo(b)flouranthene	BDL	UG/L	5
Benzo(g,h,i)perylene	BDL	UG/L	4
Benzo(k)flouranthene	BDL	UG/L	5
Chrysene	BDL	UG/L	4
Dibenz(a,h)anthracene	BDL	UG/L	4
Flouranthene	BDL	UG/L	3
Fluorene	BDL	UG/L	5
Indeno(1,2,3-cd)pyrene	BDL	UG/L	3
1-Methylnaphthalene *	BDL	UG/L	6
2-Methylnaphthalene	BDL	UG/L	9
Naphthalene	BDL	UG/L	9
Phenanthrene	BDL	UG/L	4
Pyrene	BDL	UG/L	4

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
Nitrobenzene- d5	35-114	82
2-Flourobiphenyl	43-116	84
Terphenyl -d14	33-141	96

COMMENTS :

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

Approved by : Date : 6/24/96

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

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

Analytical Report

601/602 Volatiles by Method 8260

Lab Report Number: 62463
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62463
Sample Name / Location	MW-9 BF - 1107
Collector's Name	PJB
Date & Time Collected	6/3/96 @ 0930
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/6/96 / JM
Date of Analysis	06/6/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 62463	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	109
Toluene-d8	86-119	105
Bromoflourobenzene	85-116	107

COMMENTS :

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

Approved by : Jerry Does, Laboratory Director

Date: 6/24/96
Report Generated

American Environmental Network, Inc.
11 East Olive Road • Pensacola, FL 32514 • (904) 474-1001

CHAIN OF CUSTODY

AEN ACCESSION #: 605459

PART 1 - Bottle Shipment Information

CLIENT: NAS

CLIENT PROJECT NUMBER:

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

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	MS/MSD	TOTAL # OF BOTTLES
RECOVERY WELL	5-20-96	1625	GW	✓	✓	3
MW-1 (1116)	5-20-96	1910	GW	✓		1
MW-1 (1101)	5-20-96	1940	GW	✓		1
Quip. BLANK	5-20-96	1900	WATER	✓		1

Total Number of Bottles/Containers: 6

Relinquished By	Date	Time	Received By	Date	Time
Ricky Hagendorfer	5-21-96	1500	Linda L. Kitt	5/21/96	1500

Client NAS			Purchase Order Number 6135-4909
Address			Project Number CALL# 9037
City	State	Zip	Project Name JOB# 1305001
Phone Number ( ) 452-2170	Fax Number ( )		Project Location BRONSON FIELD 1101, 1116, 1107
Project Manager GREG CAMPBLE			Sampled By RICKY HAGENDORFER / BARRY HICKS

TURNAROUND TIMES	check below	SPECIAL INSTRUCTIONS
Standard - 14-21 days	✓	SAMPLING CHARGE WILL BE BILLED SEPERATE.
RUSH (must be approved in advance)		
- 48 hours - 2x standard price		
3-7 days - 1.5x standard price		
TCLP - 1 week rush 1.5x standard price		
QC Level none I II III IV (circle one)		Copies of report needed _____

FORM # 12694

D-56

WHITE — LAB CANARY — REPORT PINK — CLIENT

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

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: 62465 A
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62465			
Sample Name / Location	MW-11 BF -1107			
Collector's Name	PJB			
Date & Time Collected	6/3/96 @ 1000			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	06/11/96 -BJ			
Date of Analysis	06/11/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	**1- 62465**	**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	140 %

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/25/96
Report Generated

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

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 62465
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62465**		
Sample Name / Location	MW-11 BF -1107		
Collector's Name	PJB		
Date & Time Collected	6/3/96 @ 1000		
Sample Type (composite or grab)	Grab		
Analyst	M. Chambers		
Date of Extraction / Initials	6/5/96; JJ		
Date of Analysis	6/7/96		
Sample Matrix	GW		
Dilution		X	1.26
COMPOUND NAME	1- **62465**	units	Det. Limit
Acenaphthene	BDL	UG/L	6
Acenaphthylene	BDL	UG/L	6
Anthracene	BDL	UG/L	3
Benzo(a)anthracene	BDL	UG/L	4
Benzo(a)pyrene	BDL	UG/L	3
Benzo(b)flouranthene	BDL	UG/L	5
Benzo(g,h,i)perylene	BDL	UG/L	4
Benzo(k)flouranthene	BDL	UG/L	5
Chrysene	BDL	UG/L	4
Dibenz(a,h)anthracene	BDL	UG/L	4
Flouranthene	BDL	UG/L	3
Fluorene	BDL	UG/L	5
Indeno(1,2,3-cd)pyrene	BDL	UG/L	3
1-Methylnaphthalene *	BDL	UG/L	6
2-Methylnaphthalene	BDL	UG/L	9
Naphthalene	BDL	UG/L	9
Phenanthrene	BDL	UG/L	4
Pyrene	BDL	UG/L	4

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
Nitrobenzene- d5	35-114	85
2-Flourobiphenyl	43-116	88
Terphenyl -d14	33-141	107

COMMENTS :

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

Approved by : Date : 6/24/96

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

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

Analytical Report

601/602 Volatiles by Method 8260

Lab Report Number: 62465
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62465
Sample Name / Location	MW-11 BF -1107
Collector's Name	PJB
Date & Time Collected	6/3/96 @ 1000
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/5/96 / JM
Date of Analysis	06/5/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 62465	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	105
Toluene-d8	86-119	103
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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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: 62466 A
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62466			
Sample Name / Location	MW-12 BF - 1107			
Collector's Name	PJB			
Date & Time Collected	6/3/96 @ 1015			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	06/11/96 -BJ			
Date of Analysis	06/11/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	**1- 62466**	**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. * = 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

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

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 62466
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62466**		
Sample Name / Location	MW-12 BF - 1107		
Collector's Name	PJB		
Date & Time Collected	6/3/96 @ 1015		
Sample Type (composite or grab)	Grab		
Analyst	M. Chambers		
Date of Extraction / Initials	6/5/96; JJ		
Date of Analysis	6/8/96		
Sample Matrix	GW		
Dilution		X	1.39
COMPOUND NAME	1- **62466**	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	70
2-Flourobiphenyl	43-116	76
Terphenyl -d14	33-141	74

COMMENTS :

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

Approved by : Date : 6/24/96

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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: 62467
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62467
Sample Name / Location	MW-13 BF - 1107
Collector's Name	PJB
Date & Time Collected	6/3/96 @ 1030
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/5/96 / JM
Date of Analysis	06/5/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 62467	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	106
Toluene-d8	86-119	103
Bromoflourobenzene	85-116	101

COMMENTS :

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

Approved by : Jerry Daes, Laboratory Director

Date: 6/24/96
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 End of Report

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Navy Public Works Center
Environmental Laboratory
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~N 922-4728/3642

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

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 62467
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62467**
Sample Name / Location	MW-13 BF - 1107
Collector's Name	PJB
Date & Time Collected	6/3/96 @ 1030
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	6/5/96; JJ
Date of Analysis	6/7/96
Sample Matrix	GW
Dilution	X 1.17

COMPOUND NAME	1- **62467**	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
~louranthene	BDL	UG/L	2
. lourene	BDL	UG/L	5
Indeno(1,2,3-cd)pyrene	BDL	UG/L	2
1-Methylnaphthalene *	BDL	UG/L	6
2-Methylnaphthalene	BDL	UG/L	8
Naphthalene	BDL	UG/L	8
Phenanthrene	BDL	UG/L	4
Pyrene	BDL	UG/L	4

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
Nitrobenzene- d5	35-114	87
2-Flourobiphenyl	43-116	90
Terphenyl -d14	33-141	101

COMMENTS :

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

Approved by : Date : 6/24/96

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

Analytical Report

601/602 Volatiles by Method 8260

Lab Report Number: 62468
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62468			
Sample Name / Location	MW-14 BF - 1107			
Collector's Name	PJB			
Date & Time Collected	6/3/96 @ 1045			
Sample Type (composite or grab)	Grab			
Analyst	J. Moore			
Date of Extraction / Initials	06/6/96 / JM			
Date of Analysis	06/6/96			
Sample Matrix	GW			
Dilution		X	1	
Compound Name	**1- 62468**	**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**	109
Toluene-d8	**86-119**	102
Bromoflourobenzene	**85-116**	101

COMMENTS :

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

Approved by : Jerry Does, Laboratory Director

Date: 6/23/96
Report Generated

Navy Public Works Center
Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, FL 32508 - 6500
Phone (904) 452-4728/3642
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: 62467 A
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62467			
Sample Name / Location	MW-13 BF - 1107			
Collector's Name	PJB			
Date & Time Collected	6/3/96 @ 1030			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	06/11/96 -BJ			
Date of Analysis	06/11/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	**1- 62467**	**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. * = FL HRS certification pending.

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

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~N 922-4728/3642

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

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 62468
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62468**		
Sample Name / Location	MW-14 BF - 1107		
Collector's Name	PJB		
Date & Time Collected	6/3/96 @ 1045		
Sample Type (composite or grab)	Grab		
Analyst	M. Chambers		
Date of Extraction / Initials	6/5/96; JJ		
Date of Analysis	6/7/96		
Sample Matrix	GW		
Dilution		X	1.26
COMPOUND NAME	1- **62468**	units	Det. Limit
Acenaphthene	BDL	UG/L	6
Acenaphthylene	BDL	UG/L	6
Anthracene	BDL	UG/L	3
Benzo(a)anthracene	BDL	UG/L	4
Benzo(a)pyrene	BDL	UG/L	3
Benzo(b)flouranthene	BDL	UG/L	5
Benzo(g,h,i)perylene	BDL	UG/L	4
Benzo(k)flouranthene	BDL	UG/L	5
Chrysene	BDL	UG/L	4
Dibenz(a,h)anthracene	BDL	UG/L	4
Flouranthene	BDL	UG/L	3
Flourene	BDL	UG/L	5
Indeno(1,2,3-cd)pyrene	BDL	UG/L	3
1-Methylnaphthalene *	BDL	UG/L	6
2-Methylnaphthalene	BDL	UG/L	9
Naphthalene	BDL	UG/L	9
Phenanthrene	BDL	UG/L	4
Pyrene	BDL	UG/L	4

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
Nitrobenzene- d5	35-114	84
2-Flourobiphenyl	43-116	89
Terphenyl -d14	33-141	98

COMMENTS :

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

Approved by : Date : 6/24/96

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

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:	62468 A
Sample Date:	06/3/96
Received Date:	06/3/96
Sample Site:	Bronson Field
Job Order No.:	130 5001

LAB Sample ID#	1- 62468			
Sample Name / Location	MW-14 BF - 1107			
Collector's Name	PJB			
Date & Time Collected	6/3/96 @ 1045			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	06/11/96 -BJ			
Date of Analysis	06/11/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	**1- 62468**	**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	99 %

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 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: 62469
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62469
Sample Name / Location	DMW-15 BF - 1107
Collector's Name	PJB
Date & Time Collected	6/3/96 @ 1100
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/5/96 / JM
Date of Analysis	06/5/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 62469	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	112
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

 End of Report

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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: 62469
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62469**		
Sample Name / Location	DMW-15 BF - 1107		
Collector's Name	PJB		
Date & Time Collected	6/3/96 @ 1100		
Sample Type (composite or grab)	Grab		
Analyst	M. Chambers		
Date of Extraction / Initials	6/5/96; JJ		
Date of Analysis	6/7/96		
Sample Matrix	GW		
Dilution	X 1.12		
COMPOUND NAME	1- **62469**	units	Det. Limit
Acenaphthene	BDL	UG/L	6
Acenaphthylene	BDL	UG/L	6
Anthracene	BDL	UG/L	2
Benzo(a)anthracene	BDL	UG/L	3
Benzo(a)pyrene	BDL	UG/L	2
Benzo(b)flouranthene	BDL	UG/L	4
Benzo(g,h,i)perylene	BDL	UG/L	3
Benzo(k)flouranthene	BDL	UG/L	4
Chrysene	BDL	UG/L	3
Dibenz(a,h)anthracene	BDL	UG/L	3
louranthene	BDL	UG/L	2
Flourene	BDL	UG/L	4
Indeno(1,2,3-cd)pyrene	BDL	UG/L	2
1-Methylnaphthalene *	BDL	UG/L	6
2-Methylnaphthalene	BDL	UG/L	8
Naphthalene	BDL	UG/L	8
Phenanthrene	BDL	UG/L	3
Pyrene	BDL	UG/L	3

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
Nitrobenzene- d5	35-114	79
2-Flourobiphenyl	43-116	78
Terphenyl -d14	33-141	92

COMMENTS :

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

Approved by : Date : 6/24/96

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

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: 62469 A
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62469			
Sample Name / Location	DMW-15 BF - 1107			
Collector's Name	PJB			
Date & Time Collected	6/3/96 @ 1100			
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- 62469**	**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	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

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: 62470
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62470
Sample Name / Location	Equipment Blank BF - 1107
Collector's Name	PJB
Date & Time Collected	6/3/96 @ 0915
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/5/96 / JM
Date of Analysis	06/5/96
Sample Matrix	DI Water
Dilution	X 1

Compound Name	1- 62470	units	Det. Limit	Flags
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	5	
Chloroform	BDL	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodiflouromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	5	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	5	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichloroflouromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
1,2-Dichloroethane-d4	75-133	107
Toluene-d8	86-119	102
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 Deas, 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: 62470
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62470**		
Sample Name / Location	Equipment Blank BF - 1107		
Collector's Name	PJB		
Date & Time Collected	6/3/96 @ 0915		
Sample Type (composite or grab)	Grab		
Analyst	M. Chambers		
Date of Extraction / Initials	6/5/96; JJ		
Date of Analysis	6/8/96		
Sample Matrix	DI		
Dilution	X 1.01		
COMPOUND NAME	1- **62470**	units	Det. Limit
Acenaphthene	BDL	UG/L	5
Acenaphthylene	BDL	UG/L	5
Anthracene	BDL	UG/L	2
Benzo(a)anthracene	BDL	UG/L	3
Benzo(a)pyrene	BDL	UG/L	2
Benzo(b)flouranthene	BDL	UG/L	4
Benzo(g,h,i)perylene	BDL	UG/L	3
Benzo(k)flouranthene	BDL	UG/L	4
Chrysene	BDL	UG/L	3
Dibenz(a,h)anthracene	BDL	UG/L	3
Flouranthene	BDL	UG/L	2
Flourene	BDL	UG/L	4
Indeno(1,2,3-cd)pyrene	BDL	UG/L	2
1-Methylnaphthalene *	BDL	UG/L	5
2-Methylnaphthalene	BDL	UG/L	7
Naphthalene	BDL	UG/L	7
Phenanthrene	BDL	UG/L	3
Pyrene	BDL	UG/L	3

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
Nitrobenzene- d5	35-114	61
2-Flourobiphenyl	43-116	64
Terphenyl -d14	33-141	84

COMMENTS :

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

Approved by: Date : 6/24/96

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

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: 62470 A
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62470			
Sample Name / Location	Equipment Blank BF - 1107			
Collector's Name	PJB			
Date & Time Collected	6/3/96 @ 0915			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	06/11/96 -BJ			
Date of Analysis	06/11/96			
Sample Matrix	DI Water			
Dilution	X 1			
Compound Name	**1- 62470**	**units**	**Det. Limit**	**Flags**
Ethylene Dibromide (EDB)	BDL	ug/L	0.02	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	Percent Recovery
Tetra-Chloro-m-Xylene	54-140	102 %

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/24/96
Report Generated

Page 1 of 1 End of Report

Navy Public Works Center
Environmental Laboratory

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

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

Analytical Report
610 PAH's by Method 8270

Lab Report Number: 62471
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- **62471**
Sample Name / Location	Duplicate BF - 1107
Collector's Name	PJB
Date & Time Collected	6/3/96 @
Sample Type (composite or grab)	Grab
Analyst	M. Chambers
Date of Extraction / Initials	6/5/96; JJ
Date of Analysis	6/8/96
Sample Matrix	GW
Dilution	X 1.18

COMPOUND NAME	1- **62471**	units	Det. Limit
Acenaphthene	BDL	UG/L	6
Acenaphthylene	BDL	UG/L	6
Anthracene	BDL	UG/L	2
Benzo(a)anthracene	BDL	UG/L	4
Benzo(a)pyrene	BDL	UG/L	2
Benzo(b)flouranthene	BDL	UG/L	5
Benzo(g,h,i)perylene	BDL	UG/L	4
Benzo(k)flouranthene	BDL	UG/L	5
Chrysene	BDL	UG/L	4
Dibenz(a,h)anthracene	BDL	UG/L	4
Flouranthene	BDL	UG/L	2
Flourene	BDL	UG/L	5
Indeno(1,2,3-cd)pyrene	BDL	UG/L	2
1-Methylnaphthalene *	BDL	UG/L	6
2-Methylnaphthalene	BDL	UG/L	8
Naphthalene	BDL	UG/L	8
Phenanthrene	BDL	UG/L	4
Pyrene	BDL	UG/L	4

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
Nitrobenzene- d5	35-114	70
2-Flourobiphenyl	43-116	68
Terphenyl -d14	33-141	81

COMMENTS :

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

Approved by Date : 6/24/96

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

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

Analytical Report

601/602 Volatiles by Method 8260

Lab Report Number: 62471
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62471
Sample Name / Location	Duplicate BF - 1107
Collector's Name	PJB
Date & Time Collected	6/3/96 @ Not Submitted
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/5/96 / JM
Date of Analysis	06/5/96
Sample Matrix	GW
Dilution	X 1

Compound Name	1- 62471	units	Det. Limit	Flags
Benzene	BDL	ug/L	1	
Bromodichloromethane	BDL	ug/L	1	
Bromoform	BDL	ug/L	2	
Bromomethane	BDL	ug/L	3	
Carbon Tetrachloride	BDL	ug/L	1	
Chlorobenzene	BDL	ug/L	1	
Chloroethane	BDL	ug/L	1	
2-Chloroethylvinyl ether	BDL	ug/L	5	
Chloroform	BDL	ug/L	1	
Chloromethane	BDL	ug/L	1	
Dibromochloromethane	BDL	ug/L	1	
1,2-Dichlorobenzene	BDL	ug/L	1	
1,3-Dichlorobenzene	BDL	ug/L	1	
1,4-Dichlorobenzene	BDL	ug/L	1	
Dichlorodiflouromethane	BDL	ug/L	1	
1,1-Dichloroethane	BDL	ug/L	1	
1,2-Dichloroethane	BDL	ug/L	1	
1,1-Dichloroethene	BDL	ug/L	1	
trans-1,2-Dichloroethene	BDL	ug/L	1	
1,2-Dichloropropane	BDL	ug/L	1	
cis-1,3-Dichloropropene	BDL	ug/L	1	
trans-1,3-Dichloropropene	BDL	ug/L	1	
Ethylbenzene	BDL	ug/L	1	
Methylene Chloride	BDL	ug/L	5	
Methyl-tert-butyl ether (MTBE) *	BDL	ug/l	5	
1,1,2,2-Tetrachloroethane	BDL	ug/L	1	
Tetrachloroethene	BDL	ug/L	1	
Toluene	BDL	ug/L	1	
1,1,1-Trichloroethane	BDL	ug/L	1	
1,1,2-Trichloroethane	BDL	ug/L	1	
Trichloroethene	BDL	ug/L	1	
Trichloroflouromethane	BDL	ug/L	1	
Vinyl Chloride	BDL	ug/L	1	
Xylenes (Total)	BDL	ug/L	1	

SURROGATE SPIKE RECOVERIES

	Acceptance Limits	
1,2-Dichloroethane-d4	75-133	110
Toluene-d8	86-119	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
Report Generated

 End of Report

D-81

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:	62471 A
Sample Date:	06/3/96
Received Date:	06/3/96
Sample Site:	Bronson Field
Job Order No.:	130 5001

LAB Sample ID#	1- 62471			
Sample Name / Location	Duplicate BF - 1107			
Collector's Name	PJB			
Date & Time Collected	6/3/96 @ Not Submitted			
Sample Type (composite or grab)	Grab			
Analyst	B. Jacquart			
Date of Extraction / Initials	06/12/96 -BJ			
Date of Analysis	06/12/96			
Sample Matrix	GW			
Dilution	X 1			
Compound Name	**1- 62471**	**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. * = FL HRS certification pending.

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: 62472
Sample Date: 06/3/96
Received Date: 06/3/96
Sample Site: Bronson Field
Job Order No.: 130 5001

LAB Sample ID#	1- 62472
Sample Name / Location	Trip Blank BF - 1107
Collector's Name	PJB
Date & Time Collected	6/3/96 @ AM
Sample Type (composite or grab)	Grab
Analyst	J. Moore
Date of Extraction / Initials	06/5/96 / JM
Date of Analysis	06/5/96
Sample Matrix	DI
Dilution	X 1

Compound Name	1- 62472	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	105
Toluene-d8	86-119	102
Bromoflourobenzene	85-116	101

COMMENTS :

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

Approved by : Jerry Dees, Laboratory Director

Date: 6/23/96
Report Generated

Joe

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 #: 130 5001

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: POR ~~5-22-96~~ 6·3·96
Received Date: 6.3.96
Sample Site: BF1107
Lab Due Date:

Sample ID #	Lab	#1- 62463		#2- 62464		#3-62465		#4-62466		Notes:		
Sample Name or Location	----------	MW-9 ✓		MW-10 ✓		MW-11 ✓		MW-12 ✓		XAG		
Sampled by	----------	PJB		PJB		PJB		PJB				
Composite Date/Time Collected	Begin											
	Frequency											
	End											
Grab Time	----------	0930		0945		1000		1015				
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	✓	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									5	40 ml VOA Vial x 2	HCl/4° C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4° C
Gas Chromatography	EPA SW 8000									5	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Halo. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCl/4° C/None
Non-Halo. Vol. Org./GC	EPA SW 8015(MOD)									4	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCl/4° C/None
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									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									5	40ml VOAx2/4 oz.	HCl/4° C/None
VOC/GCMS-Cap.	EPA SW 8260									5	40ml VOAx2/4 oz.	HCl/4° C/None
Semivol. Org./GCMS-Cap.	EPA SW 8270A									15	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310	X	2 PAH	X	2 PAH	X	2 PAH	X	2 PAH		1Lx3/4 oz.	4° C/None
PARAMETER by Group Name	METHOD SOURCE	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Gasoline Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Kerosene Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	EPA 418.1	X	2 TPH	X	2 TPH	X	2 TPH	X	2 TPH		Consult Lab	Consult Lab
RCRA Metals (8)	EPA Various										Consult Lab	Consult Lab
TCLP Metals (8) w/extraction	EPA SW-846										Consult Lab	Consult Lab
Lead (Pb)	EPA 239.2	~~X~~	~~1 Pb~~ PJB	~~X~~	~~1 Pb~~ PJB	~~X~~	~~1 Pb~~ PJB	~~X~~	~~1 Pb~~ PJB		250ml/4 oz.	HNO3/None
Other:												

Comments: Leads not Sampled.

Relinquished by: Patil L. Vo
Date/Time: 6·3·96 / 1500

Received by: J W Moore
Date/Time: 6-3-96 1500

PWC 8510/8

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NPWC Environmental Laboratory
Bldg 3297, Code 920
NAS Pensacola, FL 32508-5500
Ph#-(904)452-4728
Autovon-922-4728

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

Report Required? Yes No DEP? Yes No
Lab ID Number:
Sample Date: ~~5-22-96~~ 6-3-96
Received Date: 6-3-96
Sample Site: BF 1107
Lab Due Date:

Sample ID #	Lab	#1-62467		#2-62468		#3-62469		#4-62470		Notes:		
Sample Name or Location	----------	MW-13 ✓		MW-14 ✓		DMW-15 ✓		EQ. BLANK ✓		XAG		
Sampled by	----------	PJB		PJB		PJB		PJB				
Composite Date/Time Collected	Begin											
	Frequency											
	End											
Grab Time	----------	1030		1045		1100		0915				
Sample Matrix	----------	GW		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	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 3	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									15	1Lx3/4 oz	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310	X	2 PAA	X	2 PAA	X	2 PAA	X	2 PAA		1Lx3/4 oz	4° C/None
PARAMETER by Group Name	METHOD SOURCE	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Gasoline Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Kerosene Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW-846										Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	EPA 418.1	X	2 TPH	X	2 TPH	X	2 TPH	X	2 TPH		Consult Lab	Consult Lab
RCRA Metals (8)	EPA Various										Consult Lab	Consult Lab
TCLP Metals (8) w/extraction	EPA SW-846										Consult Lab	Consult Lab
Lead (Pb)	EPA 239.2	~~X~~	~~1 Pb~~ PJB	~~X~~	~~1 Pb~~ PJB	~~X~~	~~1 Pb~~ PJB	~~X~~	~~1 Pb~~ PJB		250ml/4 oz	HNO/None
Other:												

Comments: Leads Not Sampled

Relinquished by: Patrick D. B
Date/Time: 6-3-96 / 1500

Received by: Jeff Moore
Date/Time: 6-3-96 / 1500

PWC 9610/6

UST CHAIN OF CUSTODY/REQUEST FOR ANALYSIS

NC 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: PJB ~~5.22.96~~ 6.3.96
Received Date: 6.3.96
Sample Site: BF 1107
Lab Due Date:

Sample ID #	Lab	#1- 62471	#2- 62472	#3-	#4-	Notes:
Sample Name or Location	---------- / ----------	Duplicate	Trip Blank			KAG
Sampled by	----------	PJB	PJB			
Composite Date/Time Collected	Begin / Frequency / End					
Grab Time	----------	—	AM			
Sample Matrix	----------	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							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					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									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								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	~~X~~	~~1 PB~~ PJB								250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: Patil & Tom
Date/Time: 6.3.96 / 1500

Received by: JW Moore
Date/Time: 6-3-96 1500

PWC 951018

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

Analysis Report

Analysis: FLPRO\PETRO. HYDROCARBON RANGE C8-C40

Accession:	606079
Client:	NAS, CO, PWC
Project Number:	CALL #9042
Project Name:	FL PRO
Project Location:	BRONSON SITE 1107
Department:	SEMI-VOLATILE FUELS

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

"FINAL REPORT FORMAT - SINGLE"

Accession: 606079
Client: NAS, CO, PWC
Project Number: CALL #9042
Project Name: FL PRO
Project Location: BRONSON SITE 1107
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 MW-9 Sample Date/Time: 03-JUN-96 0930
Client Sample Id: 62463 BRONSON SITE 1107 Received Date: 06-JUN-96

Batch: FPW049 Extraction Date: 07-JUN-96
Blank: A Dry Weight %: N/A Analysis Date: 13-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	ND	100	
NONATRIACONTANE	%REC/SURR	48	42-193	
ORTHO TER PHENYL	%REC/SURR	89	82-142	
ANALYST	INITIALS	KS		

Comments:

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

"FINAL REPORT FORMAT - SINGLE"

Accession: 606079
Client: NAS, CO, PWC
Project Number: CALL #9042
Project Name: FL PRO
Project Location: BRONSON SITE 1107
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 MW-10 Sample Date/Time: 03-JUN-96 0945
Client Sample Id: 62464 BRONSON SITE 1107 Received Date: 06-JUN-96

Batch: FPW049 Extraction Date: 07-JUN-96
Blank: A Dry Weight %: N/A Analysis Date: 13-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	ND	100	
NONATRIACONTANE	%REC/SURR	47	42-193	
ORTHO TER PHENYL	%REC/SURR	102	82-142	
ANALYST	INITIALS	KS		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 606079
Client: NAS, CO, PWC
Project Number: CALL #9042
Project Name: FL PRO
Project Location: BRONSON SITE 1107
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 MW-11 Sample Date/Time: 03-JUN-96 1000
Client Sample Id: 62465 BRONSON SITE 1107 Received Date: 06-JUN-96

Batch: FPW049 Extraction Date: 07-JUN-96
Blank: A Dry Weight %: N/A Analysis Date: 13-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	ND	100	
NONATRIACONTANE	%REC/SURR	61	42-193	
ORTHO TER PHENYL	%REC/SURR	96	82-142	
ANALYST	INITIALS	KS		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession:	606079
Client:	NAS, CO, PWC
Project Number:	CALL #9042
Project Name:	FL PRO
Project Location:	BRONSON SITE 1107
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 MW-12	Sample Date/Time:	03-JUN-96 1015
Client Sample Id:	62466 BRONSON SITE 1107	Received Date:	06-JUN-96
Batch: FPW049		Extraction Date:	07-JUN-96
Blank: A	Dry Weight %: N/A	Analysis Date:	13-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:

"FINAL REPORT FORMAT - SINGLE"

Accession:	606079
Client:	NAS, CO, PWC
Project Number:	CALL #9042
Project Name:	FL PRO
Project Location:	BRONSON SITE 1107
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 MW-13	Sample Date/Time:	03-JUN-96 1030
Client Sample Id:	62467 BRONSON SITE 1107	Received Date:	06-JUN-96
Batch: FPW049		Extraction Date:	07-JUN-96
Blank: A	Dry Weight %: N/A	Analysis Date:	13-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	ND	100	
NONATRIACONTANE	%REC/SURR	72	42-193	
ORTHO TER PHENYL	%REC/SURR	87	82-142	
ANALYST	INITIALS	KS		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession:	606079
Client:	NAS, CO, PWC
Project Number:	CALL #9042
Project Name:	FL PRO
Project Location:	BRONSON SITE 1107
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 MW-14	Sample Date/Time:	03-JUN-96 1045
Client Sample Id:	62468 BRONSON SITE 1107	Received Date:	06-JUN-96
Batch: FPW049		Extraction Date:	07-JUN-96
Blank: A	Dry Weight %: N/A	Analysis Date:	13-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	ND	100	
NONATRIACONTANE	%REC/SURR	57	42-193	
ORTHO TER PHENYL	%REC/SURR	97	82-142	
ANALYST	INITIALS	KS		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 606079
Client: NAS, CO, PWC
Project Number: CALL #9042
Project Name: FL PRO
Project Location: BRONSON SITE 1107
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 MW-15 Sample Date/Time: 03-JUN-96 1100
Client Sample Id: 62469 BRONSON SITE 1107 Received Date: 06-JUN-96

Batch: FPW049 Extraction Date: 07-JUN-96
Blank: A Dry Weight %: N/A Analysis Date: 13-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	ND	100	
NONATRIACONTANE	%REC/SURR	53	42-193	
ORTHO TER PHENYL	%REC/SURR	92	82-142	
ANALYST	INITIALS	KS		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession:	606079
Client:	NAS, CO, PWC
Project Number:	CALL #9042
Project Name:	FL PRO
Project Location:	BRONSON SITE 1107
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 Eq. Blank
Client Sample Id: 62470 BRONSON SITE 1107
Sample Date/Time: 03-JUN-96 0915
Received Date: 06-JUN-96

Batch: FPW049
Blank: A Dry Weight %: N/A
Extraction Date: 07-JUN-96
Analysis Date: 13-JUN-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	85	82-142	
ANALYST	INITIALS	KS		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 606079
Client: NAS, CO, PWC
Project Number: CALL #9042
Project Name: FL PRO
Project Location: BRONSON SITE 1107
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 Duplicate
Client Sample Id: 62471 BRONSON SITE 1107
Sample Date/Time: 03-JUN-96 N/S
Received Date: 06-JUN-96

Batch: FPW049
Blank: A
Dry Weight %: N/A
Extraction Date: 07-JUN-96
Analysis Date: 14-JUN-96

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	ND	100	
NONATRIACONTANE	%REC/SURR	60	42-193	
ORTHO TER PHENYL	%REC/SURR	86	82-142	
ANALYST	INITIALS	KS		

Comments:

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

Quality Control Report

Analysis: FLPRO\PETRO. HYDROCARBON RANGE C8-C40

Accession:	606079
Client:	NAS, CO, PWC
Project Number:	CALL #9042
Project Name:	FL PRO
Project Location:	BRONSON SITE 1107
Department:	SEMI-VOLATILE FUELS

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

Date 17-Jun-96

"QC Report"

Title: Water Blank
Batch: FPW049
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: 13-JUN-96 Date Extracted: 07-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	48	42-193

Comments:

"QC Report"

Title: Water Reagent
Batch: FPW049
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: 14-JUN-96
RSD Date Analyzed: 14-JUN-96

RS Date Extracted: 07-JUN-96
RSD Date Extracted: 07-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	3918	78	4004	80	3	30	57-122
Surrogates:									
ORTHO TER PHENYL				88		88			82-142
C-39				44		46			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).

I/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 #: 606079

PART 1 - Bottle Shipment Information

CLIENT: NRWC ENV. LAB

CLIENT PROJECT NUMBER: STUB #6150-9262

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

PARAMETERS AND PRESERVATIVES REQUESTED

SAMPLE I.D.	SITE	SAMPLE DATE	SAMPLE TIME	MATRIX	FL PRO	TOTAL # OF BOTTLES
62463	BROWDON 1107	6/3/96	0930	GW	✓	2
62464			0945		✓	2
62465			1000		✓	2
62466			1015		✓	2
62467			1030		✓	2
62468			1045		✓	2
62469			1100		✓	2
62470			0915		✓	2
62471	✓	✓	NS	✓	✓	2

Total Number of Bottles/Containers: 18

Relinquished By	Date	Time	Received By	Date	Time
Kathy Bruce	6/6/96	0815	Peter Shuba	6-6-96	0815
Peter Shuba	6-6-96	0950	Linda L. Kitt	6/6/96	0950

Client NRWC ENV. LAB CODE 920			Purchase Order Number STUB #6150-9262
Address BLDG 3297			Project Number CALL #9042
City PENSACOLA	State FL	Zip 32508	Project Name FL PRO
Phone Number 904 452-3642	Fax Number (904) 452-2799		Project Location BROWDON SITE 1107
Project Manager JERRY LEES			Sampled By PJB

TURNAROUND TIMES	check below	SPECIAL INSTRUCTIONS
Standard - 14-21 days	✓	STUB #6150-9262 VERBAL 4/13/96
RUSH (must be approved in advance)		CALL #9042 LETTER 4/20/96
<- 48 hours - 2x standard price		JOB 130 5001
3-7 days - 1.5x standard price		ITEM #011
TCLP - 1 week rush 1.5x standard price		
QC Level none I II III IV (circle one)		Copies of report needed 1

FORM # 12694

D-102

WHITE — LAB CANARY — REPORT PINK — CLIENT

Navy Public Works Center
Environmental Laboratory

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

Laboratory Report

Total Lead

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

Lab ID Number:	9704028
Sample Date:	23 Apr 97
Received Date:	23 Apr 97
Sample Site:	Bronson Field Site 1107
Job Order #:	130 5001

Sample ID#	Lab	1- 71701	2- 71702	3- 71703	4- 71704	Analyst(s):
Sample Name	Requester	Site 1107, MW #7	Site 1107, MW #3	Site 1107, MW #8	Site 1107, MW #9	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	23 Apr 97 @ 1235	23 Apr 97 @ 1245	23 Apr 97 @ 1255	23 Apr 97 @ 1325	30 Apr 97
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab	
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	

PARAMETER Metals:	METHOD #	ID# 1- 71701	units	Det. Limit	ID# 2- 71702	units	Det. Limit	ID# 3- 71703	units	Det. Limit	ID# 4- 71704	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- 71705	6- 71706	7- 71707	8- 71708	Analyst(s):
Sample Name	Requester	Site 1107, MW #10	Site 1107, MW #11	Site 1107, MW #2	Site 1107, Duplicate	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	23 Apr 97 @ 1335	23 Apr 97 @ 1350	23 Apr 97 @ 1440	23 Apr 97	30 Apr 97
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab	
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	

PARAMETER Metals:	METHOD #	ID# 5- 71705	units	Det. Limit	ID# 6- 71706	units	Det. Limit	ID# 7- 71707	units	Det. Limit	ID# 8- 71708	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

P-103

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 08-May-97 13:21

PWC 5090/14

End of Report

Navy Public Works Center
Environmental Laboratory

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

Laboratory Report

Total Lead

Requester:	NPWC Environmental	Lab ID Number:	9704029
Address:	Bldg. 3887	Sample Date:	23 Apr 97
	NAS Pensacola, FL 32508	Received Date:	23 Apr 97
Phone #:	452-4728	Sample Site:	Bronson Field Site 1107
Contact:	Greg Campbell	Job Order #:	130 5001

Sample ID#	Lab	1- 71709	2- 71710	3-	4-	Analyst(s):
Sample Name	Requester	Site 1107, Equipment Blank	Site 1107, MW #1			Brian Nelson
Collector Name		P. Keane	P. Keane			
Date/Time Collected (Military)	Comp start					
	Comp stop					Date(s) of analysis:
	Grab	23 Apr 97 @ 1450	23 Apr 97 @ 1515			30 Apr 97
Sample Type	Comp/Grab	Grab	Grab			
Sample Matrix		Deionized Water	Groundwater			

PARAMETER Metals:	METHOD #	ID# 1- 71709	units	Det. Limit	ID# 2- 71710	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 BDL	mg/l	0.003		mg/l	0.003		mg/l	0.003	None

D-104

Sample ID#	Lab	5-	6-	7-	8-	Analyst(s):
Sample Name	Requester					
Collector Name						
Date/Time Collected (Military)	Comp start					
	Comp stop					Date(s) of analysis:
	Grab					
Sample Type	Comp/Grab					
Sample Matrix						

PARAMETER Metals:	METHOD #	ID# 5-	units	Det. Limit	ID# 6-	units	Det. Limit	ID# 7-	units	Det. Limit	ID# 8-	units	Det. Limit	Preservative(s)
Lead(Pb)	EPA 239.2		mg/l	0.003		mg/l	0.003		mg/l	0.003		mg/l	0.003	None

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 08-May-97 13:23

PWC 5090/14

End of Report

1 of 3

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Yes No

Requester: NPWC ENVIRONMENTAL
Address: B-3878 NAS P
Phone #: 452-2107
Contact: GREG CAMPBELL
Job Order #: 1305001

Lab ID Number:
Sample Date: 4/23/97
Received Date: 4/23/97
Sample Site: BRONSON FIELD 1107
Lab Due Date:

Sample ID #	Lab	#1-7-1701	#2-7-1702	#3-7-1703	#4-7-1704
Sample Name	----------	BRONSON FIELD	BRONSON FIELD	BRONSON FIELD	BRONSON FIELD
or Location	----------	MW#17	MW#3	MW#8	MW#9
Sampled by	----------	[illegible]	[illegible]	[illegible]	[illegible]
Composite	Begin				
Date/Time	Frequency				
Collected	End				
Grab Time	----------	1235	1245	1255	1325
Sample Matrix	----------	GW	GW	GW	GW

Notes: BRONSON FIELD SITE 1107 QUIESCENT SAMPLES Pb ONLY

PARAMETER by Method Name	METHOD #	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
			1-1		1-1		1-1		1-1			
Ethylene Dibromide (EDB)	EPA 504									3	120ml A VOA/4 oz.	None/4° C
Purg. Halocarbons/GC	EPA 601									4	40 ml VOA Vial x 2	HCl/4° C
Purg. Aromatics/GC	EPA 602									3	40 ml VOA Vial x 2	HCl/4° C
Purg. Halo. & Aro./GC	EPA 601/602									6	40 ml VOA Vial x 2	HCl/4° C
Polynuclear Aromatics/HPLC	EPA 610									7	1L Amber x 2	4° C
Purgeables/GCMS	EPA 624									8	40 ml VOA Vial x 2	HCl/4° C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4° C
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									5	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	RL–PRO									7	Consult Lab	Consult Lab
RCRA Metals (8)	EPA Various									6	Consult Lab	Consult Lab
TCLP Metals (8) w/extraction	EPA SW–846									10	Consult Lab	Consult Lab
Lead (Pb) only	EPA 239.2	X		X		X		X		1	250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: [signature]
Date/Time: 4/23/97 BRONSON 1540

Received by: [signature]
Date/Time: 4/23/97 16.05

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CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? (Yes) No QC Required? Yes No

Requester: NPWC ENVIRONMENTAL
Address: B3878 NASP
Phone #: 452-2107
Contact: GRETA CAMPBELL
Job Order #: 1305001

Lab ID Number:
Sample Date: 4/23/97
Received Date: 4/23/97
Sample Site: BRANSON FIELD 1107
Lab Due Date:

Sample ID #	Lab	#1- 7-1705	#2- 7-1706	#3- 7-1707	#4- 7-1708	Notes:
Sample Name	----------	BRANSON FIELD	BRANSFIELD	BRANSFIELD	BRANSON FIELD	
or Location	----------	MW #10	MW #11	MW #2	DUPLICATE	
Sampled by	----------	RKeane	RKeane	RKeane	RKeane	
Composite	Begin					
Date/Time	Frequency					
Collected	End					
Grab Time	----------	1335	1350	1440		
Sample Matrix	----------	GW	GW	GW	GW	

PARAMETER by Method Name	METHOD #	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Ethylene Dibromide (EDB)	EPA 504									3	120ml A VOA/4 oz.	None/4° C
Purg. Halocarbons/GC	EPA 601									4	40 ml VOA Vial x 2	HCl/4° C
Purg. Aromatics/GC	EPA 602									3	40 ml VOA Vial x 2	HCl/4° C
Purg. Halo. & Aro./GC	EPA 601/602									6	40 ml VOA Vial x 2	HCl/4° C
Polynuclear Aromatics/HPLC	EPA 610									7	1L Amber x 2	4° C
Purgeables/GCMS	EPA 624									8	40 ml VOA Vial x 2	HCl/4° C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4° C
Gas Chromatography	EPA SW 8000									5	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Halo. Vol. Org./GC	EPA SW 8010									4	40ml VOAx2/4 oz.	HCl/4° C/None
Non–Halo. Vol. Org./GC	EPA SW 8015(MOD)									4	40mlx2/1Lx2/4 oz.	HCl/4° C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCl/4° C/None
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									6	40ml VOAx2/4 oz.	HCl/4° C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4° C/None
VOC/GCMS	EPA SW 8240A									8	40ml VOAx2/4 oz.	HCl/4° C/None
VOC/GCMS–Cap.	EPA SW 8260									8	40ml VOAx2/4 oz.	HCl/4° C/None
Semivol. Org./GCMS–Cap.	EPA SW 8270A									18	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310									9	1Lx3/4 oz.	4° C/None

PARAMETER by Group Name	METHOD SOURCE	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Gasoline Analytical Group	EPA SW–846									47	Consult Lab	Consult Lab
Kerosene Analytical Group	EPA SW–846									39	Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW–846									24	Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	EPA 418.1									2	Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	FL–PRO									7	Consult Lab	Consult Lab
RCRA Metals (8)	EPA Various									8	Consult Lab	Consult Lab
TCLP Metals (8) w/extraction	EPA SW–846									10	Consult Lab	Consult Lab
Lead (Pb) only	EPA 239.2	X		X		X		X		1	250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: RKeane
Date/Time: 4/23/97 BRANSON 1540

Received by: RKeane
Date/Time: 4/23/97 1605

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CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Report Required? Yes No QC Required? Yes No

Requester: NPWC ENVIRONMENTAL
Address: B-3878 NASP
Phone #: 452-2107
Contact: GREG CAMPBELL
Job Order #: 1305001

Lab ID Number:
Sample Date: 4/23/97
Received Date: 4/23/97
Sample Site: BROWNFIELD 1107
Lab Due Date:

Sample ID #	Lab	#1- 7-1709	#2- 7-1710	#3-	#4-
Sample Name or Location	----------	BRAUN EQ BLANK	BROWN FIELD MW#1		
Sampled by	----------	[illegible]	[illegible]		
Composite Date/Time Collected	Begin				
	Frequency				
	End				
Grab Time	----------	1450	1575		
Sample Matrix	----------	DI	GW		

Notes: MW#1 HAD OIL ON THE BAILER

PARAMETER by Method Name	METHOD #	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Ethylene Dibromide (EDB)	EPA 504									3	120ml A VOA/4 oz.	None/4° C
Purg. Halocarbons/GC	EPA 601									4	40 ml VOA Vial x 2	HCl/4° C
Purg. Aromatics/GC	EPA 602									3	40 ml VOA Vial x 2	HCl/4° C
Purg. Halo. & Aro./GC	EPA 601/602									6	40 ml VOA Vial x 2	HCl/4° C
Polynuclear Aromatics/HPLC	EPA 610									7	1L Amber x 2	4° C
Purgeables/GCMS	EPA 624									8	40 ml VOA Vial x 2	HCl/4° C
Base/Neutrals & Acids/GCMS	EPA 625									15	1L Amber x 2	4° C
Gas Chromatography	EPA SW 8000									5	40mb2/1Lx2/4 oz.	HCl/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	40mb2/1Lx2/4 oz.	HCl/4° C/None
Arom. Vol. Org./GC	EPA SW 8020									3	40ml VOAx2/4 oz.	HCl/4° C/None
Halo./Arom. Vol. Org./GC	EPA SW 8010/8020									6	40ml VOAx2/4 oz.	HCl/4° C/None
Polynuclear Aromatics/GC	EPA SW 8100									6	1Lx2/4 oz.	4° C/None
VOC/GCMS	EPA SW 8240A									8	40ml VOAx2/4 oz.	HCl/4° C/None
VOC/GCMS–Cap.	EPA SW 8260									8	40ml VOAx2/4 oz.	HCl/4° C/None
Semivol. Org./GCMS–Cap.	EPA SW 8270A									16	1Lx3/4 oz.	4° C/None
Polynuclear Aromatics (PAH's)	EPA SW 8310									9	1Lx3/4 oz.	4° C/None

PARAMETER by Group Name	METHOD SOURCE	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	X	Bottle ID #'s	Billing Units	Containers Required	Preservative(s) Used
Gasoline Analytical Group	EPA SW–846									47	Consult Lab	Consult Lab
Kerozene Analytical Group	EPA SW–846									39	Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW–846									24	Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	EPA 418.1									2	Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	FL–PRO									7	Consult Lab	Consult Lab
RCRA Metals (8)	EPA Various									6	Consult Lab	Consult Lab
TCLP Metals (8) w/extraction	EPA SW–846									10	Consult Lab	Consult Lab
Lead (Pb) only	EPA 239.2	X		X						1	250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: [illegible]
Date/Time: 4/23/97 BROWN – 1540

Received by: [illegible]
Date/Time: 4/23/97 1605

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Navy Public Works Center
Environmental Laboratory

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

Laboratory Report

Total Lead

Requester:	NPWC Environmental	Lab ID Number:	9704030
Address:	Bldg. 3887	Sample Date:	24 Apr 97
	NAS Pensacola, FL 32508	Received Date:	24 Apr 97
Phone #:	452-4728	Sample Site:	Bronson Field Site 1107
Contact:	Greg Campbell	Job Order #:	130 5001

Sample ID#	Lab	1- 71756	2- 71757	3- 71758	4- 71759	Analyst(s):
Sample Name	Requester	Site 1107, MW #12	Site 1107, MW #6	Site 1107, MW #5	Site 1107, MW #13	Brian Nelson
Collector Name		P. Keane	P. Keane	P. Keane	P. Keane	
Date/Time	Comp start					
Collected	Comp stop					Date(s) of analysis:
(Military)	Grab	24 Apr 97 @ 1330	24 Apr 97 @ 1340	24 Apr 97 @ 1355	24 Apr 97 @ 1405	30 Apr 97
Sample Type	Comp/Grab	Grab	Grab	Grab	Grab	
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	

PARAMETER Metals:	METHOD #	ID# 1- 71756	units	Det. Limit	ID# 2- 71757	units	Det. Limit	ID# 3- 71758	units	Det. Limit	ID# 4- 71759	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- 71760	6- 71761	7-	8-	Analyst(s):
Sample Name	Requester	Site 1107, MW #14	Site 1107, MW #1-D			Brian Nelson
Collector Name		P. Keane	P. Keane			
Date/Time	Comp start					
Collected	Comp stop					Date(s) of analysis:
(Military)	Grab	24 Apr 97 @ 1435	24 Apr 97 @ 1520			30 Apr 97
Sample Type	Comp/Grab	Grab	Grab			
Sample Matrix		Groundwater	Groundwater			

PARAMETER Metals:	METHOD #	ID# 5- 71760	units	Det. Limit	ID# 6- 71761	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 BDL	mg/l	0.003		mg/l	0.003		mg/l	0.003	None

D-108

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

Approved by: Jerry Dees, Laboratory Director

Date/Time: 08-May-97 13:26

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

Requester: BLUE ENVIRONMENTAL
Address: B-3828
Phone #: 452-2107
Contact: GREG CAMPBELL
Job Order #: 1305001

Report Required? Yes No QC Required? Yes No
Lab ID Number:
Sample Date: 4/24/97
Received Date: 4/24/97
Sample Site: BROWN FIELD (1107)
Lab Due Date:

Sample ID #	Lab	#1-7-1756	#2-7-1757	#3-7-1758	#4-7-1759
Sample Name or Location	----------	BROWN FIELD MW#12	BROWN FIELD MW#6	BROWN FIELD MW#5	BROWNFIELD MW#15
Sampled by	----------	PRoane	PRoane	PRoane	PRoane
Composite Date/Time Collected	Begin				
	Frequency				
	End				
Grab Time	----------	1330	1340	1355	1405
Sample Matrix	----------	GW	GW	GW	GW

Notes: NAS BROWN FIELD SITE 1107 QUIESCENT SAMPLING

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		X		X		X		1	250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: PRoane
Date/Time: 4/24/97 Ryan Brown 1535

Received by: PRoane
Date/Time: 4/24/97 1605

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* MW# 6 HAS oil ON MEASUREMENT PROBE AT BOTTOM OF WELL

2 of 2

CHAIN OF CUSTODY/REQUEST FOR ANALYSIS (UST Projects)

NPWC Environmental Laboratory
Bldg. 3887, Code 920
NAS Pensacola, Fl. 32508
Phone – (904) 452–4728/3642
DSN 922–4728/3642
FAX (904) 452–2799/2387

Requester: Rice Environmental
Address: PS-3878
Phone #: 452-2107
Contact: Greg Campbell
Job Order #: 130500

Report Required? Yes No QC Required? Yes No
Lab ID Number:
Sample Date: 4/24/97
Received Date: 4/24/97
Sample Site: Brownfield (1107)
Lab Due Date:

Sample ID #	Lab	#1- 7-1760	#2- 7-1761	#3-	#4-	Notes:
Sample Name	----------	Brownfield	Brownfield			
or Location	----------	MW#14	MW 1-D			
Sampled by	----------	P Reave	P Reave			
Composite	Begin					
Date/Time	Frequency					
Collected	End					
Grab Time	----------	1435	1520			
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									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									9	1Lx3/4 oz.	4° C/None
PARAMETER by Group Name	**METHOD SOURCE**	**X**	**Bottle ID #'s**	**X**	**Bottle ID #'s**	**X**	**Bottle ID #'s**	**X**	**Bottle ID #'s**	**Billing Units**	**Containers Required**	**Preservative(s) Used**
Gasoline Analytical Group	EPA SW-846									47	Consult Lab	Consult Lab
Kerosene Analytical Group	EPA SW-846									39	Consult Lab	Consult Lab
Mixed Product Analytical Group	EPA SW-846									24	Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	EPA 418.1									2	Consult Lab	Consult Lab
Total Petroleum Hydrocarbons	FL-PRO									7	Consult Lab	Consult Lab
RCRA Metals (8)	EPA Various									6	Consult Lab	Consult Lab
TCLP Metals (8) w/extraction	EPA SW-846									10	Consult Lab	Consult Lab
Lead (Pb) only	EPA 239.2	X		X						1	250ml/4 oz.	HNO_3/None
Other:												

Comments:

Relinquished by: P Reave
Date/Time: 4/24/97 Signed Brown 1535

Received by: P Reave
Date/Time: 4/24/97 1605

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